Revised 1700 Embarcadero Road Auto Dealership Project

Addendum to the 1700-1730 Embarcadero Road Auto Dealership Project Initial Study-Mitigated Negative Declaration

SCH # 2019039076

prepared by

City of Palo Alto
Planning and Development Services Department
250 Hamilton Avenue
Palo Alto, California 94301
Contact: Sheldon Ah Sing, AICP, Principal Planner

prepared with the assistance of

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

November 2022

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

Table of Contents

Tables

Figures

Appendices

1 Introduction

This document is an addendum to the *1700-1730 Embarcadero Road Auto Dealership Project Initial Study-Mitigated Negative Declaration* (IS-MND) (State Clearinghouse #2018072009) adopted in May 2019 ("2019 IS-MND") (City of Palo Alto 2019).

In accordance with Section 15164 of the *California Environmental Quality Act (CEQA) Guidelines*, codified in Sections 15000 et seq. of Title 14 of the California Code of Regulations, a lead agency must prepare an addendum to a previously certified EIR or adopted negative declaration if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR or negative declaration have occurred. Under Section 15162(a), where an EIR or negative declaration has been certified for a project, no subsequent EIR or negative declaration shall be prepared for the project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, that there are substantial changes in the project or circumstances or substantially important new information that will cause the project to have significant new impacts or substantially increase previously identified significant impacts.

The addendum does not need to be circulated for public review but can be included in or attached to the final EIR or negative declaration (Section 15164(c)). The decision-making body must consider the addendum with the final EIR or negative declaration prior to making a decision on the project (Section 15164(d)). A brief explanation of the decision not to prepare a subsequent EIR or negative declaration pursuant to Section 15162, supported by substantial evidence, should be included in the addendum, the lead agency's findings on the project, or elsewhere in the record (Section 15164(e)). A discussion on this topic can be found in Section 4, Decision Not to Prepare a Subsequent Environmental Impact Report, of this addendum.

This addendum has been prepared in accordance with relevant provisions of CEQA (California Public Resources Code Section 21000, *et seq.*) and the *CEQA Guidelines*. It describes the proposed revisions to the project and compares the revised project's impacts to those identified in the *1700-1730 Embarcadero Road Auto Dealership Project IS-MND*. The analysis demonstrates that the revised project does not require the preparation of a subsequent or supplemental IS-MND.

2 Background

This section provides an overview of the 1700-1730 Embarcadero Road Auto Dealership Project and its IS-MND to provide context for this addendum.

2.1 1700-1730 Embarcadero Road Auto Dealership Project

The previously approved 1700-1730 Embarcadero Road Auto Dealership Project (referred to in the addendum as the "original project" or the "2019 project") involved development of an automotive sales and dealership building. The original project site was located at 1700 and 1730 Embarcadero Road in the City of Palo Alto in Santa Clara County. The original project site encompassed 209,888 square feet (4.82 acres) on two parcels (Assessor's Parcel Numbers 008-03-084 and 008-03-066) at the southeast corner of Embarcadero Road and East Bayshore Road. One of the parcels (APN: 008-03-084 at 1700 Embarcadero Road) was already developed with a one-story, 15,207-square-foot, vacant restaurant building constructed in 1968 (formerly Ming's Chinese Cuisine and Bar). The second parcel (APN 008-03-066) was developed with a 15,049-square-foot, two-story auto dealership (Audi Palo Alto); surface parking areas; and landscaping. The original project would maintain two separate parcels and involved demolition of the two existing commercial buildings and the construction of a new automotive sales and dealership building for use by both Mercedes Benz and Audi car companies as well as associated surface parking and landscaping. In addition, a separate 2,155 square foot car wash building was proposed at the rear of the project site to be shared by both auto dealerships. Table 1 summarizes the characteristics of the original 1700-1730 Embarcadero Road Auto Dealership Project.

Table 1 2019 Project Characteristics

Feature	Details
Site/Building Features	
Total Project Site Size	209,888 sf (4.82 acres)
Total Building Footprint	104,038 sf
Floor Area Ratio (FAR)	0.5
Building Height	43 feet (maximum parapet height)
	50 feet (maximum elevator and stair tower height)
	14 feet (car wash structure)
Auto Dealership Main Building	
Showroom	29,583 sf
Other Occupied Space (Offices, Service and Parts, Dealership Services, Photo Booth)	74,548 sf
Total	**104,131 sf**
Car Wash	2,155 sf
Landscaping	
Proposed Site Total	26,680 sf
Proposed Tree Total	59 new trees
Vehicle Parking	
Surface Level Parking	63 spaces
Deck 2nd Floor Parking	111 spaces
Deck 3rd Floor Parking	211 spaces
Total	**385 spaces**
Bicycle Parking	15 spaces

sf = square feet

2.2 1700-1730 Embarcadero Road Auto Dealership Project IS-MND

The Palo Alto City Council adopted the IS-MND for the original project in June 2019 ("2019 IS-MND"). The 2019 IS-MND evaluated potential environmental consequences associated with the project for all of the issue areas identified in the *CEQA Guidelines* Appendix G checklist.

The 2019 IS-MND found that the original project would have less than significant impacts, with implementation of mitigation measures, related to:

- Biological Resources
- Transportation
- Cultural and Tribal Resources
- Geology and Soils
- Noise

Mitigation measures BIO-1 (Light Spillover Minimization) and BIO-2 (Nesting Bird Surveys and Avoidance) would reduce impacts to biological resources to less than significant levels. Mitigation measures CR-1 (Resource Recover Procedures), CR-2 (Human Remains Recovery Procedures), and TRC-1 (Unanticipated Discovery of Tribal Cultural Resources) would reduce impacts to cultural and

tribal resources to less than significant levels. Mitigation measure GEO-1 (Geotechnical Design Considerations) would reduce impacts to Geology and Soils to less than significant levels. Mitigation measure N-1 (Car Wash Noise Reduction) would reduce impacts to noise to less than significant levels. Mitigation measures TRA-1 (East Bayshore Road/Embarcadero Road Intersection Improvements) and TRA-2 (Payment of Transportation Impact Fee) would reduce impacts to transportation to less than significant levels. The project was not found to have any potentially significant and unmitigable impacts.

Impacts were found to be less than significant without mitigation for aesthetics, air quality, greenhouse gas emissions, hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, utilities and service systems, and energy. The original project was found to have no impacts related agriculture and forestry resources, mineral resources, and recreation.

3 Revised 1700 Embarcadero Road Auto Dealership Project

The City of Palo Alto, as the Lead Agency, prepared this addendum for the 1700 Embarcadero Road Auto Dealership Update Project (also referred to in this addendum as the "revised project") in compliance with the California Environmental Quality Act (CEQA), the *CEQA Guidelines* (California Code of Regulations Section 15000 et. seq.), and the regulations and policies of the City of Palo Alto, California.

3.1 Project Title

Revised 1700 Embarcadero Road Auto Dealership Project

3.2 Project location

The project site is located at 1700 Embarcadero Road in the City of Palo Alto in Santa Clara County. The regional location for the project is shown on Figure 1. The updated project would be located on a portion of the project site described and analyzed in the 2019 IS-MND for the original project. Figure 2 shows the project site analyzed in the 2019 IS-MND and the revised project site. The updated project site encompasses 2.54 acres on Accessor's Parcel Number 008-03-084 at the southeast corner of Embarcadero Road and East Bayshore Road. The site is bounded by Embarcadero Road to the north, East Bayshore Road to the west, professional offices to the south and an Audi dealership to the east. Across Embarcadero Road to the north are professional offices and to the west across East Bayshore Road are medical offices.

3.3 Project Description

Similar to the original project, the revised project would involve demolition of on-site structures and construction of an auto dealership along with associated parking, office, and showroom space as well as a car wash. However, the revised project involves a reduced project size and project site compared to the original project analyzed in the 2019 IS-MND. The revised project would involve development on the 2.54-acre site at 1700 Embarcadero Road instead of the full 4.82 acres site and would be operated by Mercedes Benz only instead of a combined Audi/Mercedes Benz dealership. The Audi dealership that was formerly part of the project site would remain.

This revised project site is currently occupied by a vacant restaurant building and associated parking spaces. The restaurant building would be demolished with the proposed project. Parking areas associated with the restaurant are currently being used for vehicle storage by the adjacent Audi dealership.

The revised project would involve 31,195 square feet of dealership space and a 4,499-square-foot service drive. A carwash would be located at the southeast corner of the building. The project would provide 85 customer parking spaces, 42 inventory parking spaces, and 19 display parking spaces.

Figure 1 Regional Location

Imagery provided by Esri and its licensors © 2018.

★ Project Location

N

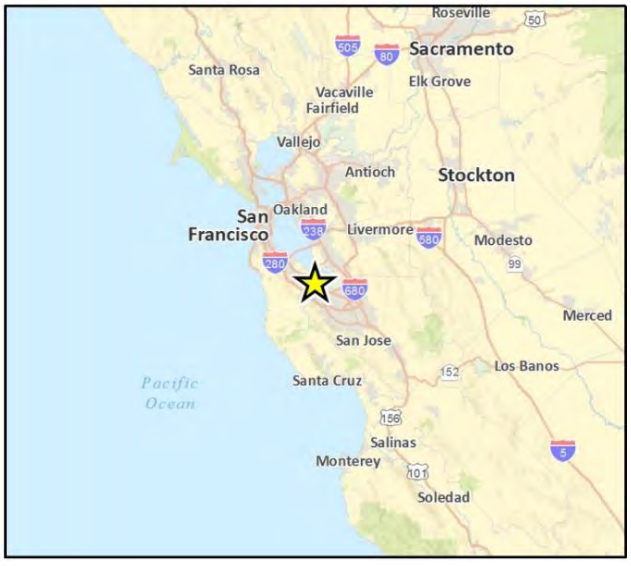


Figure 2 2019 IS-MND Project Site and Revised Project Site Locations

Imagery provided by Microsoft Bing and its licensors © 2022.

Vehicle access to the project site would be provided via the existing right-in/right-out driveway on Embarcadero Road and the existing full-access driveway on East Bayshore Road. In addition, a driveway connection to the adjacent Audi dealership would be provided. Further, the revised project would involve development an off-site multi-use path along Embarcadero Road and East Bayshore Road to replace the existing concrete sidewalk and trees.

The following entitlements are required for the revised project:

- Site and Design Review
- Design Enhancement Exception (DEE) to deviate from the "build-to-line" requirement
- Variance from the parking lot tree canopy shade requirement

Table 2 shows the revised project's characteristics. Figure 3 shows the revised project site plan.

Table 2 Revised Project Characteristics

Feature	Revised Project Details
Site/Building Features	
Total Project Site Size	110,432 sf (2.54 acres)
Total Building Footprint	35,694 sf
Floor Area Ratio (FAR)	0.32
Building Height	26 feet (maximum parapet height)
	29.5 feet (maximum top of screen)
	36 feet (maximum top of pylon)
Floor Area	
1st Floor Dealership	25,480 sf
2nd Floor Dealership	5,715 sf
Total	**31,195 sf**
Service Drive	4,499 sf
Landscaping	
Proposed Site Total	22,332 sf
Proposed Tree Total	On-site trees: 67 trees (66 new trees, 1 existing tree to remain) Street trees adjacent to the site: 7 trees Off-site trees: 12 trees proposed for the Baylands Total trees: 86 trees (85 new trees and 1 existing tree to remain)
Vehicle Parking	
Display Parking	19 spaces
Customer Parking	85 spaces
Inventory Parking	42 spaces
Total	**146 spaces**
Bicycle Parking	4 spaces

sf = square feet

Figure 3 Revised Project Proposed Site Plan

3.4 Comprehensive Plan Designations and Zoning

The project site (APN 008-03-084) has a 2030 Comprehensive Plan land use designation of Service Commercial. As described in the City of Palo Alto's Comprehensive Plan, the CS land use designation allows for facilities providing citywide and regional services and relying on customers arriving by car. Typical uses include auto services and dealerships, motels, lumberyards, appliance stores, and restaurants.

The project site is zoned Service Commercial (CS) District. The Palo Alto Municipal Code (PAMC), Chapter 18.16 states the intent of the CS District:

> "To create and maintain areas accommodating citywide and regional services that may be inappropriate in neighborhood or pedestrian-oriented shopping areas, and which generally require automotive access for customer convenience, servicing of vehicles or equipment, loading or unloading, or parking of commercial service vehicles."

In addition to this parcel's primary zoning designation, the project site is subject to land use restrictions in the Site and Design (D) Review Combining District. Site and Design (D) Review Combining Districts are intended to provide a process for review and approval of development in environmentally and ecologically sensitive areas, including established community areas which may be sensitive to negative aesthetic factors, excessive noise, increased traffic or other disruptions, in order to assure that use and development will be harmonious with other uses in the general vicinity, will be compatible with environmental and ecological objectives, and will be in accord with Palo Alto Comprehensive Plan.

Further, as part of the original project approved in 2019, an Auto Dealership (AD) Combining District was added to the project site. According to PAMC Chapter 18.30.020, the AD combining district may be combined with a CS district and the CS(AD) combining district permits auto dealerships.

4 Decision Not to Prepare a Subsequent Mitigated Negative Declaration

As outlined in Section 15164 of the *CEQA Guidelines*, a lead agency shall prepare an addendum to a previously certified EIR or a (mitigated) negative declaration adopted for a proposed project, if some changes or additions are necessary but none of the conditions described in *CEQA Guidelines* Section 15162 calling for preparation of a subsequent EIR or (M)ND have occurred. The conditions described in Section 15162 include the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
    a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    b. Significant effects previously examined will be substantially more severe than shown in the previous EIR [or negative declaration];
    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The *CEQA Guidelines* Section 15164 states that the Lead Agency or responsible agency shall prepare an addendum to an adopted negative declaration if only minor changes or additions are necessary but none of the conditions described above have occurred. The *CEQA Guidelines* further specify that a brief explanation of the decision not to prepare a subsequent EIR should be included in one of the following: the addendum itself, the Lead Agency's findings on the project, or elsewhere in the record. Pursuant to the *CEQA Guidelines*, an addendum does not need to be circulated for public review but can be included in or attached to the adopted negative declaration prior to deciding on the project.

The purpose of this addendum is to analyze the environmental impacts of the revised project in relation to the environmental impacts identified for the project site in the adopted 1700-1730 Embarcadero Road Auto Dealership Project IS-MND. The following analysis was conducted pursuant to the requirements of *CEQA Guidelines* Section 15162.

5 Environmental Impacts

This addendum evaluates potential environmental impacts that could result from the revised project. The existing environmental conditions in and around the project site are substantially the same under present conditions as described in the 2019 IS-MND. The analysis below provides updates where necessary to characterize potential impacts.

Appendix G of the *CEQA Guidelines* provides a checklist of environmental issues areas suggested for assessment in CEQA analyses. Since preparation of the 2019 IS-MND, revisions to the *CEQA Guidelines* have occurred to include environmental issue areas pertaining to energy and wildfire. To provide a thorough and conservative analysis of potential impacts associated with the revised project, this addendum addresses the 20 environmental issue areas suggested by Appendix G of the 2021 *CEQA Guidelines*, listed below.

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

Potential environmental impacts of the revised project are analyzed to determine whether they are consistent with the impact analysis provided in the 2019 IS-MND, and whether additional mitigation measures are required to minimize or avoid further potential impacts. Where the following analysis identifies impacts, discussion of previously identified mitigation measures from the 2019 IS-MND and existing applicable policies and regulations are discussed, as relevant, with respect to mitigating potential impacts from the revised project.

5.1 Aesthetics

Impacts Identified in the 2019 IS-MND

As discussed in Section 1, *Aesthetics*, of the 2019 IS-MND, the 2019 project was found to be consistent with maximum allowed height and FAR and therefore generally compatible with the visual character, size, and scale of the surrounding structures. Additionally, the 2019 project would not interrupt views of scenic areas and views of proposed building from the adjacent Baylands would be blocked by vegetation. The 2019 IS-MND found that the 2019 project would be consistent with PAMC regulations regarding lighting and would reduce surface level parking compared to existing conditions, which would reduce glare on parked onsite vehicles. The 2019 project was adjacent to open space; however, the portion of the proposed building adjacent to the open space would be a height of 40 feet and contain a 98-foot setback and therefore would not substantially

shadow public open spaces. Therefore, impacts related to aesthetics were found to be less than significant.

Impacts of the Revised Project

The revised project would have maximum parapet height of 26 feet and the pylon tower design feature would have a maximum height of 36 feet. The revised project would have a FAR of 0.32. Like the original project analyzed in the 2019 IS-MND, although the revised project would increase the height of the on-site structure compared to the existing one-story building on-site, the revised project would be consistent with maximum allowable height and FAR requirements set forth in the PAMC and would be similar in size and scale to the adjacent buildings. In addition, the project includes a Design Enhancement Exception request to allow an approximately 45- foot setback from the 10-foot build-to-line from Embarcadero Road. Thus, the revised project would be set back further from Embarcadero Road than the existing building on site, which would reduce the perceived scale of the building from motorists and passersby on Embarcadero Road. Furthermore, the project would introduce a building of higher visual quality with a contemporary design than the existing building and several landscaping elements along the project frontage. The additional landscaping would reduce the visual impact of the project and soften the appearance of the new building. The revised project would also be subject to Site and Design Review. This review includes a hearing and recommendation by the Planning and Transportation Commission and the Architectural Review Board on whether the project is consistent with the City's adopted goals, policies, and guidelines related to site design. Overall, the revised project would not change or adversely affect the visual character or quality of the site and its surroundings more than the original project.

Like the original project, the revised project site is not located along or in proximity to a California State Officially Designated Scenic Highway and does not contain scenic resources such as rock outcroppings or historic buildings. According to Policy Program L-9.1 from the Land Use and Design Chapter of the City of Palo Alto Comprehensive Plan, roads with high scenic value are Sand Hill Road, University Avenue between Middlefield Road and San Francisquito Creek, Embarcadero Road, Page Mill Road, Oregon Expressway, Interstate 280, Arastradero Road (west of Foothill Expressway), Junipero Serra Boulevard/Foothill Expressway, and Skyline Boulevard. The scenic qualities of these roadways are to be preserved. The project site is on Embarcadero Road which northeast of the project site affords scenic views of the Palo Alto Golf Course and ultimately of the Baylands as well as the south bay and the hills of the East Bay. None of these scenic views are currently available through the project site. Views to the Baylands from Embarcadero Road adjacent to the site are blocked by existing development and mature trees. The project would not block views of the Baylands, bay or distant hills from the roadway. Therefore, it would not affect the scenic quality of the roadway. Because the site would be reduced in size, as shown on Figure 2, the revised site would no longer be located adjacent to or directly visible from the Renzel Trail within the Baylands Nature Preserve. Additionally, the revised project would include off-site planting of 12 trees and 14 evergreen shrubs on the Baylands in order to screen the proposed building and existing neighboring office building. Therefore, impact related to public viewsheds, view corridors, and scenic resources would be less than significant and similar to that of the original project.

The revised project site is within the original project site and is in an urbanized area with relatively high levels of existing lighting. The existing lighting on the site and adjacent commercial and roadway uses generate light and glare along all sides of the property. Primary sources of existing light at the project site and adjacent to the project site include lighting associated with the existing commercial buildings, including building mounted lighting, parking lot lighting, and headlights from vehicles on nearby streets. The primary sources of glare on and adjacent to the project site are the

sun's reflection from metallic and glass surfaces on buildings and on vehicles parked in on-site parking areas and in adjacent parking lots. The revised project would incorporate exterior lighting in the form of sign lighting, building-mounted lighting, parking lot lighting, and other safety related lighting. Additionally, interior lighting would be visible through the proposed building's windows. Exterior lighting would be required to conform to PAMC Sections 16.14.170 and 16.144.295, which require fully shielded fixtures to prevent light pollution and glare. Like the original project, the revised project site is located in a commercial area with no existing adjacent residential uses and the revised project site is no longer located directly adjacent to the Baylands open space. Therefore, impacts related to lighting or creating shadows on public open space would be reduced compared to the original project. Impacts related to aesthetics would remain less than significant.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to aesthetics than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.2 Agriculture and Forest Resources

Impacts Identified in the 2019 IS-MND

As discussed in Section 2, *Agriculture and Forestry Resources*, of the 2019 IS-MND, no impacts related to agricultural or forest lands were found to occur because there are no agricultural lands in the project site or in the vicinity of the project site. The project site is currently occupied by commercial buildings and parking areas.

Impacts of the Revised Project

Similar to the analysis of the original project in the 2019 IS-MND, the revised project would not be located on or near agricultural or forest lands and would be located within an urbanized area of Palo Alto. No significant impacts to agriculture and forest resources would occur.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to agriculture and forest resources than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.3 Air Quality

Impacts Identified in the 2019 IS-MND

As discussed under Section 3, *Air Quality,* of the 2019 IS-MND, the 2019 project was found to be consistent with applicable air quality plans including the Bay Area Air Quality Management District's (BAAQMD) 2017 Clean Air Plan (BAAQMD 2017). Additionally, construction and operational

emissions would not exceed BAAQMD thresholds. The 2019 project was located in proximity to sensitive receptors such as the Bay Area Christian Church and the Hope Technology School, approximately 370 feet to the south of the site. However, operational emissions generated by the project, including emissions generated by the two diesel-powered emergency generators, were found not to result in particulate matter emissions greater than BAAQMD thresholds. During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust and during idling. However, these odors would be temporary and would cease upon completion. Therefore, impacts related to air quality were found to be less than significant.

Impacts of the Revised Project

The revised project would be reduced in size from a 104,131-sqare-foot building as analyzed in the 2019 IS-MND to a 31,195-square-foot building. Like the original project, the revised project would not directly create population growth but would increase employment. However, as the revised project would be reduced in size compared to the original project, the revised project would not generate population growth or increase employment such that the project would conflict with the 2017 Clean Air Plan assumptions. Further, emissions associated with construction and operation of the revised project would also be reduced and the project would remain below BAAQMD thresholds for criteria pollutants or CAAQS CO thresholds. Unlike the original project, the revised project would not involve emergency generators; therefore, stationary emissions associated with generator usage would not occur and operational emissions would be reduced compared to the 2019 project. Similar to the analysis of the original project in the 2019 IS-MND, construction activities would require heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust and during idling. However, these odors would be temporary and would cease upon completion. Therefore, impacts related to air quality would be reduced compared to the original project and would be less than significant.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to air quality than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.4 Biological Resources

Impacts Identified in the 2019 IS-MND

As discussed in Section 4, *Biological Resources*, of the 2019 IS-MND, the original project was found to result in impacts that are less than significant with mitigation incorporated for potential effects to sensitive or special status species, riparian habitat, or other sensitive natural community, and established native resident or migratory wildlife corridors. Because the original project would result in an increase in site lighting, the 2019 IS-MND concluded that it could have the potential to impact birds, fish, and mammals in the Baylands Nature Preserve if bright enough and directed off site. Mitigation Measure BIO-1 was required to minimize light spillover. Further, Mitigation Measure BIO-2, was required to reduce impacts associated with nesting birds. The project was found to result in less than significant impacts related to federally protected wetlands and local policies or ordinances protecting biological resources. The project was also subject to the City of Palo Alto Tree

Preservation Ordinance (PAMC Chapter 8.10). Although no protected trees were found on site, the original project proposed the removal of 13 street trees which required a Tree Removal Permit prior to removal, as well as replacement trees pursuant to the Tree Technical Manual (PAMC Section 8.10.030). With compliance with the PAMC, impacts to trees were found to be less than significant. The project site is not within an approved Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan and no such impact would occur.

The 2019 IS-MND required the following mitigation measures:

BIO-1 **Light Spillover Minimization.** On the project boundaries adjacent to the Baylands Nature Preserve, project light sources shall be shielded, directed downward, and focused on the project site, such that light spillover onto the Baylands does not exceed 1.0-foot candle.

BIO-2 **Nesting Bird Surveys and Avoidance.** Construction of the project and any other site disturbing activities that would involve vegetation or tree removal, shall be prohibited during the general avian nesting season (February 1 – August 31), if feasible. If nesting season avoidance is not feasible, the applicant shall retain a qualified biologist, as approved by the City of Palo Alto, to conduct a preconstruction nesting bird survey to determine the presence/absence, location, and activity status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the CFGC, nesting bird surveys shall be performed not more than 14 days prior to scheduled vegetation clearance and structure demolition. In the event that active nests are discovered, a suitable buffer (typically a minimum buffer of 50 feet for passerines and a minimum buffer of 250 feet for raptors) shall be established around such active nests and no construction shall be allowed within the buffer areas until a qualified biologist has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest). No ground disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Under the MBTA, no nest shall be purposefully removed because of or for the purposes of project activities. Nesting bird surveys are not required for construction activities occurring between August 31 and February 1.

With implementation of mitigation measures, the project was found to have less than significant impacts related to biological resources.

Impacts of the Revised Project

Like the original project site, the revised project site is located in an urbanized area of Palo Alto and has been graded and developed/paved for the existing building and surface parking lots. The original project site was located adjacent to the Baylands Nature Preserve; however, the revised project site is located approximately 280 feet away. Due to the reduction of the project size and because the project would no longer be adjacent to the Baylands Nature Preserve, Mitigation Measure BIO-1 would no longer apply to the project. However, as the revised project would still involve tree removal and construction adjacent to trees, Mitigation Measure BIO-2 would apply to the revised project to address potential impacts nesting birds.

The project site includes 56 trees including 43 trees on the project site and 13 Street Trees in the adjacent East Bayshore Road street right-of-way. None of the trees on the site are oak or redwood

species that are considered "Protected" per the City's Tree Preservation ordinance (Monarch Consulting Arborists 2021). However, the project would involve removal 13 Street Trees. A Tree Removal Permit would be required prior to removal of the street trees. In addition, the trees would need to be replaced in accordance with the requirements of the Tree Technical Manual, which is incorporated by reference in PAMC Section 8.10.030, "Tree Technical Manual." Section 3.20 of the Tree Technical Manual requires replacement of protected and designated trees and outlines the required species, location, size, and number for replacement if a regulated tree (e.g., a protected tree or street tree) is removed. The required tree replacement is based on the species, size, and canopy of the existing trees that would be removed. the proposed project would involve planning 84 new trees (including 12 in the Baylands and 7 street trees). The revised project would continue to comply with the City of Palo Alto Tree Preservation Ordinance (PAMC Chapter 8.10) and provide replacement trees for the 42 on-site trees and 13 street trees to be removed. Overall, impacts to biological resources would be reduced compared to what was analyzed in the 2019 IS-MND. Impacts to biological resources would remain less than significant with Mitigation Measure BIO-1 incorporated.

Conclusion

Impacts to biological resources would be reduced compared to those previously analyzed in the 2019 IS-MND. No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to biological resources than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary. Mitigation Measure BIO-1 would no longer apply to the project and Mitigation Measure BIO-2 from the 2019 IS-MND would continue to apply.

5.5 Cultural Resources

Impacts Identified in the 2019 IS-MND

As discussed in the Section 5, *Cultural Resources,* the 2019 IS-MND, the original project was found to have no impact related to historic resources, California history or prehistory, and local cultural resources recognized by city council resolution. The analysis of the original project in the 2019 IS-MND found that the original project site does not contain historic structures or local cultural resources recognized by City Council resolution. There is an existing building on the project site built in 1968. However, the structure is not listed on a National and or California Register nor is it listed on the City's Historic Inventory (City of Palo Alto 2012). The structure was analyzed based on the criteria for eligibility for listing on the California/ National Register of historic places and determined it to be ineligible for listing (M-Group 2015). No local cultural resources recognized by City Council resolution have been identified on the project site.

The 2019-IS-MND found that the project would have a less than significant impact with mitigation incorporated for archaeological resources, human remains, and unique paleontological or geologic features. The original project would include construction activities such as grading and excavation to a depth of approximately seven feet which could lead to unanticipated discovery of archaeological, paleontological resources or human remains. Mitigation measures CR-1 and CR-2, discussed below, were required to reduce impacts associated with the discovery of human remains, archeological resources, and paleontological resources.

The 2019 IS-MND required the following mitigation measures:

CR-1 **Resource Recovery Procedures**. In the event that archaeological or paleontological resources are unearthed during project construction, all earth-disturbing work in the vicinity of the find shall be temporarily suspended or redirected until an archaeologist or paleontologist has evaluated the nature and significance of the find. If the discovery proves to be significant under CEQA, additional work such as preservation in place, archaeological data recovery, and/or paleontological salvage shall occur as required by the archeologist or paleontologist in coordination with City staff and descendants and/or stakeholder groups, as warranted. After the find has been appropriately treated, depending on the nature of the discovery, work in the area may resume. A Native American representative shall be retained to monitor mitigation work associated with Native American cultural material.

CR-2 **Human Remains Recovery Procedures.** If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to the origin and disposition pursuant to the Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission.

With implementation of these mitigation measures, development under the 2019 project were found to have a less than significant impact related to cultural resources.

Impacts of the Revised Project

The revised project would be located on a portion of the site previously analyzed in the 2019 IS-MND and would involve demolition of the structure at 1700 Embarcadero Road. This structure was also planned for demolition in the original IS-MND and was found not to be a historical structure or local cultural resource. Therefore, the revised project would have no impact to historic resources or local cultural resources recognized by City Council resolution.

As with the project analyzed in the 2019 IS-MND, the revised project would include construction activities such as grading and excavation to a depth of approximately seven feet which could lead to unanticipated discovery of archaeological, paleontological resources, or human remains. Overall, the project would involve less ground disturbance as the revised project involves development on a 2.54-acre site compared to a 4.82-acre site analyzed in the 2019 IS-MND. Therefore, the chance of an unanticipated discovery is reduced. Nonetheless, mitigation measures CR-1 and CR-2 would continue to apply to the revised project. Impacts would be reduced compared to the original project and would be less than significant with mitigation incorporated.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to cultural resources than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary and Mitigation Measures CR-1 and CR-2 from the 2019 IS-MND would continue to apply to the revised project.

5.6 Energy

Impacts Identified in the 2019 IS-MND

As discussed in Section 18, *Energy Conservation*, of the 2019 IS-MND, implementation of the original project would result in the commitment of additional energy resources, including consumption of energy during construction and operation. The original project's total annual electricity and natural gas consumption were found to represent a small percent of statewide annual demand. Additionally, the project would be required to comply with California State regulations for energy conservation including the California Energy Code and CALGreen, along with the City's Green Building Standards. While a large portion of the original project's energy use would result from fuel consumption associated with project-related vehicle trips, the project would supply electric vehicle charging stations and places new car dealership uses in an area with transit access, thereby incrementally reducing vehicle trips and fuel consumption.

Impacts of the Revised Project

Like the original project analyzed in the 2019 IS-MND, the revised project would result in the commitment of additional energy resources, including consumption of energy during construction and operation. However, the revised project would be smaller than what was previously analyzed in the 2019 IS-MND, thus it is reasonable to assume that the project would require less energy than what was previously analyzed. Additionally, the project would be required to comply with California State regulations for energy conservation including the California Energy Code and CALGreen, along with the City's Green Building Standards. Similar to the 2019 IS-MND the project would be located in an area with transit access and would include electric vehicle charging stations. Therefore, for the same reasons as described in the 2019 IS-MND, the revised project would not result in a significant impact related to energy conservation.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to utilities and service systems than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.7 Geology and Soils

Impacts Identified in the 2019 IS-MND

As discussed in Section 6, *Geology and Soils*, of the 2019 IS-MND the original project would connect to the local wastewater treatment system and thus would have no impact to soils supporting the use of septic tanks. Additionally, the project is not located in an area identified as having known earthquake faults and there would be no impact relating to ground rupture. The project site is located in an area subject to seismic shaking and soil erosion. However, compliance with PAMC and California Building Code (CBC) requirements relating to seismic shaking and soil erosion would reduce impacts to a less than significant level. Additionally, the project would be required to comply with erosion control standards and policies in the Palo Alto Comprehensive Plan Natural Environment Element to reduce impacts related to soil erosion and salination.

A geotechnical study prepared for the project site determined that a liquefaction hazard exists. Therefore, Mitigation Measure GEO-1 was required to reduce potential impacts related to liquefaction. The original project was found to have less than significant impacts to impacts related to liquefaction, expansive soils, unstable soils, and geologic hazard relating to engineering design and seismic safety techniques with the implementation of Mitigation Measure GEO-1 discussed below:

GEO-1 Geotechnical Design Considerations. The recommendations included in the 2015 Geotechnical Investigation conducted by Romig Engineers, Inc. (Appendix C of the 2019 IS-MND) related to soil engineering shall be incorporated into the proposed project grading and building plans. The recommendations are related to:

- Foundation design;
- Surface improvements;
- Slabs-on-grade;
- Retaining walls;
- Vehicle pavements; and
- Earthwork

Impacts of the Revised Project

The revised project would be located on a parcel previously analyzed in the 2019 IS-MND. Like the original project site analyzed in the 2019 IS-MND, the revised project site is not located in an area identified as having known earthquake faults and there would be no impact relating to ground rupture. The revised project would be required to comply with regulations discussed the 2019 IS-MND including PAMC, CBC, erosion control standards, and policies in the Palo Alto Comprehensive Plan Natural Environment Element. With compliance with existing regulations, the revised project would have a less than significant impact related to strong seismic shaking, soil erosion, and salination. Like the original project as analyzed in the 2019 IS-MND, the revised project is in an area with liquefaction hazards and the revised project would be required to comply with Mitigation Measure GEO-1 to mitigate liquefaction, expansive soils, unstable soils, and geologic hazard relating to engineering design and seismic safety techniques on the site. Like the original project analyzed in the 2019 IS-MND, the project would connect to the local wastewater treatment system and thus would have no Impact to soils supporting the use of septic tanks. Overall, impacts would be the same as those analyzed in the 2019 IS-MND.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to geology and soils than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary and Mitigation Measure GEO-1 from the 2019 IS-MND would continue to apply to the revised project.

5.8 Greenhouse Gas Emissions

Impacts Identified in the 2019 IS-MND

As discussed on the 2019 IS-MND, GHG emissions associated with the original project would less than significant. Operational emissions associated with the original project would not exceed BAAQMD thresholds. Additionally, the original project would not conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of GHG's and would be consistent with the objectives of the applicable Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), AB 32, SB 32, SB 97 and SB 375.

Impacts of the Revised project

The revised project would be reduced in size from a 104,131-sqare-foot building as analyzed in the 2019 IS-MND to a 31,195-square-foot building. Therefore, GHG emissions associated with construction and operation of the revised project would be reduced compared to the original project. Like the original project, GHG emissions associated with the revised project would not exceed BAAQMD GHG thresholds. Further, for the same reasons as described in the 2019 IS-MND, the revised project would not conflict with applicable GHG reduction plans, including the objective of RTP/SCS, AB 32, SB 32, SB 97 and SB 375.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to GHG emissions than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new or revised mitigation measures are necessary.

5.9 Hazards and Hazardous Materials

Impacts Identified in the 2019 IS-MND

As discussed in Section 8, *Hazards and Hazardous Materials*, of the 2019 IS-MND, the original project could involve the transportation and use of hazardous materials during construction activities. The project would also require the demolition of an existing building which could cause the release of asbestos, polychlorinated biphenyl (PCB's), or lead based paint. However, the project would be subject to federal, state and regulations that minimize risks associated with the transportation of hazardous materials and handling hazardous materials. Additionally, the project would use designated roadways during transportation hazardous materials to limit risk during transportation of hazardous materials.

A portion of the original project site at 1730 Embarcadero Road (occupied by Audi) involves a leaking underground storage tank (LUST) cleanup site; however, the levels of soil and groundwater contamination were found to be below levels of regulatory concern and impacts associated with development on a LUST cleanup site were found to be less than significant.

The 2019 project would facilitate the construction of new automotive uses including installation of a car wash building and associated above ground greywater storage tank which could involve the use, storage, disposal, or transportation of hazardous materials. However, as with other automotive

activities that involve the storage and use of hazardous materials, onsite activity involving hazardous substances (such as the petrochemicals, polymers, and basic inorganics), and the transport, storage and handling of these substances must adhere to applicable local, state, and federal safety standards, ordinances, and regulations, including development of a Hazardous Materials Business Plan (HMBP). Compliance with existing laws and regulations governing the transport, use, release and storage of hazardous materials and wastes, including the required Stormwater Pollution Prevention Plan (SWPPP) and HMBP, would reduce impacts related to exposure of the public or environment to hazardous materials to less than significant levels.

Hope Technology School, located approximately 370 feet south of the original project site on East Bayshore Road, is the closest existing school to the project site. However, the original project would comply with existing laws and regulations governing the transport, use, release and storage of hazardous materials and wastes, including the required SWPPP and HMBP. Therefore, impacts would be less than significant.

The original project site is located in an urban area in Palo Alto therefore there would be no risk of exposing people or structures to a significant risk of loss, injury or death involving wild land fires.

The original project site is located approximately 0.3 miles from the property line and 0.5 miles from the runway of the Palo Alto Airport, a 103-acre facility with a single runway owned and operated by the City of Palo Alto. The original project involved construction of a structure up to 50 feet in height but would not exceed the height restrictions nor conflict with the airport operations. Additionally, the potential for aircraft accidents is relatively low in this area and no land use restrictions are in place (Santa Clara County 2016). The project site is not located within the vicinity of a private airstrip. Therefore, a less than significant impact related to airport safety would occur.

The original project would not involve the development of structures that could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Additionally, the original project would involve the refurbishment of three existing entryways to the project site, which would be required to be reviewed and approved by the Palo Alto Fire Department to ensure safe emergency access is provided. Impacts related to emergency response plans and emergency evacuation plans were found to be less than significant.

Impacts of the Revised Project

Like the original project analyzed in the 2019 IS-MND, the revised project could require the transportation, use, storage of hazardous materials during construction activities. However, the project would be subject to federal, state, and local regulations that minimize risks associated with the transportation of hazardous materials and handling hazardous materials. Because the revised project involves a reduced footprint compared to the 2019 project and would not involve development on the 1730 Embarcadero Road portion of the original site, the revised project would no longer involve development on a LUST cleanup site. The revised project would also require the demolition of an existing building at 1700 Embarcadero Road which could cause the release of asbestos, polychlorinated biphenyl (PCB's), or lead based paint. However, the revised project would be subject to federal, state and regulations that minimize risks associated with the transportation of hazardous materials and handling hazardous materials.

Similar to the 2019 IS-MND project, the revised project would involve the construction of new automotive uses and a car wash and associated above ground greywater storage tank. However, like the original project, compliance with existing laws and regulations governing the transport, use, release and storage of hazardous materials and wastes, including the required SWPPP and HMBP,

would reduce impacts related to exposure of the public or environment to hazardous materials to less than significant levels. The revised project is located approximately 525 feet from the Hope Technology School, which is further away than the original project. As with the original project, compliance with existing regulations would ensure that impacts to this school would be less than significant.

The revised project is in the same location as the 2019 IS-MND project with a reduced project site size and a reduced building height compared to the original project and is located approximately 200 feet further away from the Palo Alto Airport compared to the original project. The revised project would not exceed the height restrictions nor conflict with the airport operations for the Palo Alto Municipal Airport.

The revised project site is in the same location as the 2019 project with a reduced site size. Like the original project, the revised project would not expose people or structures to wildland fires and would not interfere with an emergency response or evacuation plan for the same reasons as described in the original 2019 IS-MND.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to hazards and hazardous materials than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.10 Hydrology and Water Quality

Impacts Identified in the 2019 IS-MND

As discussed in Section 9, *Hydrology and Water Quality*, of the 2019 IS-MND, the original project site is largely paved and covered with impervious surfaces. The 2019 IS-MND found that the project would increase impervious surfaces by approximately two percent which would not introduce new paved areas to the extent that the rate of surface runoff would substantially increase. The project site is connected to an existing stormwater drainage system located in the City of Palo Alto San Francisco Bay Watershed. The original project would not alter the course of a stream or river and would not cause stream bank instability. Additionally, the project would incorporate low impact development features and would be required to comply with federal, state, and local regulations and therefore would not result in significant impacts related to runoff water and drainage, water quality standards, and polluted runoff.

The project site would be served by the San Francisco Public Utilities Commission (SFPUC) and would not include installation of new groundwater wells or use of groundwater from existing wells. Additionally, the project would not significantly increase impermeable surfaces thus impact to groundwater would be less than significant.

The original project would involve demolition of an existing vacant commercial building and a portion of an existing auto dealership. Oil, fuels, solvents, paint and other hazardous and potentially hazardous materials commonly used in auto service uses are likely present at the existing auto dealership and could be transported via runoff during demolition. However, the project would include low impact development features which would collect, filter, and reduce runoff before it

enters the municipal storm drain system and the project would adhere to the applicable state and local regulations. The original project was found to potentially require dewatering if groundwater is exposed during construction activities. However, with adherence to the City's policies regarding dewatering, contaminated groundwater would not enter the stormwater system.

The original project site is located within Flood Zone AE, a Special Flood Hazard Area (SFHA), with a base flood elevation of 11 feet. The proposed auto dealership building would have an elevated finished floor slab on a series of piers to establish the required height above sea level per FEMA standards. According to Map S-7 in the City's Comprehensive Plan Safety Element, the project site is in a dam inundation area for the Searsville Reservoir. However, compliance with existing regulations would reduce impacts related to flooding.

The original project site is flat and surrounded by commercial development away from crests and very steep ridges. Therefore, the project site is located in a low hazard area for tsunami, seiche, and mudflow.

Impacts of the Revised Project

The revised project would include a reduction in size and thus would introduce less impermeable surfaces than what was analyzed in the 2019 IS-MND. Additionally, the project would be required to comply with federal, state, and local regulations governing stormwater runoff and water quality. With compliance with existing stormwater control regulations, the revised project would not result in significant impacts related to runoff water and drainage, water quality standards, and polluted runoff. No groundwater wells would be installed as part of the revised project therefore the revised project would not affect groundwater. The revised project site is in flood zone AE10.5; however, like the original project, the revised project would have an elevated finished floor slab that is one foot above the base food elevation (i.e., finish floor elevation of 11.5 feet) to establish the required height above sea level per FEMA standard. Overall, project impacts related to water quality and hydrology would be reduced compared to the original project and would be less than significant.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to hydrology and water quality than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.11 Land Use and Planning

Impacts Identified in the 2019 IS-MND

As discussed in Section 10, *Land Use and Planning*, of the 2019 IS-MND, the project would not physically divide a community, as it would continue the existing commercial development and would not include the construction of new roads or linear infrastructure. With approval of the proposed zoning changes, the 2019 project was found to be generally consistent with applicable land use plans, policies, and regulations, including the Baylands Master Plan (City of Palo Alto 2008). Additionally, the project would result in no impact to a Habitat Conservation Plan or Natural Community Conservation Plan.

Impacts of the Revised Project

The revised project would reduce the project size but would continue existing commercial development and would not include the construction of new roads or linear infrastructure. Therefore, it would not divide an established community.

The revised project site has a Comprehensive Plan land use designation of Service Commercial and is zoned Service Commercial (CS) with a Design (D) Review Combining District and an Auto Dealership (AD) Combining District. The proposed auto dealership use is consistent with the Comprehensive Plan and Zoning Ordinance designations for the site. Pursuant to PAMC Section 18.16.060, Development Standards, the maximum floor area ratio for auto dealership uses is 0.4 to 1, with an additional 0.2:1 FAR permitted exclusively for auto showroom space, for a total FAR of 0.6:1. The maximum height allowed is 50 feet. The revised project would have a have a FAR of 0.32:1 and maximum height of 36 feet. The revised project would remain consistent with applicable land use plan, policy, and regulations.

Like the original project, for the revised project the applicant is also requesting a Design Enhancement Exception (DEE) per PAMC Section 18.46.050 to deviate from the "build-to-line" requirement with the CS district. According to the build-to-line requirement for the CS district, 50 percent of the frontage of the building is required to be built to the front setback of 10 feet from Embarcadero Road. The proposed project would be set back 45 feet from Embarcadero Road. Therefore, none of the building would be built to the front 10-foot setback. Assuming the DEE is granted, the proposed project would not conflict with the build-to-line requirement of 50 percent of the building frontage to be 10-feet from Embarcadero Road. The proposed auto dealership structure would also be set back at least 80 feet-from East Bayshore Road to accommodate the 80-foot utility easement for the underground utilities and overhead high voltage power lines. There are no code requirements preventing this type of setback in the PAMC for the CS district.

The revised project requests a variance per PAMC 18.76.030 to deviate from the parking lot tree canopy shade requirement (PAMC 18.54.040(d)). According to the requirement, landscaping within parking lot areas shall result in 50 percent shading of parking lot areas in 15 years. The project cannot meet this requirement because of the easements along East Bayshore Road limiting planting of trees.

Like the original project site, the revised project site is located in the City's Baylands Master Plan area. According to the 2008 Baylands Master Plan Elements, the project site is located within the "Privately Owned Lands" designation. Privately owned lands in the Baylands area consist of approximately 90 acres of industrial research, office, and commercial uses concentrated along Embarcadero Road and East Bayshore Frontage Road. The private lands policies of the Baylands Master Plan are:

1. Be sure any future development is consistent with the Comprehensive Plan and continues to receive extensive design review utilizing the Site and Design Review Process and the Site Assessment and Design Guidelines Palo Alto Nature Preserve.
2. Provide screen planting along the southerly urbanized edge of the private property facing the former ITT property.

As discussed in Section 1, *Aesthetics,* of this addendum, the Planning and Transportation Commission and City Council would consider this policy context and the site's proximity to the Baylands during their review of the project. Therefore, with review and approval it is anticipated that the final design would be consistent with the first private lands policy in the Baylands Master

Plan. Further, while the original project was adjacent to the Baylands the revised project would be located approximately 280 feet away. The revised project would involve planting of screening trees in the Baylands to further provide further screening between the Baylands and nearby development. The revised project would be generally consistent with the Baylands Master Plan.

Overall, land use impacts would be the same as those found in the 2019 IS-MND for the original project and would be less than significant.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to land use and planning than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.12 Mineral Resources

Impacts Identified in the 2019 IS-MND

As discussed in Section 11, *Mineral Resources*, of the 2019 IS-MND, no impacts related to mineral resources would occur. The original project site and surrounding properties are part of an urbanized area with no current oil or gas extraction. No mineral resource activities would be altered or displaced by the original project.

Impacts of the Revised Project

The revised project would have no impacts to mineral resources as the revised project parcel was analyzed in the 2019 IS-MND and is not located on mineral deposits or near mining operations.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to mineral resources than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.13 Noise

Impacts Identified in the 2019 IS-MND

As discussed under Impact a and c in Section 12, *Noise,* of the 2019 IS-MND, the 2019 IS-MND found that the original project's auto repair, heating, ventilation, and air conditioning (HVAC) equipment, delivery and trash truck activity, and off-site traffic increases would not generate noise in excess of standards set forth in the City's general plan or noise ordinance, and would therefore result in impacts that are less than significant. However, the project's proposed car wash was considered to have an impact on adjacent office workers to the south of the project based on PAMC Section 9.10,040, which states that "no person shall produce, suffer or allow to be produced by any machine

or device, or any combination of same, on commercial or industrial property, a noise level more than eight dB above the local ambient at any point outside of the property plane." The local ambient noise level was assumed to be 65 dBA, as the project site is within the 65 dBA CNEL noise contour modeled by the City of Palo Alto for Highway 101 (City of Palo Alto 2017). Car wash noise levels were determined to exceed 73 dBA (8 dBA above local ambient) and would be less than significant impact with implementation of mitigation measures. Therefore, the 2019 IS-MND required the following mitigation measure to reduce car wash noise at the adjacent office use:

N-1 **Car Wash Noise Reduction.** Prior to operation of the car wash, the project applicant shall implement the following noise reduction measures to ensure car wash noise does not exceed 73 dBA at the nearest property line in order to comply with PAMC Section 9.10.040:

- Housings or silencers shall be installed on the dryers/blower fans.
- Noise attenuation mats shall be installed on the interior of the car wash tunnel.
- Dryers/blowers shall be installed as far into the tunnel as feasible.

As discussed under Impact b in Section 12, *Noise,* of the 2019 IS-MND, impacts at adjacent uses to the original project site from groundborne vibration would be less than significant. Although construction of the original project would generate vibration during demolition and construction activities, the vibration levels would not exceed applicable Federal Railroad Administration (FRA) thresholds and would be less than significant.

As discussed under Impact d in Section 12, *Noise,* of the 2019 IS-MND, the original project would result in less than significant impacts related to construction noise. Although construction of the project would generate noise during construction activities, the construction noise levels would comply with PAMC construction noise regulations and would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project and would be less than significant.

As discussed under Impact e and f in Section 12, *Noise,* of the 2019 IS-MND, the original project would have a less than significant impact to individuals residing or working within the project area to public or private airport usage. The nearest airport to the project site is the Palo Alto Airport, located approximately 0.65 miles to the northeast. Although nearby aircraft are occasionally audible, the project site is located outside of the mapped Palo Alto airport noise contours (Figure 5 in the airport's Comprehensive Land Use Plan) and would be less than significant (Santa Clara County 2016).

Impacts of the Revised Project

The revised project would generate noise similar to development under the 2019 project, including noise and groundborne vibration during construction as well as traffic and operational noise. The revised project would construct a reduced sized auto dealership (Mercedes Benz only) and associated parking, office, and showroom space as well as a car wash on a reduced project site compared to the original project analyzed in the 2019 IS-MND. Development of the reduced project size and project site would be required to comply with the same applicable noise standards regarding exposure to revised project noise.

Similar to the 2019 project, the revised project would generate noise that may periodically be audible to nearby sensitive receptors. Like the original project analyzed in the 2019 IS-MND, the revised project's auto repair, HVAC equipment, delivery and trash truck activity, and off-site traffic increases (less than 1 dBA, see Appendix A) would not generate noise in excess of standards set

forth in the City's general plan or noise ordinance. Therefore, for the same reasons described in the 2019 IS-MND, these operational noise impacts would remain less than significant.

For the 2019 project, the car wash location was adjacent to the property line for the office development south of the project site. The revised project's proposed car wash would be located in the southern portion of the project site. Compared to the 2019 project, the revised project car wash would be located further away from the adjacent office property. Whereas the original car wash was located adjacent to the site boundary, the revised project car wash is located approximately 80 feet from the property line of the adjacent office property.

Car wash noise could potentially impact adjacent properties and ground-floor noise contours were modeled with SoundPLAN (modeling results are included in Appendix A). Propagation of modeled car wash noise sources was based on ISO Standard 9613-2, "Attenuation of Sound during Propagation Outdoors, Part 2: General Method of Calculation." The assessment methodology assumes that all receivers would be downwind of stationary sources. This is a worst-case assumption for total noise impacts since only some receivers would be downwind at any one time. The primary noise-generating component of the car wash would be the blowers used to dry the cars. The revised project would install three Broadway Equipment Car Wash Equipment 45 horsepower (hp) blowers at a height of eight feet and approximately two feet from the exit of the car wash. According to the manufacturer's specifications (see Appendix A), the blowers generate a noise level of 85.3 dBA L_{eq} at 20 feet from the exit. This analysis also conservatively assumes the equipment would operate continuously for a full hour (100 percent for 60 minutes) during all hours of operation. For this analysis, the car wash would be operational during the daytime hours of 7:00 a.m. to 10:00 p.m. only. The car wash would not operate during the nighttime hours of 10:00 p.m. to 7:00 a.m. Noise associated with car wash blowers would be directional due to the walls of the car wash tunnel. Noise would generally project outward toward the tire and compressor rooms of the proposed dealership building and some noise would also project from the entrance of the war wash toward the car dealership building to the east of the project site boundary.

The results of the SoundPLAN model are shown on Figure 4. As shown in the figure, car wash activities on the project site would generate noise levels up to 48 dBA L_{eq} at the adjacent office building to the south of the project site (OFF1) and 63 dBA L_{eq} at the adjacent dealership property to the east of the project site (OFF2) during operation. In addition, noise levels would be up to an estimated 52 dBA L_{eq} at the southern property line. OFF2 represents the highest noise levels from the car wash at an adjacent property line, as this receiver is located closest to the noise generating portion of the car wash (the blowers).

PAMC Section 9.10,040 states that "no person shall produce, suffer or allow to be produced by any machine or device, or any combination of same, on commercial or industrial property, a noise level more than eight dB above the local ambient at any point outside of the property plane." To ensure that the proposed project does not exceed the limits set forth in PAMC Section 9.10,040, Mitigation Measure N-1 would continue to apply and would be modified to the following:

Figure 4 Modeled Receivers and Noise Contours

N-1 **Car Wash Noise Reduction:** Prior to operation of the car wash, the project applicant shall implement noise reduction measures to ensure car wash noise complies with PAMC Chapter 9.10. The applicant shall implement any measure or combination of measures that would achieve compliance such as the following:

- Doors enclosing the car wash shall be sealed at all times when dryers are operating
- Housings or silencers shall be installed on the dryers/blower fans
- Noise attenuation mats shall be installed on the interior of the car wash tunnel
- Dryers/blowers shall be installed as far into the tunnel as feasible

The City shall review and approve the plans to ensure compliance with the PAMC Chapter 9.10 prior to issuance of certificate of occupancy.

Similar to development under the 2019 project, development under the revised project would also generate groundborne vibration during demolition and construction activities. However, for the same reasons described in the 2019 IS-MND, groundborne vibration during demolition and construction would not exceed FRA thresholds at nearby receivers. Therefore, groundborne vibration impacts would remain less than significant.

Similar to demolition and construction under the 2019 project, construction of the reduced project size and project site under the revised project would generate noise during construction activities. However, for the same reasons described in the 2019 IS-MND, demolition and construction noise would comply with PAMC construction noise regulations would not exceed ambient noise levels at nearby sensitive receptors. Therefore, operational noise impacts would remain less than significant.

As discussed in the 2019 IS-MND, the nearest airport to the revised project site is the Palo Alto Airport, located approximately 0.65 miles to the northeast. Although nearby aircraft are occasionally audible, the project site is located outside of the mapped Palo Alto airport noise contours (shown on Figure 5 of the airport's Comprehensive Land Use Plan) (Santa Clara County 2016). Therefore, aircraft noise impacts would remain less than significant.

Conclusion

The revised project would be located on a portion of the site previously analyzed in the 2019 IS-MND and the proposed car wash would have a different location and orientation than the original project. As with the project analyzed in the 2019 IS-MND, noise associated with the proposed car wash may exceed 8 dB above the local ambient at the property plane which is prohibited under PAMC Section 9.10,040. Mitigation Measure N-1 from the 2019 IS-MND would continue to apply and has been modified consistent with the revised project. Impacts would be less than significant with mitigation incorporated. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to noise than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent IS-MND would occur.

5.14 Population and Housing

Impacts Identified in the 2019 IS-MND

As discussed in Section 13, *Population and Housing*, of the 2019 IS-MND, the original project would not involve the development of new residential units and therefore would not directly contribute to population growth. However, the auto dealership building would generate approximately 150 new

jobs that could indirectly generate population growth and a greater need for employee housing. The 150 additional jobs associated with the original project would represent a less than 0.2 percent increase in jobs. Therefore, the original project would not significantly increase jobs within the city. Additionally, construction of the original project would not displace substantial numbers of housing units or otherwise cause substantial human displacement. While the project would incrementally contribute the city's jobs/housing imbalance, the project's contribution to overall employment in Palo Alto would be minimal.

Impacts of the Revised Project

Like the original project analyzed in the 2019 IS-MND, the revised project would not involve the development of new residential buildings and would not directly to population growth. In addition, the revised project would involve an auto dealership of reduced size compared to what was analyzed in the original IS-MND; therefore, it would involve fewer employees. Like the original project, the revised project would not significantly increase jobs in the city or result in substantial indirect population growth. Additionally, the project would not displace housing units or cause human displacement. Therefore, impacts to population and housing would be reduced compared to the original project and would be less than significant.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to population and housing than were identified in the 2029 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.15 Public Services

Impacts Identified in the 2019 IS-MND

As discussed under Section 14, *Public Services and Recreation*, of the 2019 IS-MND, since the original project would not involve new residential uses, the project would not directly increase the number of school-aged children in the area. The project would not create excessive demand for emergency services or introduce development to areas outside of normal service range that would necessitate new fire protection facilities. With the continued implementation of existing practices of the City, including compliance with the California Fire Code, the original project would not significantly affect community fire protection services and would not result in the need for construction of fire protection facilities. Additionally, the project would not create substantial new demand for police services or introduce development to areas outside of normal service range that would necessitate new police protection facilities.

Impacts of the Revised Project

Like the original project analyzed in the 2019 IS-MND, the revised project does not involve residential uses and would not directly introduce the number of school-aged children in the area. The revised project would be reduced in size compared to the original project and therefore would generally decrease demand for fire and police services compared to what was previously analyzed on the 2019 IS-MND. Therefore, for the same reasons as described in the 2019 IS-MND, the revised

project would result in less than significant impacts related to fire services, police services, and schools.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to public services than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.16 Recreation

Impacts Identified in the 2019 MND

As discussed in Section 15, *Recreation*, of the 2019 IS-MND, the originally proposed auto dealership building would not directly generate population growth or substantially generate employment growth such that the construction of new park or recreational facilities would be required. There are three parks within a mile radius of the project site, including the Baylands Nature Preserve, Bixby Park, and Greer Park. The project would not involve the construction or expansion of recreational or park facilities.

Impacts of the Revised Project

The revised project would remain in the same location as what was analyzed in the 2019 IS-MND but would involve a reduced project site size. The revised project would be served by same parks listed in the 2019 IS-MND. The revised project size would be reduced to what was analyzed in the 2019 IS-MND therefore would result in fewer employees that may utilize nearby parks or recreation spaces. The revised project would not directly generate a population growth such that the construction of new park or recreational facilities would be required. Like the original project as analyzed in the 2019 IS-MND, the revised project would have no impact to recreation facilities.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to recreation than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.17 Transportation

Impacts Identified in the 2019 IS-MND

As discussed in the 2019 IS-MND, the intersection of East Bayshore Road and Embarcadero Road does not operate within applicable jurisdictional standards LOS D/E (City of Palo Alto and VTA CMP) during p.m. peak hours without the project. With development under the original project, the intersection of Embarcadero Road and East Bayshore Road would continue to operate at LOS F during the p.m. peak hour, with an increase in critical delay by 18.8 seconds but an increase in

critical V/C of only 0.085. This would exceed thresholds. Therefore, the original project would result in a potentially significant impact under Background and Cumulative Conditions and Mitigation Measures TRA-1 and TRA-2 would be required.

TRA-1 East Bayshore Road/Embarcadero Road Intersection Improvements. The applicant shall construct the following improvements prior to Certificate of Occupancy for the project: Reconfigure the northbound approach from one left-turn and one through/right-turn lane to one left-turn and one all movement lane. Improvements would include a new crosswalk on the north leg, a right-turn overlap phase (right turn arrow) for the southbound East Bayshore to westbound Embarcadero right turn, and a right-turn overlap phase for the eastbound Embarcadero to southbound East Bayshore right turn. Improvements shall occur prior to occupancy clearance.

TRA-2 Payment of Transportation Impact Fee. The applicant shall pay the Citywide Transportation Impact Fee (as updated in 2019)[1] which will fund improvements to the East Bayshore Road/Embarcadero Road intersection to address cumulative plus project conditions impacts. The payment shall be calculated by City of Palo Alto transportation division staff and paid prior to occupancy clearance. Payment of the Transportation Impact Fee would represent the project's fair share contribution to intersection improvements. Intersection improvements would be either widening the intersection and maintaining signal control or building a roundabout, to be determined by the City at the time of implementation and shall be designed to ensure the intersection operates at acceptable Level of Service levels under cumulative conditions.

The Santa Clara Valley Transit Authority's Congestion Management Program (CMP) Traffic Impact Assessment guidelines require that the CMP freeway segments be evaluated to determine the impact of added traffic for projects that generate trips equal to or greater than one percent of the freeway segment's capacity. The original IS-MND found that the project's contribution to freeway volumes would be less than one percent of the capacity of each of the studied freeway segments.

The original project was found to not impede the development or function of planned pedestrian facilities and would not affect or conflict with the adopted policies, plans, or programs regarding pedestrian facilities, or otherwise substantially reduce the performance or safety of such facilities. Additionally, the original project would not impede the development or function of planned bicycle facilities and would not affect or conflict with the adopted policies, plans, or programs regarding bicycle facilities, or otherwise substantially reduce the performance or safety of such facilities. Existing bike lanes would serve the additional users of the site adequately. Additionally, 15 bicycle parking spaces would be located at the northeast corner of the project site adjacent to the vehicle driveway and at the rear of the Audi facilities as well as additional bicycle/ pedestrian access paths from Embarcadero Road and East Bayshore Road to the project site.

Due to the nature of the project, an auto dealership, it is not expected to generate a significant demand for transit service. Additional increase in demand for transit service would be served by existing facilities. The original project would not result in development or activities that would impede the operation of a transit system.

[1] The Citywide Transportation Impact Fee update is currently under consideration by the Palo Alto City Council and adoption is anticipated to occur in April 2019 (prior to the approval of the project). The proposed update to the City's traffic impact fee program was evaluated in the Final EIR for the Comprehensive Plan (certified and adopted November 13, 2017) and identified as a mitigation measure (Measure TRANS-1b) in the EIR for the Comprehensive Plan.

Vehicles travelling to and from the project site would access the site from Embarcadero Road and East Bayshore Road. Project-generated traffic would not use local residential streets or cause change in traffic that would increase the Traffic Infusion on Residential Environment index.

Based on the site plan and field observations, adequate sight distance is available at the project driveways the site plan and field observations, adequate sight distance is available at the project driveways to ensure that existing vehicles can see pedestrians on the sidewalks, as well as vehicles on the street. Additionally, the project would have ample access points, as the project would be served by two driveways onto Embarcadero Road and one driveway on East Bayshore Road.

Additionally, the original project would not affect airport operations, alter air traffic patterns, or in any way conflict with established Federal Aviation Administration flight protection zones.

Impacts of the Revised Project

Vehicle Miles Traveled (VMT) Analysis

Recent changes to CEQA, specifically implementation of SB 743, require analysis of impacts related to vehicle miles traveled (VMT), not LOS.

Senate Bill (SB) 743 was signed into law by Governor Brown in 2013 and tasked the State Office of Planning and Research (OPR) with establishing new criteria for determining the significance of transportation impacts under CEQA. SB 743 requires the new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." It also states that alternative measures of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

In January 2018, OPR transmitted its proposed *CEQA Guidelines* implementing SB 743 to the California Natural Resources Agency for adoption, and in January 2019 the Natural Resources Agency finalized updates to the *CEQA Guidelines*, which incorporated SB 743 modifications, and are now in effect. SB 743 changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (Public Resource Code Section 21099 (b)(2)). In addition to new exemptions for projects consistent with specific plans, the *CEQA Guidelines* replaced congestion-based metrics, such as auto delay and LOS, with VMT as the basis for determining significant impacts, unless the Guidelines provide specific exceptions.

Because cities were only required to analyze VMT after July 1, 2020, the 2019 IS-MND does not provide a framework for considering the revised project's impacts to VMT. An analysis of VMT impacts of development of the revised project is provided in order to determine if the project would result in new significant impacts or substantial increase in the severity of impacts compared to the 2019 IS-MND.

As discussed in the Transportation Analysis prepared by Hexagon Transportation Consultants Inc, dated October 6, 2022 (Appendix B), the VMT analysis was conducted using the citywide travel demand model by shifting retail employment from existing dealerships within a 20-mile radius to the project location, analyzing the total daily boundary VMT generated within the 20-mile radius with and without the project. According to the Transportation Analysis and shown below in Table 3, the revised project was shown to slightly reduce total daily boundary VMT generated by land uses within a 20-mile radius of the project site. This result accounts for all trips associated with the

proposed dealership (service customers, sales customers from other Mercedes dealerships, sales customers from other comparable brands' dealerships, and employees).

Table 3 Vehicle Miles Traveled Analysis Summary

	Daily Boundary VMT			
Boundary Area	**Existing Conditions**	**Existing + Project Conditions**	**Change**	**% Change**
20-Mile Radius	60,373,390	60,372,481	-909	-0.002%

Sources: Hexagon Transportation Consultants, Inc 2022; Appendix B

Customers servicing their Mercedes vehicles with home or work locations closer to the proposed Mercedes dealership would be expected to patronize the new dealership due to its proximity. Trips would therefore be shortened by between 5 and 10 miles, reducing VMT.

For customers looking to patronize a Mercedes dealership, some might be inclined to choose the new Mercedes dealership due to proximity while some might be attracted to the newness of the new Mercedes dealership. As discussed in the TIA, this segment of customers would also reduce their total VMT, but on a smaller scale than service customers due to the potential of customers deciding to travel longer distances attracted by the newness of the dealership.

As a conservative measure, the Transportation Analysis also assumed that a new Mercedes dealership in the area could potentially draw sales customers away from other luxury brand dealerships. This assumption is conservative because Mercedes is a well-known brand and it is unlikely that the presence of a new Mercedes dealership would affect customers' desires to purchase one brand over another. As shown on Figure 3 in Appendix B, dealerships are mostly concentrated in the City of San Jose and the City of Fremont, with a few scattered across the Peninsula. The likelihood of a customer driving past an existing Mercedes dealership to visit the proposed dealership because of newness is very low. Therefore, the majority of customers in this segment are most likely residing between Belmont and San Jose, where there are already existing Mercedes dealerships. These customers would lengthen their trips by up to 10 miles, thereby increasing VMT.

The revised project is located in an area with relatively high VMT for employee trips. Given the highly technical nature of the work, the Transportation Analysis assumed that employees for the revised project would be drawn from other existing dealerships, which are mostly located in relatively low VMT areas for employee trips (on average 4 VMT per employee shorter). Therefore, employee trips would increase total VMT.

As discussed above, most trips generated from car dealerships are derived from customers and employees. Sales customer trips would be expected to be comparatively fewer on a typical weekday. In aggregate, VMT effects from service customers, sales customers, and employees would be negative. Additionally, the revised project would also include a Transportation Demand Management (TDM) plan that is expected to reduce peak hour trip generation by 20 percent. The revised project would also include the installation of a 10-foot-wide Class I multi-use path along the project frontage on East Bayshore Road and on Embarcadero Road, which would improve safety for bicyclists travelling in the area and reduce VMT by encouraging current drivers to utilize bicycles. Therefore, impacts related to VMT would be less than significant.

Local Transportation Analysis

Under SB 743 and the revised CEQA Guidelines, LOS may no longer be used to determine whether a project may have a significant environmental impact to transportation and traffic under CEQA. Therefore, the impacts on transportation that applied in the 2019 IS-MND may no longer be considered impacts in accordance with CEQA and the previous mitigation measures would not apply.

However, in June 2020 the City of Palo Alto City Council adopted a Local Transportation Impact Analysis Policy. To evaluate compliance with the City's adopted Local Transportation Impact Analysis Policy, the City prepared an analysis of the revised project to evaluate how the revised project affected study intersections. The Transportation Impact Analysis for the revised project shows that the study intersections currently operate at or above the City's standard of LOS D or better for signalized intersections during the AM and PM peak hours and would continue to operate at LOS D or better under background and cumulative conditions. Therefore, the revised project would not result in an inconsistency with Council's adopted Local transportation Impact Analysis Policy and the original mitigation measures would not apply as conditions of approval of the project.

Impact TRA-2 would similarly no longer be an impact under CEQA. However, the measures outlined in Mitigation Measure TRA-2 would apply regardless because payment of transportation impact fees are a code requirement in accordance with PAMC Chapter 16.59. Because the project would result in net new PM peak hour trips, the project proponent would be required to pay the applicable fees per net new PM peak hour trip in accordance with the code, based on the adopted municipal fee schedule at the time of payment. The current adopted municipal fee schedule is fiscal year 2023.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more significant impacts with respect to transportation than were identified in the 2019 IS-MND. None of the conditions listed in CEQA Guidelines Section 15162 requiring preparation of a subsequent negative declaration would occur. No new or revised mitigation measures are necessary. Mitigation measures TRA-1 and TRA-2 from the 2019 IS-MND would not apply to the revised project under CEQA. The revised project would result in fewer vehicle trips at nearby intersections and reducing VMT in comparison to the project identified in the 2019 IS-MND. The project would comply with code requirements under Chapter 16.49 of the municipal code for payment of transportation impact fees based on the net new PM peak hour trips for the proposed project in comparison to baseline conditions.

5.18 Tribal Cultural Resources

Impacts Identified in the 2019 IS-MND

Impacts associated with tribal cultural resources for the original project were discussed in Section 5, *Cultural Resources*, of the 2019 IS-MND. In May 2016, the City of Palo Alto received a single request from a tribe to be contacted in accordance with AB 52. However, through subsequent correspondence with the tribe, it was concluded that the tribe had contacted the City of Palo Alto in error and did not wish to be contacted regarding future projects within the City's jurisdiction. The tribe, the Torres Martinez Desert Cahuilla Indians, is not traditionally or culturally affiliated with the geographic area within the City of Palo Alto. Because no other tribes had requested to be contacted,

no notices in accordance with AB 52 were sent. Nonetheless, although no tribal cultural resources were expected to be present, the proposed excavation of the original project site could potentially result in adverse effects if unanticipated tribal cultural resources were discovered. Thus, mitigation measure TCR-1, included below, was required to reduce impacts to tribal cultural resources.

TCR-1 **Unanticipated Discovery of Tribal Cultural Resources**. In the event that cultural resources of Native American origin are identified during construction, all earth disturbing work within the vicinity of the find must be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find and an appropriate Native American representative, based on the nature of the find, is consulted. If the City determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with Native American groups. The plan would include avoidance of the resource or, if avoidance of the resource is infeasible, the plan would outline the appropriate treatment of the resource in coordination with the archeologist and the appropriate Native American tribal representative.

With implementation of Mitigation Measure TCR-1, development of the original project was found to have a less than significant impact related to tribal cultural resources.

Impacts of the Revised Project

The revised project would be located on a parcel previously analyzed in the 2019 IS-MND. As with the project analyzed in the 2019 IS-MND, tribal cultural resources are not expected to be present on-site. Nonetheless, like the original project, the revised project would include construction activities such as grading and excavation to a depth of approximately seven feet which could lead to unanticipated discovery of tribal cultural resources, although the area of disturbance would be reduced compared to the original project. Mitigation Measure TCR-1 would apply to the revised project to address potential impacts in the event tribal cultural resources are found during construction. Impacts would be less than significant with mitigation incorporated.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to tribal cultural resources than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary and Mitigation Measure TCR-1 from the 2019 IS-MND would continue to apply to the revised project.

5.19 Utilities and Service Systems

Impacts Identified in the 2019 IS-MND

As discussed in Section 17, *Utilities and Service Systems*, of the 2019 IS-MND, development of the original project would increase demand for potable water above existing conditions. However, sufficient water supplies would be available to serve the project from existing entitlements and resources. No new or expanded entitlements would be needed to serve the original project. The project would not result in a substantial physical deterioration of public water facilities or result in

adverse physical impacts from new or expanded utility facilities due to increased use as a result of the project.

The original project would involve development of automotive uses, which would generate wastewater. The project would generate approximately 23,557 gallons of wastewater per day. This increase would be approximately 0.5 percent of the existing unused capacity of the Regional Water Quality Control Plant. Therefore, there would be sufficient wastewater capacity to serve the project site and the project would not result in a substantial physical deterioration of public wastewater facilities.

Development of the original project would increase impervious surfaces at the project site by two percent which would result in a proportional increase in runoff at the project site. However, project low impact development features required by PAMC and compliance with state and federal regulations would reduce stormwater runoff onsite. Thus, the original project would not result in the construction of new, or expansion of existing, stormwater drainage facilities.

The original project would generate approximately 0.38 tons of solid waste per day and assuming a 50 percent diversion rate approximately 0.19 tons per day would be sent to the landfill. Estimated solid waste generated by this project could be accommodated at the Kirby Canyon Landfill and would thus not violate any statute or regulation regarding solid waste capacity.

Impacts of the Revised Project

Like 2019 project, the revised project would involve development of automotive uses, which would use water and generate wastewater and solid waste. However, the revised project would be reduced in size compared to the original project and therefore would utilize less water and generated less wastewater and solid waste than was previously analyzed in the 2019 IS-MND. Therefore, for the same reasons as described in the 2019 IS-MND, the revised project would not cause a significant impact to wastewater, stormwater, and solid waste facilities.

Like the original project analyzed in the 2019 IS-MND, the revised project would be required to comply with the PAMC, and state and federal regulations to reduce stormwater runoff onsite. Further, the revised project would involve a reduce project site size compared to the original project. Therefore, for the same reasons as described in the 2019 IS-MND, the revised project would not result in the construction of new stormwater drainage facilities or expansion of existing facilities.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to tribal cultural resources than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.20 Wildfire

Impacts Identified in the 2019 IS-MND

Since Wildfire was added to the *CEQA Guidelines* as a separate environmental issue area after adoption of the 2019 IS-MND, it does not include a chapter or section dedicated to analysis of

impacts to wildfire. However, impacts associated with wildland fire hazards were discussed in Section 8, *Hazards and Hazardous Materials*. The analysis found that the project site is in an urban area and not adjacent to or in the vicinity of wildlands and no impact related to exposing people or structures to significant risk associated with wildland fires would occur.

Impacts of the Revised Project

Recent changes to the *CEQA Guidelines* have added additional checklist questions related to wildfire hazards to Appendix G of the *CEQA Guidelines.* Therefore, additional discussion related to wildfire hazards is provided herein to supplement the 2019 IS-MND. Wildfires are of particular concern in areas designated as a Very High Fire Hazard Severity Zone (VHFHSZ).

The revised project site is not located within or near a Very High Fire Hazard Severity Zone or state responsibility area. The nearest Very High Fire Hazard Severity Zone is located approximately 10 miles south of the project site, west of Saratoga (California Department of Forestry and Fire Protection 2007). No impacts would occur.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or substantially more severe significant impacts with respect to wildfire than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary.

5.21 Mandatory Findings of Significance

Impacts Identified in the 2019 IS-MND

As discussed in Section 19, *Mandatory Findings of Significance*, of the 2019 IS-MND, impacts to fish and wildlife habitats would be less than significant with the implementation of mitigation measures BIO-1 and BIO-2. Impacts to California History or Prehistory would be less than significant with the implementation of mitigation measures CR-1, CR-2, and TCR-1. Cumulative impacts would be less than significant with the implementation of Mitigation Measure TRA-1 and TRA-2. Impacts to human beings associated with air quality, hazards and hazardous materials, and noise impacts would be less than significant with Mitigation Measure N-1 incorporated.

Impacts of the Revised Project

Mandatory findings of significance would generally remain the same with the exception of impacts to fish and wildlife habitats. Impacts to fish and wildlife habitats would be less than significant with the implementation of Mitigation Measure BIO-2. However, because the project would no longer be adjacent to the Baylands Nature Preserve, Mitigation Measure BIO-1 would no longer apply to the project. For the same reasons as described in the 2019 IS-MND. The revised project would not cause a significant impact to fish and wildlife habitats, California History or Prehistory, cumulative impacts, or impacts to human beings with implementation of mitigation.

Conclusion

No substantial changes have occurred that require major revisions to the 2019 IS-MND. There is no new information indicating that the revised project would have new significant impacts or

substantially more severe significant impacts than were identified in the 2019 IS-MND. None of the conditions listed in *CEQA Guidelines* Section 15162 requiring preparation of a subsequent negative declaration would occur. No new mitigation measures are necessary and Mitigation Measures BIO-2, CR-1, CR-2, GEO-1, and TCR-1 from the 2019 IS-MND would continue to apply to the revised project.

6 Conclusion

This addendum demonstrates that potential impacts associated with the revised project are consistent with potential impacts characterized in and mitigation measures developed for the 2019 IS-MND. Substantive revisions to the 2019 IS-MND are not necessary because no new significant impacts or impacts of substantially greater severity than previously described would occur as a result of the revised project. Therefore, the following determinations are applicable:

- No further evaluation of environmental impacts is required for the revised project
- No Subsequent EIR or negative declaration is necessary per *CEQA Guidelines* Section 15162
- This addendum is the appropriate level of environmental analysis and documentation for the revised project in accordance with *CEQA Guidelines* Section 15164

Pursuant to *CEQA Guidelines* Section 15164(c), this addendum will be included in the public record for the 2019 IS-MND and will be considered as part of the deliberations on the revised project. Documents related to this addendum will be available at the City of Palo Alto Planning and Development Services Department.

7 References and Preparers

References

Bay Area Air Quality management District (BAAQMD). 2017. 2017 Clean Air Plan. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en (accessed June 2022)

California Department of Forestry and Fire Protection. 2007. Santa Clara County Fire Hazard Severity Zones In SRA. https://osfm.fire.ca.gov/media/6766/fhszs_map43.pdf (accessed June 2022)

Hexagon Transportation Consultants, Inc. 2022. 1700 Embarcadero Road Mercedes Benz Dealership Transportation Analysis.

M-Group. 2015. 1700 Embarcadero Historical Resource Evaluation.

Monarch Consulting Arborists. 2021. Tree Inventory, Assessment, and Protection Report. Prepared June 21, 2021.

Palo Alto, City of. 2008. Baylands Master Plan. Available: https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/7.baylands-master-plan/bmp2008finaldoc4webcolor_090502optomized.pdf (accessed June 2022)

_____. 2012. Master List of Structures on the Historic Inventory. July 2012. https://www.cityofpaloalto.org/civicax/filebank/documents/3504 (accessed June 2022)

_____. 2017. Comprehensive Plan Update Supplement to the Draft Environmental Impact Report. August 30, 2017. Palo Alto, CA. http://www.paloaltocompplan.org/eir (accessed June 2022)

_____. 2019. 1700-1730 Embarcadero Road Auto Dealership Project Draft Initial Study-Mitigated Negative Declaration. March 2019. Prepared by Rincon Consultants, Inc.

Romig Engineering, Inc. 2013. Phase I Environmental Site Assessment for 1700 Embarcadero Road, Palo Alto, CA. June 11, 2013.

Santa Clara County. 2016. Comprehensive Land Use Plan Santa Clara County, Palo Alto Airport. Adopted by the Santa Clara County Airport Land Use Commission November 19, 2008, Amended November 16, 2016. https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC_PAO_CLUP.pdf (accessed June 2022)

List of Preparers

Rincon Consultants, Inc. prepared this addendum under contract to the City of Palo Alto. Persons and firms involved in data gathering, analysis, project management, and quality control include the following:

RINCON CONSULTANTS, INC.

Abe Leider, AICP CEP, Principal-in-Charge
Karly Kaufman, MESM, Project Manager
Nichole Yee, Environmental Planner
Bill Vosti, Program Manager – Air Quality, GHG Emissions, and Noise
Audrey Brown, GIS Specialist

Appendix A

Noise Modeling Results

Appendix A

Rincon FHWA Traffic Noise Model

rincon

Model Input

Project Name :	1700 Embarcadero Rd Auto Dealership		
Project Number :	21-10964		
Modeling Condition :	Existing		
Ground Type :	Hard	**Peak ratio to ADT:**	
Metric (L_{eq}, L_{dn}, CNEL) :	Ldn	**Traffic Desc. (Peak or ADT) :**	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Emarcadero Road	from the east	E. Bayshore Rd	22,830	35	50	97			2	1	80		20	
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	8,420	25	50	97			2	1	80		20	
3	Emarcadero Road	Geng Rd	to the west	7,280	25	50	97			2	1	80		20	
4	East Bayshore Rd	Emarcadero Rd	to the south	8,990	35	50	97			2	1	80		20	
5	Geng Road	Emarcadero Rd	to the north	1,740	25	50	97			2	1	80		20	

rincon

Model Results

Project Number :	1700 Embarcadero Rd Auto Dealership
Modeling Condition :	21-10964
Ground Type :	Existing
Metric (Leq, Ldn, CNEL) :	Ldn

Segment Number	Roadway	Segment		Noise Levels (dB) Ldn					
		From	To	Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total
1	Emarcadero Road	from the east	E. Bayshore Rd	68.9	0.0	0.0	59.2	61.2	69.9
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	64.3	0.0	0.0	54.7	57.3	65.5
3	Emarcadero Road	Geng Rd	to the west	63.7	0.0	0.0	54.1	56.7	64.9
4	East Bayshore Rd	Emarcadero Rd	to the south	64.8	0.0	0.0	55.1	57.1	65.9
5	Geng Road	Emarcadero Rd	to the north	57.5	0.0	0.0	47.9	50.4	58.6

Distance to Traffic Noise Contours (feet)				
70 dB	65 dB	60 dB	55 dB	50 dB
49	155	491	1,552	4,908
18	56	177	560	1,770
15	48	153	484	1,530
19	61	193	611	1,933
4	12	37	116	366

Appendix A

Rincon FHWA Traffic Noise Model

Model Input

Project Name :	1700 Embarcadero Rd Auto Dealership
Project Number :	21-10964
Modeling Condition :	Existing Plus Project
Ground Type :	Hard
Metric (L_{eq}, L_{dn}, CNEL) :	Ldn

Peak ratio to ADT:	
Traffic Desc. (Peak or ADT) :	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Emarcadero Road	from the east	E. Bayshore Rd	23,060	35	50	97			2	1	80		20	
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	8,500	25	50	97			2	1	80		20	
3	Emarcadero Road	Geng Rd	to the west	7,290	25	50	97			2	1	80		20	
4	East Bayshore Rd	Emarcadero Rd	to the south	9,190	35	50	97			2	1	80		20	
5	Geng Road	Emarcadero Rd	to the north	1,740	25	50	97			2	1	80		20	

Model Results

Project Number :	1700 Embarcadero Rd Auto Dealership
Modeling Condition :	
Ground Type :	Existing Plus Project
Metric (Leq, Ldn, CNEL) :	Ldn

Segment Number	Roadway	Segment		Noise Levels (dB) Ldn					
		From	To	Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total
1	Emarcadero Road	from the east	E. Bayshore Rd	68.9	0.0	0.0	59.2	61.2	70.0
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	64.4	0.0	0.0	54.8	57.3	65.5
3	Emarcadero Road	Geng Rd	to the west	63.7	0.0	0.0	54.1	56.7	64.9
4	East Bayshore Rd	Emarcadero Rd	to the south	64.9	0.0	0.0	55.2	57.2	66.0
5	Geng Road	Emarcadero Rd	to the north	57.5	0.0	0.0	47.9	50.4	58.6

Distance to Traffic Noise Contours (feet)				
70 dB	65 dB	60 dB	55 dB	50 dB
50	157	496	1,568	4,958
18	56	179	565	1,787
15	48	153	485	1,532
20	62	198	625	1,976
4	12	37	116	366

Appendix A

Rincon FHWA Traffic Noise Model

rincon

Model Input

Project Name :	1700 Embarcadero Rd Auto Dealership		
Project Number :	21-10964		
Modeling Condition :	Background 0		
Ground Type :	Hard	**Peak ratio to ADT:**	
Metric (L_{eq}, L_{dn}, CNEL) :	Ldn	**Traffic Desc. (Peak or ADT) :**	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Emarcadero Road	from the east	E. Bayshore Rd	23,470	35	50	97			2	1	80		20	
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	8,650	25	50	97			2	1	80		20	
3	Emarcadero Road	Geng Rd	to the west	7,480	25	50	97			2	1	80		20	
4	East Bayshore Rd	Emarcadero Rd	to the south	9,250	35	50	97			2	1	80		20	
5	Geng Road	Emarcadero Rd	to the north	1,790	25	50	97			2	1	80		20	

rincon

Model Results

Project Number :	1700 Embarcadero Rd Auto Dealership
Modeling Condition :	21-10964
Ground Type :	Background
Metric (Leq, Ldn, CNEL) :	Ldn

Segment Number	Roadway	Segment		Noise Levels (dB) Ldn					
		From	To	Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total
1	Emarcadero Road	from the east	E. Bayshore Rd	69.0	0.0	0.0	59.3	61.3	70.0
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	64.4	0.0	0.0	54.8	57.4	65.6
3	Emarcadero Road	Geng Rd	to the west	63.8	0.0	0.0	54.2	56.8	65.0
4	East Bayshore Rd	Emarcadero Rd	to the south	64.9	0.0	0.0	55.2	57.3	66.0
5	Geng Road	Emarcadero Rd	to the north	57.6	0.0	0.0	48.0	50.6	58.8

Distance to Traffic Noise Contours (feet)				
70 dB	65 dB	60 dB	55 dB	50 dB
50	160	505	1,596	5,046
18	57	182	575	1,818
16	50	157	497	1,572
20	63	199	629	1,989
4	12	38	119	376

Appendix A

Rincon FHWA Traffic Noise Model

rincon

Model Input

Project Name :	1700 Embarcadero Rd Auto Dealership		
Project Number :	21-10964		
Modeling Condition :	Background Plus Pr 0		
Ground Type :	Hard	**Peak ratio to ADT:**	
Metric (L_{eq}, L_{dn}, CNEL) :	Ldn	**Traffic Desc. (Peak or ADT) :**	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Emarcadero Road	from the east	E. Bayshore Rd	23,700	35	50	97			2	1	80		20	
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	8,730	25	50	97			2	1	80		20	
3	Emarcadero Road	Geng Rd	to the west	7,470	25	50	97			2	1	80		20	
4	East Bayshore Rd	Emarcadero Rd	to the south	9,450	35	50	97			2	1	80		20	
5	Geng Road	Emarcadero Rd	to the north	1,790	25	50	97			2	1	80		20	

rincon

Model Results

Project Number :	1700 Embarcadero Rd Auto Dealership
Modeling Condition :	21-10964
Ground Type :	Background Plus Project
Metric (Leq, Ldn, CNEL) :	Ldn

Segment Number	Roadway	Segment		Noise Levels (dB) Ldn					
		From	To	Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total
1	Emarcadero Road	from the east	E. Bayshore Rd	69.0	0.0	0.0	59.3	61.4	70.1
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	64.5	0.0	0.0	54.9	57.4	65.6
3	Emarcadero Road	Geng Rd	to the west	63.8	0.0	0.0	54.2	56.8	65.0
4	East Bayshore Rd	Emarcadero Rd	to the south	65.0	0.0	0.0	55.3	57.4	66.1
5	Geng Road	Emarcadero Rd	to the north	57.6	0.0	0.0	48.0	50.6	58.8

Distance to Traffic Noise Contours (feet)				
70 dB	65 dB	60 dB	55 dB	50 dB
51	161	510	1,611	5,095
18	58	183	580	1,835
16	50	157	497	1,570
20	64	203	642	2,032
4	12	38	119	376

Appendix A

Rincon FHWA Traffic Noise Model

rincon

Model Input

Project Name :	1700 Embarcadero Rd Auto Dealership		
Project Number :	21-10964		
Modeling Condition :	Cumulative		
Ground Type :	Hard	**Peak ratio to ADT:**	
Metric (L_{eq}, L_{dn}, CNEL) :	Ldn	**Traffic Desc. (Peak or ADT) :**	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Emarcadero Road	from the east	E. Bayshore Rd	26,200	35	50	97			2	1	80		20	
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	11,610	25	50	97			2	1	80		20	
3	Emarcadero Road	Geng Rd	to the west	7,680	25	50	97			2	1	80		20	
4	East Bayshore Rd	Emarcadero Rd	to the south	9,430	35	50	97			2	1	80		20	
5	Geng Road	Emarcadero Rd	to the north	4,550	25	50	97			2	1	80		20	

rincon

Model Results

Project Number :	1700 Embarcadero Rd Auto Dealership
Modeling Condition :	21-10964
Ground Type :	Cumulative
Metric (Leq, Ldn, CNEL) :	Ldn

Segment Number	Roadway	Segment		Noise Levels (dB) Ldn					
		From	To	Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total
1	Emarcadero Road	from the east	E. Bayshore Rd	69.4	0.0	0.0	59.7	61.8	70.5
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	65.7	0.0	0.0	56.1	58.7	66.9
3	Emarcadero Road	Geng Rd	to the west	63.9	0.0	0.0	54.3	56.9	65.1
4	East Bayshore Rd	Emarcadero Rd	to the south	65.0	0.0	0.0	55.3	57.4	66.1
5	Geng Road	Emarcadero Rd	to the north	61.7	0.0	0.0	52.1	54.6	62.8

Distance to Traffic Noise Contours (feet)				
70 dB	65 dB	60 dB	55 dB	50 dB
56	178	563	1,781	5,633
24	77	244	772	2,440
16	51	161	510	1,614
20	64	203	641	2,027
10	30	96	302	956

Appendix A

Rincon FHWA Traffic Noise Model

rincon

Model Input

Project Name :	1700 Embarcadero Rd Auto Dealership		
Project Number :	21-10964		
Modeling Condition :	Cumulative+ Project		
Ground Type :	Hard	**Peak ratio to ADT:**	
Metric (L_{eq}, L_{dn}, CNEL) :	Ldn	**Traffic Desc. (Peak or ADT) :**	ADT

Segment Number	Roadway	Segment		Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%)					24-Hour Traffic Distribution (%)			K-Factor
		From	To				Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Day	Evening	Night	
1	Emarcadero Road	from the east	E. Bayshore Rd	26,430	35	50	97			2	1	80		20	
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	11,690	25	50	97			2	1	80		20	
3	Emarcadero Road	Geng Rd	to the west	7,690	25	50	97			2	1	80		20	
4	East Bayshore Rd	Emarcadero Rd	to the south	9,630	35	50	97			2	1	80		20	
5	Geng Road	Emarcadero Rd	to the north	4,550	25	50	97			2	1	80		20	

rincon

Model Results

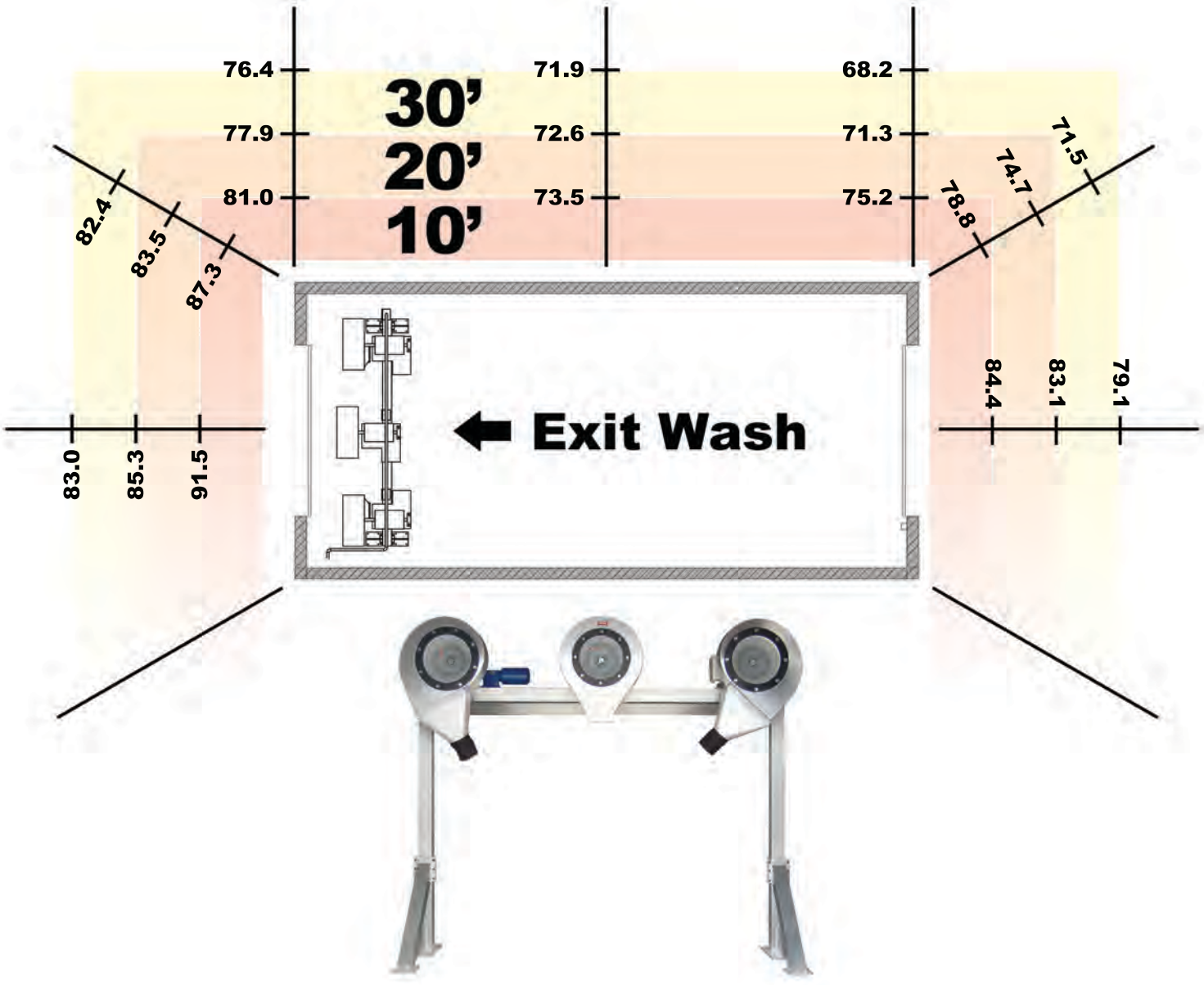
Project Number :	1700 Embarcadero Rd Auto Dealership
Modeling Condition :	21-10964
Ground Type :	Cumulative+ Project
Metric (Leq, Ldn, CNEL) :	Ldn

Segment Number	Roadway	Segment		Noise Levels (dB) Ldn					
		From	To	Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total
1	Emarcadero Road	from the east	E. Bayshore Rd	69.5	0.0	0.0	59.8	61.8	70.6
2	Emarcadero Road	E. Bayshore Rd	Geng Rd	65.8	0.0	0.0	56.2	58.7	66.9
3	Emarcadero Road	Geng Rd	to the west	63.9	0.0	0.0	54.3	56.9	65.1
4	East Bayshore Rd	Emarcadero Rd	to the south	65.1	0.0	0.0	55.4	57.4	66.2
5	Geng Road	Emarcadero Rd	to the north	61.7	0.0	0.0	52.1	54.6	62.8

Distance to Traffic Noise Contours (feet)				
70 dB	65 dB	60 dB	55 dB	50 dB
57	180	568	1,797	5,682
25	78	246	777	2,457
16	51	162	511	1,616
21	65	207	655	2,070
10	30	96	302	956

Broadway Equipment Company Car Wash / Dryer Noise Levels

Figure 4: Typical db values at locations around Broadway's 45hp Car Wash.



Note: All db readings are variable due to building size, site considerations, ect.

	Operation											Operation MM										
						Limit			OFF Receivers								Limit			OFF Receivers MM		
Blowers at 10 feet	No.	Floor	Name	Usage	Direction	Lr,lim	Lr,lim	Lr,lim	Leq,d	Leq,e	Leq,n	No.	Floor	Name	Usage	Direction	Lr,lim	Lr,lim	Lr,lim	Leq,d	Leq,e	Leq,n
Office to the South	1	G	OFF1	SCR		0	0	0	49.2	49.2	49.2	1	G	OFF1	SCR		0	0	0	17.7	17.7	17.7
Dealership to the East	2	G	OFF2	SCR		0	0	0	63.9	63.9	63.9	2	G	OFF2	SCR		0	0	0	32.4	32.4	32.4
	3	G	R-1 at 10 feet	SCR		0	0	0	53.7	53.7	53.7	3	G	R-1 at 10 f	SCR		0	0	0	22.2	22.2	22.2
	4	G	R-2 at 10 feet	SCR		0	0	0	52.7	52.7	52.7	4	G	R-2 at 10 f	SCR		0	0	0	21.2	21.2	21.2
Blowers at 12 feet																						
Office to the South	1	G	OFF1	SCR		0	0	0	51.1	51.1	51.1	1	G	OFF1	SCR		0	0	0	19.6	19.6	19.6
Dealership to the East	2	G	OFF2	SCR		0	0	0	66.4	66.4	66.4	2	G	OFF2	SCR		0	0	0	34.9	34.9	34.9
	3	G	R-1 at 10 feet	SCR		0	0	0	53.7	53.7	53.7	3	G	R-1 at 10 f	SCR		0	0	0	22.2	22.2	22.2
	4	G	R-2 at 10 feet	SCR		0	0	0	55.8	55.8	55.8	4	G	R-2 at 10 f	SCR		0	0	0	24.3	24.3	24.3
Blowers at 8 feet																						
Office to the South	1	G	OFF1	SCR		0	0	0	48.2	48.2	48.2	1	G	OFF1	SCR		0	0	0	16.7	16.7	16.7
Dealership to the East	2	G	OFF2	SCR		0	0	0	63.2	63.2	63.2	2	G	OFF2	SCR		0	0	0	31.7	31.7	31.7
	3	G	R-1 at 10 feet	SCR		0	0	0	53.6	53.6	53.6	3	G	R-1 at 10 f	SCR		0	0	0	22.1	22.1	22.1
	4	G	R-2 at 10 feet	SCR		0	0	0	51.6	51.6	51.6	4	G	R-2 at 10 f	SCR		0	0	0	20.1	20.1	20.1

Appendix B

Transportation Analysis

HEXAGON TRANSPORTATION CONSULTANTS, INC.

1700 Embarcadero Road
Mercedes Benz Dealership

Transportation Analysis

Prepared for:

AMS Associates, Inc.

October 6, 2022

Hexagon Transportation Consultants, Inc.
Hexagon Office: 100 Century Center Court, Suite 501
San Jose, CA 95112
Phone: 408.971.6100
Hexagon Job Number: 21OZ02
Client Name: Al Shaghaghi, AMS Associates, Inc.

Table of Contents

Appendices

List of Tables

List of Figures

Executive Summary

This report presents the results of the transportation analysis (TA) conducted for the proposed Mercedes Benz dealership at 1700 Embarcadero Road in Palo Alto, California. The project site is currently occupied by a vacant restaurant building. The project would replace the restaurant building and construct the site with a new Mercedes Benz dealership. Vehicle access to the Mercedes Benz dealership is provided via an existing driveway on Embarcadero Road with right-in access only and an existing full-access driveway on E. Bayshore Road.

The potential transportation impacts of the project were evaluated in accordance with the standards and policies set forth by the City of Palo Alto. The study includes a vehicle miles travelled (VMT) impact analysis in accordance with the CEQA Guidelines and the City of Palo Alto's VMT policy. The study also evaluates potential transportation effects of the project in accordance with the standards and methodologies set forth by the City of Palo Alto and the Santa Clara Valley Transportation Authority (VTA).

As required by the VTA's TIA Guidelines, an Auto Trip Reduction Statement (ATRS) form is included at the end of the Executive Summary.

VMT Analysis

The VMT analysis was conducted by comparing the existing and existing plus project scenarios to determine the relative impact of the proposed project on VMT. The project VMT is defined as the total distance traveled by vehicles traveling to and from the proposed project over a typical day. The citywide model is the best available model to represent travel within the City of Palo Alto and serves as the primary forecasting tool for the City. The model was used to estimate the proposed project's effect on total daily boundary VMT in accordance with the City's VMT guidelines. The project is expected to draw customers from existing Mercedes-Benz dealerships as well as other premium brand dealerships within a 20-mile radius. Hexagon compared the total daily boundary VMT generated within the 20-mile radius with and without the proposed project. The proposed project was shown to slightly reduce total daily boundary VMT generated by land uses within a 20-mile radius of the project site.

Project Trip Estimates

Trip generation for the proposed auto dealership was estimated based on the square footage of the project and using the average trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The ITE trip generation rate for Automobile Sales (New) (Land Use 840) was utilized for the proposed Mercedes Benz Dealership. The proposed Mercedes Benz dealership is estimated to generate 57 trips in the AM peak hour (42 inbound and 15 outbound) and 74 trips in the PM peak hour (30 inbound and 44 outbound).

Intersection Level of Service Analysis

The results of the intersection level of service analysis show that both study intersections are operating at LOS D or better during the AM and PM peak hours and would continue to operate at LOS D under background and cumulative conditions. The addition of project-generated traffic would not create an adverse effect, as defined by the City of Palo Alto, at the intersection during the AM and PM peak hour under background plus project and cumulative plus project conditions.

Other Transportation Issues

The site plan shows adequate site access and circulation, and no significant traffic operational issues are expected to occur as a result of the project. The project would not have an adverse effect on the existing or planned transit, pedestrian, or bicycle facilities in the study area.

Table ES-1
Intersection Levels of Service Summary

				Existing		Existing+Project				Background		Background+Project				Cumulative		Cumulative+Project			
ID	Intersection (Jurisdiction)	LOS Standard	Peak Hour	Avg. Delay[1]	LOS	Avg. Delay[1]	LOS	Incr. In Crit. Del.	Incr. In Crit. V/C	Avg. Delay[1]	LOS	Avg. Delay[1]	LOS	Incr. In Crit. Del.	Incr. In Crit. V/C	Avg. Delay[1]	LOS	Avg. Delay[1]	LOS	Incr. In Crit. Del.	Incr. In Crit. V/C
1	Geng Road and Embarcadero Road	D	AM	7.6	A	7.6	A	0.0	0.001	7.6	A	7.6	A	0.0	0.001	7.6	A	7.7	A	0.0	0.001
	(Palo Alto)		PM	9.9	A	9.9	A	0.0	0.000	9.9	A	9.9	A	0.0	0.000	9.9	A	9.9	A	0.0	0.000
2	E. Bayshore Road and Embarcadero Road	D	AM	24.4	C	24.5	C	0.0	0.003	24.7	C	24.8	C	0.0	0.003	25.3	C	25.4	C	0.0	0.003
	(Palo Alto)		PM	35.5	D+	36.5	D+	1.2	0.024	35.9	D+	36.9	D+	1.2	0.024	36.2	D+	37.3	D+	1.2	0.024

Notes:

l delay (seconds per vehicle) is reported for signalized intersections.
el of service.

AUTO TRIP REDUCTION STATEMENT

UPDATED: October 2014

SANTA CLARA Valley Transportation Authority

PROJECT INFORMATION	*Relevant TIA Section:*	Chapter 1
Project Name: 1700 Embarcadero Road Mercedes Benz Dealership		
Location: 1700 Embarcadero Road, Palo Alto, CA		
Description: The project would replace the vacant restaurant building and construct the site with a new Mercedes Benz dealership.		

Size (net new):	*D.U. Residential*	30,433	*Sq. Ft. Comm.*	*Acres (Gr.)*
Density:	*D.U. / Acre*	.40		*Floor Area Ratio (FAR)*

Located within 2000 feet walking distance of an LRT, BRT, BART or Caltrain station or major bus stop? Yes/No

PROJECT AUTO TRIP GENERATION	*Relevant TIA Section:*	Chapter 3		
Auto Trips Generated:	57 *AM Pk Hr*	74 *PM Pk Hr*	na *Total Weekday*	
Methodology (check one)	☒ **ITE**	☐ **Other** *(Please describe below)*		

AUTO TRIP REDUCTION APPROACH	*Relevant TIA Section:*		
☐ **Standard** *Complete Table A below*	☐ **Peer/Study-Based** *Complete Table B below*	☐ **Target-Based** *Complete Table C below*	☐ **None Taken**

TRIP REDUCTION REQUIREMENTS	*Relevant TIA Section:*	
Is the project required to meet any trip reduction requirements or targets? No	**If so, specify percent:**	
Reference code or requirement:		

TRIP REDUCTION APPROACHES

A. STANDARD APPROACH	*Relevant TIA Section:*			
Type of Reduction *Specify reduction. See Table 2 in TIA Guidelines*		**% Reduction from ITE Rates**	**Total Trips Reduced (AM/PM/Daily)**	**TOTAL REDUCTION CLAIMED**
				% / **Trips**
Transit				
Mixed-Use				
Financial Incentives				
Shuttle				

B. PEER/STUDY-BASED APPROACH	*Relevant TIA Section:*	
Basis of Reduction	**TOTAL REDUCTION CLAIMED**	
	%	**Trips**

C. TARGET-BASED APPROACH			Relevant TIA Section:			
Type of Reduction (check all that apply)					TOTAL REDUCTION CLAIMED	
❒ % Trip Reduction	❒ % SOV mode share	❒ Trip Cap			%	Trips
Description						
Time period for reduction	Peak Hour		Peak Period	Full Day		
	❒ AM/PM		❒ AM/PM	❒		

OTHER TDM/REDUCTION MEASURES			
Bicycle/Pedestrian	Yes/No	Relevant TIA Section:	
Parking Management	Yes/No	Relevant TIA Section:	
Transit	Yes/No	Relevant TIA Section:	
Site Planning and Design	Yes/No	Relevant TIA Section:	
TDM Program	Yes/No	Relevant TIA Section:	

IMPLEMENTATION		Relevant TIA Section:	
Have the project sponsor and Lead Agency agreed to any of the following measures?			
❒Monitoring			
❒Enforcement			
❒Data Sharing			

1. Introduction

This report presents the results of the transportation analysis (TA) conducted for the proposed Mercedes Benz dealership at 1700 Embarcadero Road in Palo Alto, California (see Figure 1). The project site is currently occupied by a vacant restaurant building. The project would replace the restaurant building and construct the site with a new Mercedes Benz dealership (see Figure 2). Vehicle access to the Mercedes Benz dealership is provided via an existing driveway on Embarcadero Road with right-in access only and an existing full-access driveway on E. Bayshore Road.

Scope of Study

The purpose of the study is to identify potential traffic impacts related to the proposed development. Per California Senate Bill 743 (SB 743) and CEQA Guidelines, the study includes a vehicle miles travelled (VMT) analysis. The study also includes a local transportation analysis that evaluates potential transportation effects of the project in accordance with the standards and methodologies set forth by the City of Palo Alto and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the County Congestion Management Program (CMP).

Vehicle Miles Traveled (VMT) Analysis

Per SB 743, the California Natural Resources Agency, with assistance from the Governor's Office of Planning and Research (OPR), adopted new CEQA guidelines in December 2018. The new guidelines state that automobile delay and level of service (LOS), will no longer constitute a significant environmental impact under CEQA, and that VMT is considered the most appropriate metric to evaluate a project's transportation impacts. The new CEQA guidelines became effective July 1, 2020. The evaluation of VMT for this project is based on the City's VMT Policy adopted in June 2020.

The Palo Alto VMT Policy establishes screening criteria for projects that are expected to cause a less-than-significant transportation impact under CEQA based on the land use and/or location. Projects that meet the screening criteria are not required to prepare further VMT analysis. For a project that does not meet the screening criteria, a project's VMT impact is determined by comparing the project VMT to the appropriate thresholds of significance based on the type of development. The project would not meet all applicable VMT screening criteria as described in further detail in Chapter 2. Therefore, a VMT analysis that evaluates the project's CEQA impact on VMT is required and is presented in Chapter 2.

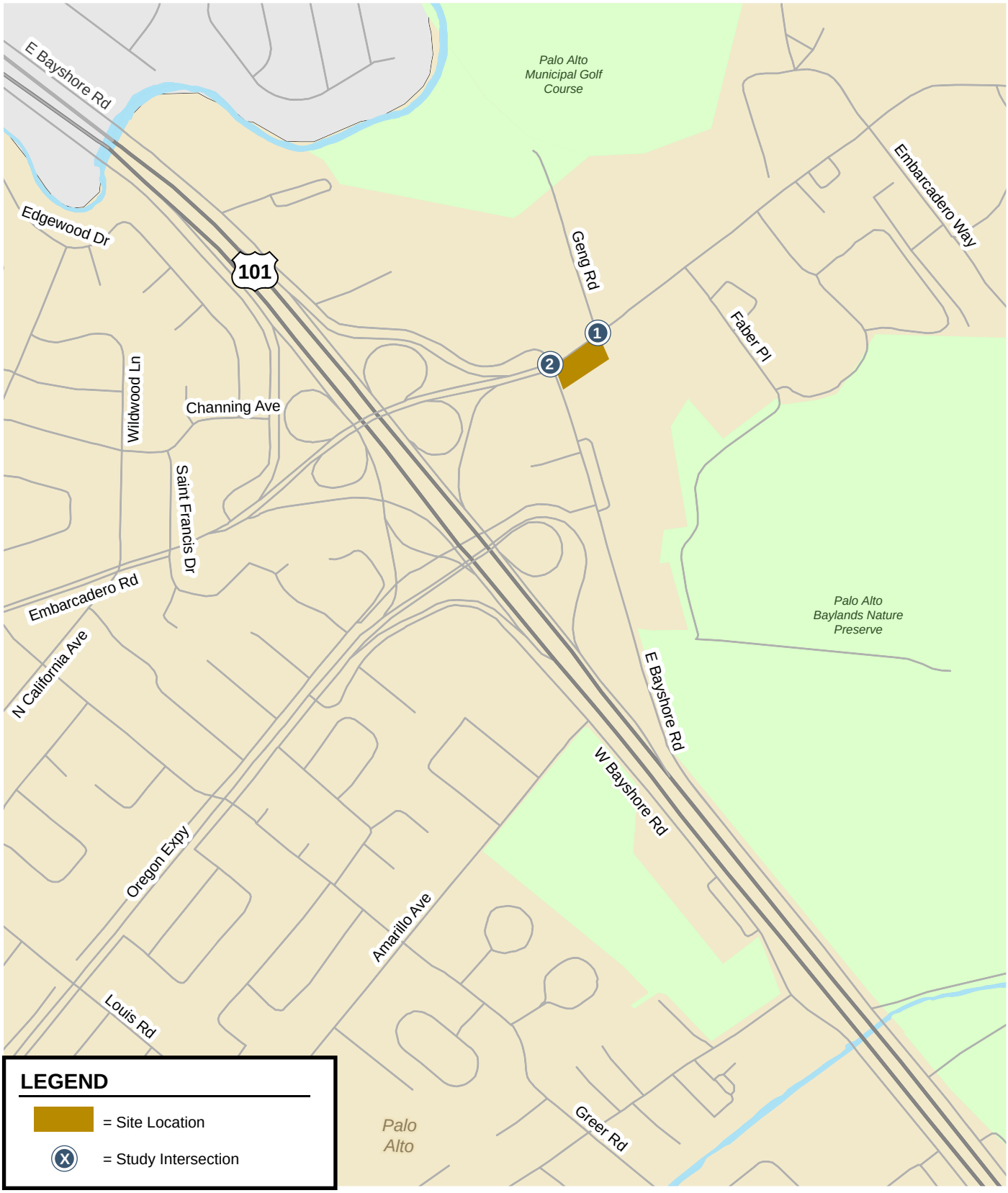


Figure 1
Site Location and Study Intersections

NORTH
Not to Scale

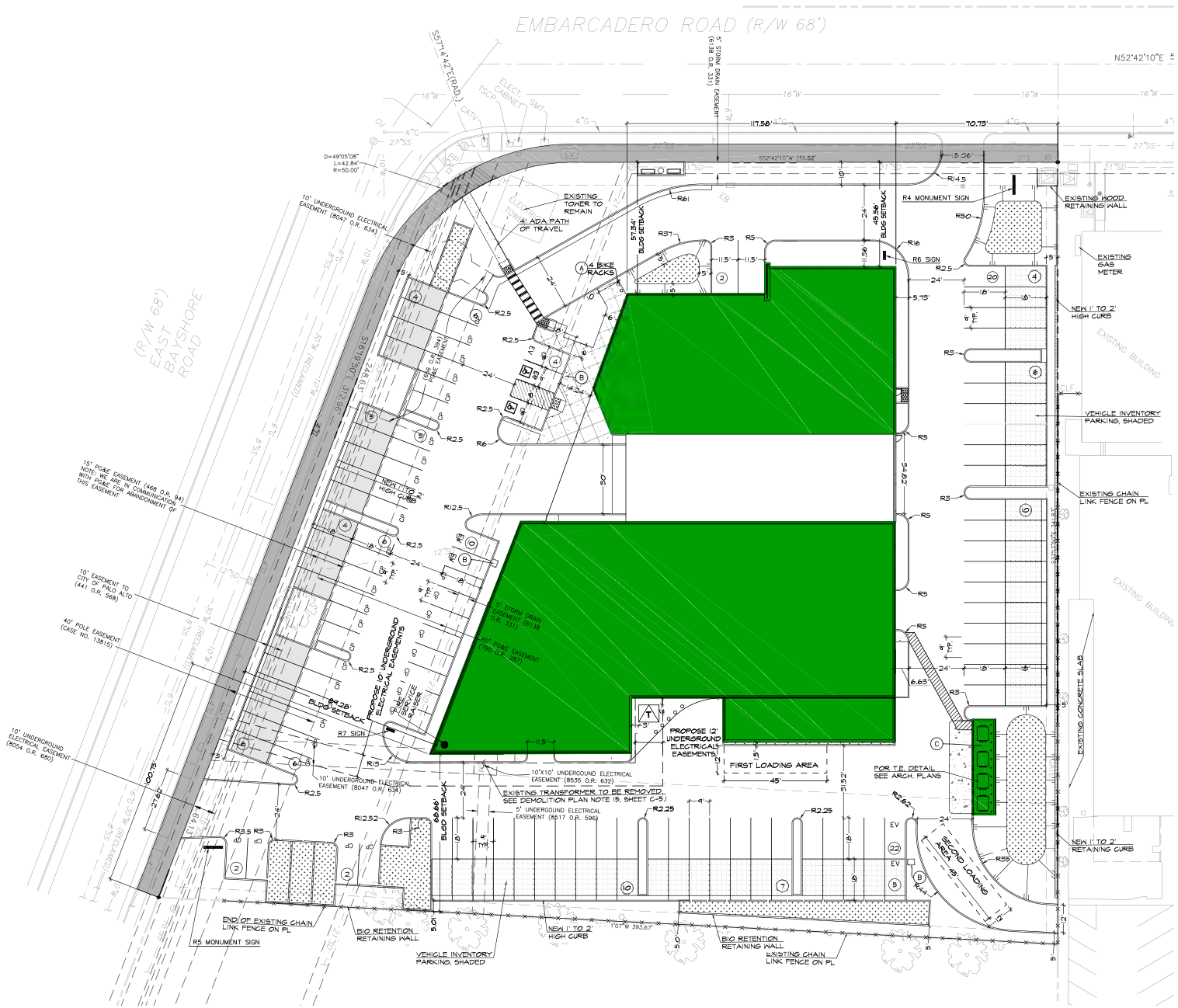


Figure 2
Site Plan

Local Transportation Analysis (LTA)

The local transportation analysis (LTA) includes an analysis of the traffic operational effects of the project on the key intersections in the vicinity of the site, an evaluation of the transit, bicycle, and pedestrian access and circulation, and a review of site access and on-site circulation.

Study Intersections

The study intersections were selected in accordance with VTA's *Transportation Impact Analysis Guidelines* (October 2014) and in consultation with Palo Alto staff. The study includes those intersections that provide primary access to the project site and intersections that would experience a traffic increase of 10 or more peak-hour trips per lane. The study intersections are listed below and shown on Figure 1.

1. Geng Road and Embarcadero Road
2. E. Bayshore Road and Embarcadero Road

Intersection traffic conditions were evaluated for the following scenarios:

- ***Existing Conditions.*** Existing AM and PM peak-hour traffic volumes for the Geng Road and Embarcadero Road intersection were obtained from previous traffic counts. The counts for the intersection were conducted in August 2018. Since the counts conducted are older than two years, a one percent growth rate was applied per year until 2021 to account for growth in traffic volumes. New counts were conducted for the Bayshore Road and Embarcadero Road intersection. The counts for the intersection were conducted in February 2022. Due to the Covid-19 pandemic, these counts were adjusted by a factor to represent pre-pandemic conditions at this intersection. The study intersections were evaluated with a level of service analysis using TRAFFIX software in accordance with the *2000 Highway Capacity Manual* methodology.
- ***Existing Plus Project Conditions.*** Existing plus project traffic volumes were estimated by adding the additional traffic generated by the project to existing conditions. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential adverse effects of the project on traffic operations.
- ***Background Conditions*.** Background traffic volumes were estimated by applying a compound growth factor of 1.4 percent per year for 2 years to existing traffic volumes. There are no approved projects within the project vicinity that would add traffic to the study intersections.
- ***Background Plus Project Conditions.*** Background plus project traffic volumes were estimated by adding the additional traffic generated by the project to background conditions. Background plus project conditions were evaluated relative to background conditions in order to determine potential adverse effects of the project on traffic operations.
- ***Cumulative No Project Conditions.*** The cumulative no project traffic volumes were estimated by applying a compound growth factor of 1.4 percent per year for 5 years to the existing traffic volumes. There are no approved and pending projects within the project vicinity.
- ***Cumulative Plus Project Conditions.*** Cumulative plus project traffic volumes were estimated by adding the new traffic generated by the proposed project. Cumulative plus project conditions were evaluated relative to cumulative conditions in order to determine potential adverse effect of the project on traffic operations.

Other Transportation Issues

The study includes a queuing analysis at the E. Bayshore Road/Embarcadero Road intersection, an evaluation of potential adverse effects to transit services and pedestrian and bicycle facilities, and a review of site access, on-site circulation, and parking.

Intersection Operations Analysis Methodology

This section presents the methods used to determine traffic conditions at the study intersections and the traffic impacts of the project. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from previous traffic studies, the City of Palo Alto, the CMP Annual Monitoring Report, and Google Earth. The following data were collected from these sources:

- Intersection traffic volumes,
- Lane geometries,
- Signal timing and phasing, and
- Approved but not yet constructed developments.

Intersection Level of Service Analysis Methodology and Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

The City of Palo Alto and the VTA evaluate level of service at signalized intersections based on the 2000 Highway Capacity Manual (HCM) level of service methodology using TRAFFIX software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Table 1 shows the level of service definitions for signalized intersections.

The intersections located in the City of Palo Alto are subject to the level of service standard of LOS D or better for city-controlled signalized intersections.

Table 1
Signalized Intersection Level of Service Definitions Based on Average Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B+ B B-	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 12.0 12.1 to 18.0 18.1 to 20.0
C+ C C-	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 23.0 23.1 to 32.0 32.1 to 35.0
D+ D D-	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lenghts, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0 39.1 to 51.0 51.1 to 55.0
E+ E E-	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p10-16.
VTA Traffic Level of Service Analysis Guidelines (June 2003), Table 2.

Intersection Vehicle Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis at intersections where the project would add a substantial number of trips to the left-turn movements. Vehicle queues were calculated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

$$P(x = n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

P (x = n) = probability of "n" vehicles in queue per lane
n = number of vehicles in the queue per lane
λ = average # of vehicles in the queue per lane (vehicles per hr. per lane/signal cycles per hr.)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for estimating future vehicle storage requirements at intersections.

For signalized intersections, the 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles, or a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn pocket storage designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement.

Definition of Adverse Intersection Operations Effects

Adverse operations effects on signalized intersections are based on the City of Palo Alto level of service standard of LOS D or better.

According to the City of Palo Alto and CMP level of service standards, a development is said to create an adverse operations effect on traffic conditions at a signalized intersection if for either peak hour, either of the following conditions occurs:

1. The level of service at the intersection drops below its respective level of service standard (LOS D or better for local intersections and LOS E or better for CMP intersections) when project traffic is added, or
2. An intersection that operates below its level of service standard under no-project conditions experiences an increase in critical-movement delay of four (4) or more seconds, or an increase in critical volume-to-capacity ratio (v/c) of one percent (0.01) or more when project traffic is added.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements are negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

Report Organization

This report has a total of nine chapters. Chapter 2 presents the VMT analysis. Chapter 3 describes existing conditions including the existing roadway network, transit service, and bicycle and pedestrian facilities. Chapter 4 describes the method used to estimate project traffic, the intersection operations under existing plus project conditions, and the project's adverse effects on the existing roadway network. Chapter 5 presents the intersection operations under background conditions. Chapter 6 presents the intersection operations under background plus project conditions. Chapter 7 presents the intersection operations under cumulative conditions with and without the project. Chapter 8 presents the analysis of other transportation-related issues, including left-turn vehicle queuing at the project driveway, site access and on-site circulation, and potential adverse effects on bicycle, pedestrian, and transit facilities. Chapter 9 presents the conclusions of the traffic impact analysis.

2. VMT Analysis

This chapter presents the VMT analysis for the project, including the VMT evaluation methodology, results of the VMT analysis, and any potential project impacts and mitigations on VMT.

VMT Thresholds of Significance

Per the City of Palo Alto VMT guidelines adopted in June 2020, VMT thresholds of significance for special project types will be developed by City staff on a project-specific basis. In coordination with City staff, the project proposed car dealership was evaluated for VMT using a net increase in total boundary VMT between existing plus project and existing conditions as the threshold of significance. As is the case with retail development, it is assumed that the proposed car dealership will shift existing trips rather than add new trips. A majority of the trips generated by the proposed Mercedes dealership will be existing Mercedes owners bringing their vehicles for service. It is assumed that these service customers are currently taking their vehicles to the closest existing Mercedes dealership to their home or work for service. Therefore, adding a Mercedes dealership will shorten trips and reduce VMT for its service customers that are currently driving to Belmont or San Jose. Adding a new Mercedes dealership within a metropolitan area does not cause more vehicles to require service or result in more vehicles to be sold. This is the same assumption that is made with adding a new grocery store within a metropolitan area. A new grocery store does not result in more apples being sold. It only reallocates where the apples are purchased. The second highest number of trips generated by the dealership would be employee trips. Because of the highly technical nature of the work, it is assumed that these employees, also, would be drawn from other dealerships. There would also be some trips generated by customers wanting to purchase a vehicle. These customers would have either gone to a different Mercedes dealership, or another comparable brand's dealership. Therefore, the analysis seeks to answer the question of whether the existing trips would get longer or shorter with the addition of the project, and whether this effect cause an overall regional increase in vehicle-miles travelled.

VMT Evaluation Methodology

Travel Demand Model

Project VMT is defined as the total distance traveled by vehicles traveling to and from the proposed project over a typical day. In order to estimate boundary VMT, the citywide travel demand forecast model was used. The citywide model is the best available model to represent travel within the City of Palo Alto, and serves as the primary forecasting tool for the City. The model is a mathematical representation of travel within the nine Bay Area counties, as well as the Santa Cruz, San Benito, Monterey and San Juaquin counties. The base model structure was developed by the Metropolitan Transportation Commission (MTC) and further refined by the Santa Clara Valley Transportation Authority (VTA) for use within Santa Clara County. There are four main components of the model: 1) trip generation, 2) trip distribution, 3) mode choice, and 4) trip assignment. The model uses socioeconomic inputs (i.e., population, income, employment) aggregated into geographic areas, called transportation analysis zones (TAZ) to estimate travel within the model area. There are 110 TAZs within the model to represent the City of Palo Alto. The model was used to estimate the proposed project's effect on total daily boundary VMT in accordance with the City's VMT guidelines.

The boundary VMT method calculates all vehicle-miles travelled on the roadway network within a certain geographic boundary. For trips starting and/or ending within the boundary, only the portion of the trip that's within the boundary is counted towards VMT. For trips with neither an origin or destination within the boundary, but passing through the boundary, the portion of the trip that is within the geographic boundary is counted towards VMT.

Project Study Area

Based on discussion with City staff, the project is expected to draw customers from existing Mercedes-Benz dealerships as well as other premium brand dealerships generally within a 20-mile radius. As shown on Figure 3, there are 3 existing Mercedes-Benz dealerships within a 20-mile radius (Mercedes Autobahn in Belmont, Mercedes Stevens Creek in Santa Clara, and Mercedes Fletcher Jones in Fremont). Within the 20-mile radius, there are 27 other premium brand car dealerships for BMW, Audi, Tesla, Porsche, Lexus, Volvo, and Cadillac.

Scenario Evaluation

The VMT analysis was conducted by comparing the existing and existing plus project scenarios to determine the relative impact of the proposed project on VMT. As discussed above, the number of trips made by customers and employees in the model was held constant, but some trips from the existing Mercedes dealerships and other luxury brand dealerships were moved from their current zones to the project zone. This was done by adjusting the number of employees in the model within the zones. The model uses employment to estimate trips for customers and employees for all retail establishments.

Car dealerships are not explicitly represented in the model. The model uses retail employment as the input for all retail establishments. For the purpose of representing the correct number of daily trips (see Table 5 below) within the model, approximately 100 retail employees needed to be added to the TAZ representing the project site. Since car dealerships generate mostly existing customer vehicle service trips, the shifting of retail employees from other TAZs was concentrated at the other three Mercedes Benz dealerships within the 20-mile radius. For other existing dealerships, only approximately 2 retail employees were shifted to the project zone (see Figure 4). By shifting trips (via retail employees as a proxy) from both existing Mercedes Benz dealerships and other existing dealerships, the model would represent both existing Mercedes Benz customers choosing to service their vehicles at the proposed dealership, as well as non-Mercedes Benz customers that would instead of patronizing other dealerships come to the proposed dealership.

VMT Evaluation

Hexagon compared the total daily boundary VMT generated within the 20-mile radius with and without the proposed project. As shown in Table 2, the proposed project was shown to slightly reduce total daily boundary VMT generated by land uses within a 20-mile radius of the project site. This result accounts for all trips associated with the proposed dealership (service customers, sales customers from other Mercedes dealerships, sales customers from other comparable brands' dealerships, and employees).

For customers getting their Mercedes vehicles serviced, their trips are need-driven (need to get their vehicles serviced), not destination-driven (wanting to visit the new Mercedes building). It is logical to assume that they would pick the closest Mercedes facility to their home or workplace during a weekday (VMTs are modelled for a typical weekday). Currently, there are Mercedes dealerships in Belmont, Fremont, and in San Jose (see Figure 3). Current Mercedes owners with their home or work locations closer to the proposed Mercedes dealership than the current dealerships would be expected to patronize the new dealership instead because of its proximity. These trips would be shortened between 5 to 10 miles, thereby reducing VMT.

For customers looking to patronize a Mercedes dealership, their trips may be destination-driven or need-driven. Some may be attracted away from a current dealership closer to their homes because of the newness of the proposed dealership. Others would be attracted to the proposed dealership simply because it is the closest dealership. It is expected that in aggregate, this segment of customers would also reduce their total VMT, but on a much smaller scale than the service customers because of the potential of customers deciding to travel longer distances attracted by the newness of the dealership.

As a conservative measure, it was also assumed that a new Mercedes dealership in their area may draw sales customers away from other luxury brand dealerships. This is a conservative assumption because Mercedes is a well-known brand, and it is highly unlikely that the presence of a new dealership would affect people's desire to purchase one brand over another. As shown on Figure 3, these dealerships are mostly concentrated in San Jose and in Fremont, with a few scattered across the Peninsula. The likelihood of such a customer driving past an existing Mercedes dealership to visit the proposed dealership just because of its newness is very low. Therefore, the majority of customers in this segment are most likely residing between Belmont and San Jose, where there are current Mercedes dealerships. These customers would lengthen their trips by up to 10 miles, thereby increasing VMT.

The project is located in a relatively high VMT area for employee trips. Existing dealerships where jobs were shifted from are mostly relatively low VMT areas for employee trips (on average 4 VMT per employee shorter). Therefore, employee trips would increase the total VMT.

As discussed above, car dealerships would generate mostly existing service customer trips and employee trips. Sales customers are expected to be comparatively less on a typical weekday. When the VMT effects from the different components of service customers, sales customers and employees are aggregated, it would be expected that the proposed dealership's resulting total effect on VMT would be negative.

The VMT analysis was conducted using the citywide travel demand model by shifting retail employment from existing dealerships (see discussion in the previous section) within a 20-mile radius to the project location. The results show an overall small reduction in VMT within the 20-mile radius. It should also be noted that the proposed dealership also proposes a TDM plan that would reduce peak hour trip generation by 20%. The project also proposes to install a 10-foot wide Class I multi-use path along the project frontage on E. Bayshore Road and on Embarcadero Road, which would improve safety for bicyclists travelling in this area and could potentially reduce VMT by encouraging current drivers to try cycling.

Table 2
Project VMT Evaluation

Boundary Area	Daily Boundary VMT			
	Existing Conditions	Existing + Project Conditions	Change	%Change
20-Mile Radius	60,373,390	60,372,481	-909	-0.002%

Notes:
Analysis conducted using the Palo Alto Citywide Travel Demand Model.

Cumulative VMT

While the City of Palo Alto's VMT policy does not provide requirements for cumulative VMT analysis, the City's VMT Policy White Paper provides the following guidance:

> *For Cumulative Conditions, OPR's Technical Advisory states that a project that is below the VMT impact thresholds and does not have a VMT impact under baseline conditions would also not have a cumulative impact, as long as it is aligned with long-term State environmental goals, such as reducing GHG emissions, and relevant plans, such as the MTC RTP/SCS.*

As discussed above, the project would not generate a significant VMT impact, and would thus also be presumed to generate a less than significant cumulative VMT impact. The project is consistent with the Palo Alto Comprehensive Plan and would directly support many of the policies and programs outlined in the Comprehensive Plan's Circulation Chapter to reduce reliance on single-occupant vehicles, reduce greenhouse gas emissions, and promote bicycling and walking. The project proposes bicycle infrastructure improvements along its frontage that would improve bicycle safety and encourage cycling instead of driving. The proposed bicycle path along the project's frontage would complete bicycle connections to the site from other parts of Palo Alto. As detailed in the project's TDM Plan, the project is committed to reducing its vehicular trip generation through various TDM measures to encourage employees to use alternative modes. It should be noted that Mercedes dealerships operate with centralized office and appointment operations in its Oregon and Las Vegas corporate offices, which would reduce the proposed dealership's need for staffing in those departments.

Mercedes has been selling plug-in hybrid electric vehicles (PHEVs) for more than 5 years, and is in the process of transitioning to selling 100% electric vehicles by 2032 or 2033. Electric vehicles would greatly reduce greenhouse gas emissions compared to traditional internal combustion vehicles. Electric vehicles would also require less maintenance, which would mean fewer service trips to the dealership. The proposed Mercedes dealership would also be selling E-bikes with ranges between 27 to 74 miles, providing interested customers a potentially viable alternative to driving. The proposed Mercedes dealership would make these electric-powered product offerings more accessible to Bay Area residents and assist the State and local goals to reduce greenhouse gas emissions.

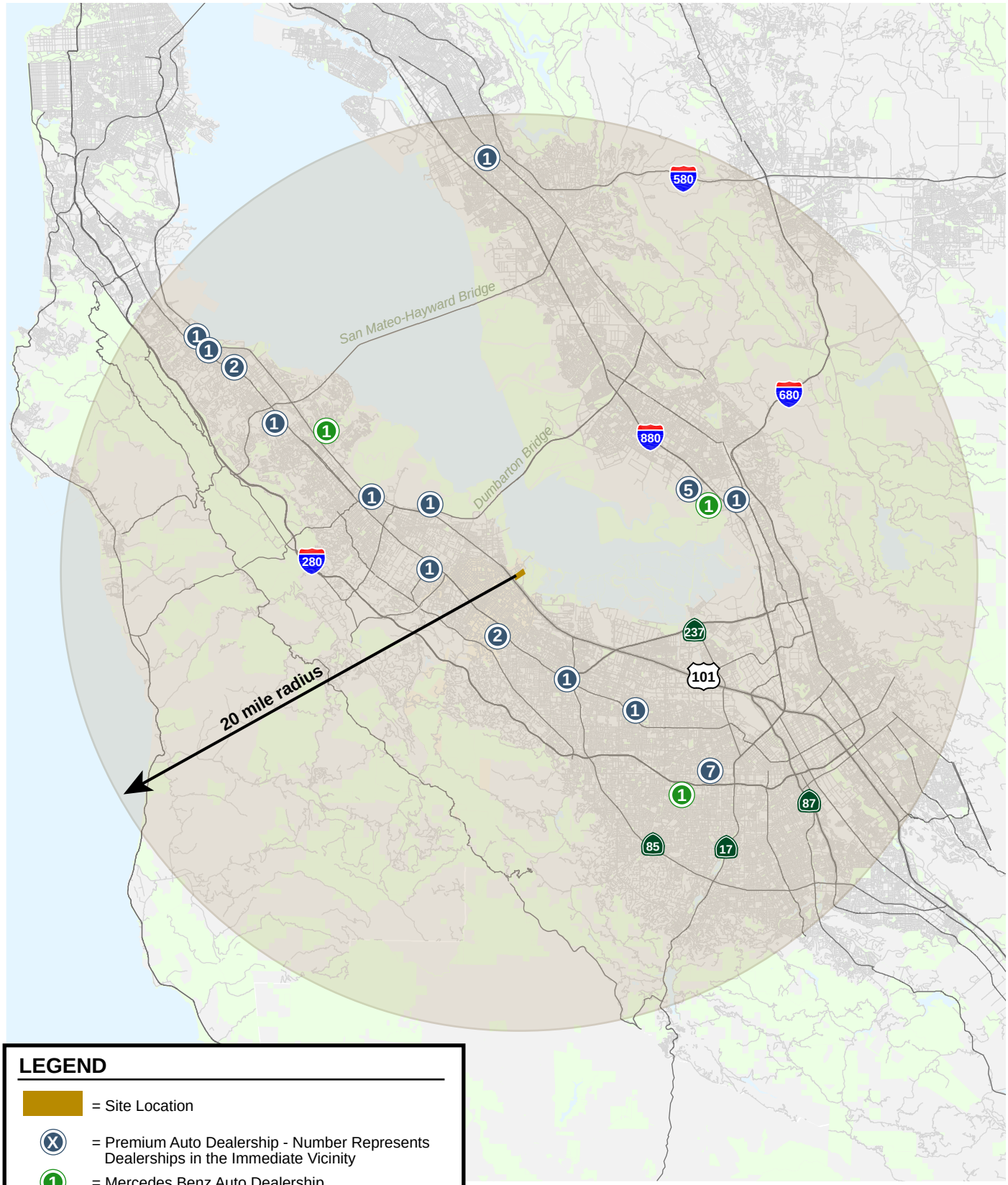


Figure 3
Locations of Comparable Premium Auto Dealerships

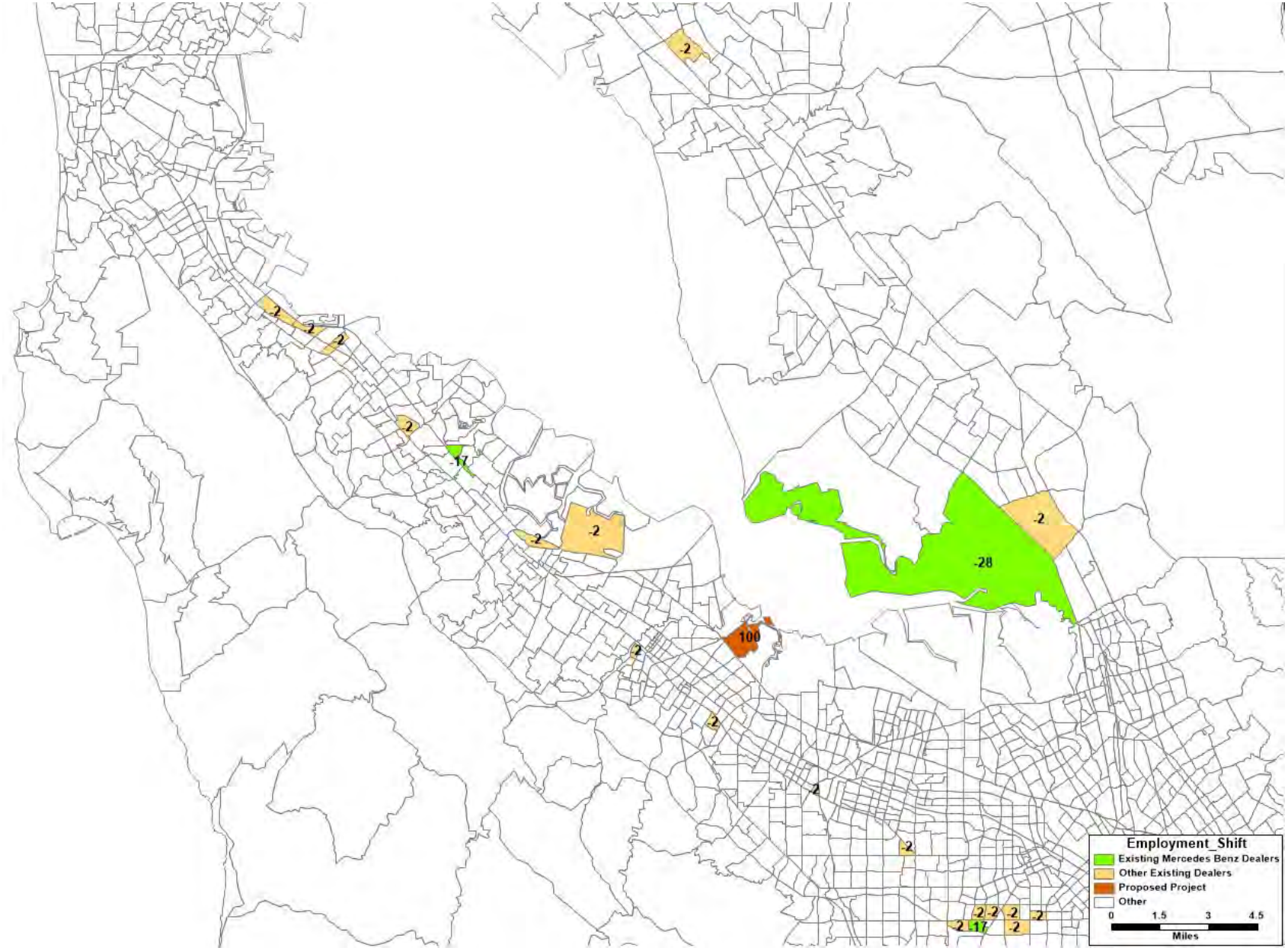


Figure 4
Reallocation of Model Employment Input for VMT Evaluation

NORTH
Not to Scale

3. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit services, pedestrian and bicycle facilities, and traffic operations at the study intersections.

Existing Roadway Network

Regional access to the project site is provided by US 101. Local access to the project site is provided via Embarcadero Road and E. Bayshore Road.

US 101 is a north-south freeway that extends through and beyond the Bay Area, connecting San Francisco to San Jose. US 101 is eight lanes wide with three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction in the vicinity of the project site. US 101 provides access to the study area via a full interchange at Embarcadero Road.

Embarcadero Road is an east-west arterial that extends eastward from El Camino Real and terminates near the Palo Alto Municipal Airport. In the vicinity of the project site, Embarcadero Road has four lanes with the speed limit is 25 miles per hour (mph). Sidewalks are present on both sides of the street, except the section between W. and E. Bayshore Road where sidewalks are present only on the north side of the street. East of Geng Road, bike lanes are present on both sides of the street with street parking on the south side of the street. Embarcadero Road runs along the northern boundary of the project site and provides access to the project site via an existing driveway that would allow right-in access only.

E. Bayshore Road is a two-lane frontage road that runs parallel to and immediately east of US 101. The speed limit is 35 mph. In the project vicinity, sidewalks are present on both sides of the street south of Embarcadero Road and on the east side of the street north of Embarcadero Road. Bike lanes are present on both sides of the street south of Watson Court. On-street parking is prohibited on E. Bayshore Road in the project vicinity. E. Bayshore Road runs along the western boundary of the Mercedes Benz site and provides access to the site via one full-access driveway.

Geng Road is a north-south roadway that extends from Embarcadero Road to its end terminus at Baylands Athletic Center. Geng Road has two lanes, and the prima facie speed limit is 25 mph. Sidewalks and bike lanes are present on both sides of the street. On-street parking is prohibited on Geng Road.

Existing Transit Services

At the time of this report, there are no existing public transit services to the study area.

Existing Pedestrian Facilities

Pedestrian facilities consist of sidewalks and crosswalks along the streets in the study area. East of E. Bayshore Road, sidewalks exist along both sides of Embarcadero Road, Geng Road, and E. Bayshore Road south of Embarcadero Road. North of Embarcadero Road, sidewalks exist on the east side of E. Bayshore Road. Between W. and E. Bayshore Road, sidewalks exist only on the north side of Embarcadero Road. West of W. Bayshore Road, sidewalks are found along both sides of Embarcadero Road and most residential roadways.

Crosswalks are present on some legs at the study intersections. However, both intersections lack marked crosswalks on the north leg and west leg. There is a marked crosswalk on the south leg at the E. Bayshore Road/Embarcadero Road intersection. No crosswalks exist at the US101/Embarcadero Road interchange. Pedestrians can cross US 101 via a dedicated pedestrian/bike overcrossing that can be accessed near the St. Francis Drive/Oregon Avenue intersection on the west side of US 101 and via E. Bayshore Road about 700 feet south of Embarcadero Road on the east side of US 101 (see Figure 5).

Existing Bicycle Facilities

The bicycle facilities in the vicinity of the project (see Figure 5) include a multi-use trail (Class I bikeway), striped bike lanes (Class II bikeway), and shared bike routes (Class III bikeway). Multi-use trails are shared between pedestrians and bicyclists and separated from motor vehicle traffic. Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are existing streets that accommodate bicycles but are not separate from the existing travel lanes. Routes are typically designated only with signs.

The Renzel Trail extends between Faber Place and the Adobe Creek Loop Trail and runs parallel to Bayshore Road. It connects the Adobe Creek Loop Trail with the San Francisquito Creek Trail through bike lanes on Embarcadero Road and Geng Road and bike routes on Faber Place. It is part of the Baylands trail system that traverses through the Baylands open space area of Palo Alto.

Bike lanes exist along both sides of Embarcadero Road east of Geng Road and along both sides of E. Bayshore Road south of Watson Court. Bike routes exist along of E. Bayshore Road north of Embarcadero Road. In addition, bicyclists and pedestrians are able to cross US 101 via a dedicated pedestrian/bike bridge that can be accessed via E. Bayshore Road.

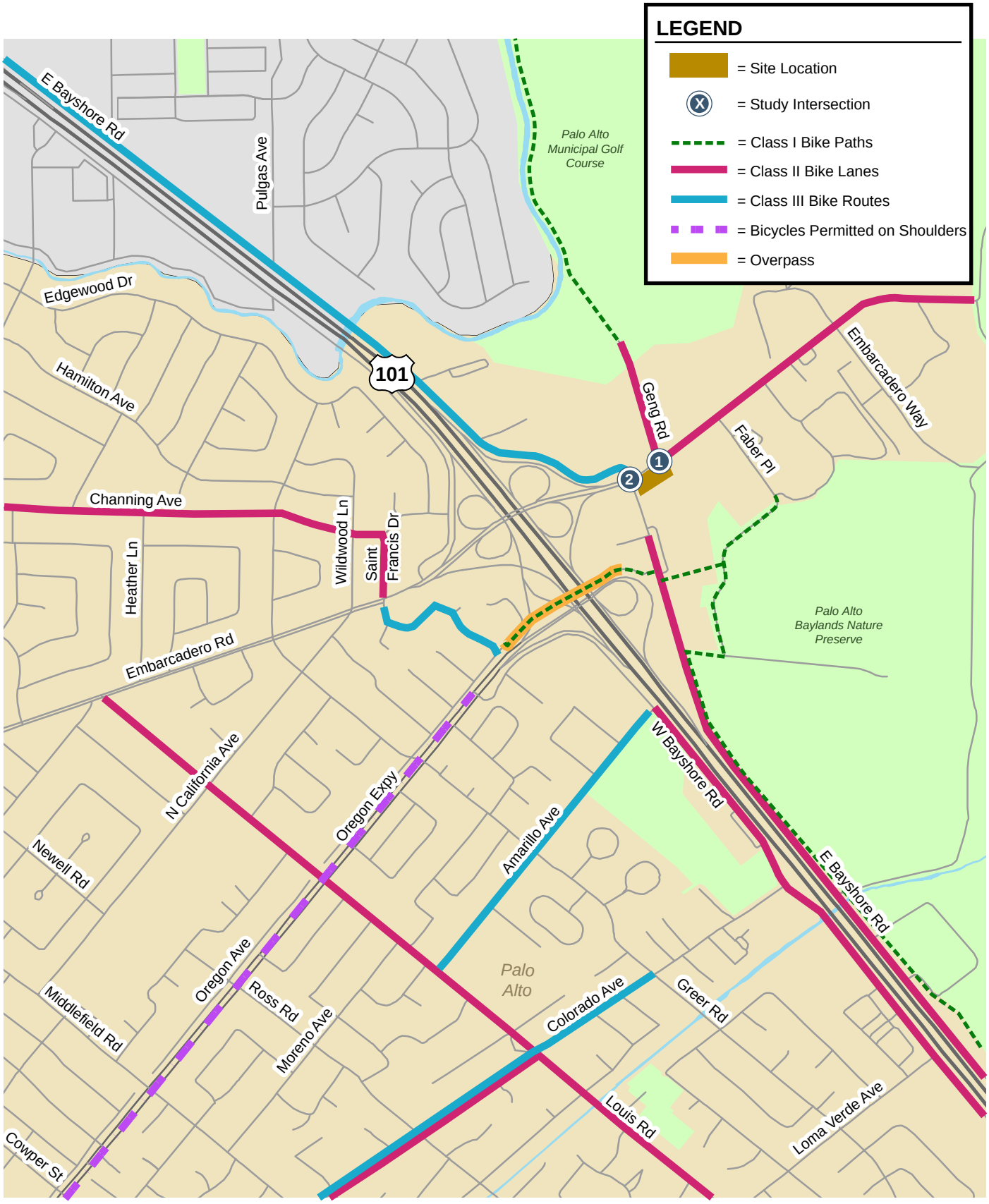


Figure 5
Existing Bicycle Facilities

Existing Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were obtained from Google Earth (see Figure 6.

Existing peak-hour volumes at the Geng Road and Embarcadero Road intersection used turning movement counts collected in August 2018, between 7:00 and 9:00 AM and between 4:00 and 6:00 PM. These traffic counts were increased by one percent per year to 2021.

Counts collected at the Embarcadero Road and E. Bayshore Road intersection for the 2019 traffic study at this project site were collected during a time when there was construction along US 101. Previous field observations indicated extensive congestion issues along Bayshore Road north of this intersection that gridlocked this intersection and prevented it from serving its demand volume within the peak hour. Congestion due to the US 101 construction no longer exist. Therefore, new turning movement counts at the E. Bayshore Road and Embarcadero Road intersection were collected in February 2022, between 7:00 and 9:00 AM and between 4:00 and 6:00 PM. Due to Covid-19, these traffic counts were adjusted to represent pre-COVID conditions using a factor derived from August 2018 counts and new February 2022 counts at the St. Francis Drive and Embarcadero Road intersection. Comparing the August 2018 and February 2022 counts at this intersection, the August 2018 AM peak hour counts were higher by a factor of 1.23, and the PM peak hour counts were higher by a factor of 1.18. These factors were used to adjust the E. Bayshore Road and Embarcadero Road intersection counts to pre-COVID conditions. As a conservative measure, the adjusted counts were further increase by a one-percent growth rate for 3 years, to represent the potential increase in traffic if there was no Covid.

The intersection turning-movement counts conducted for this analysis are presented in Appendix A. Traffic volumes for all components of traffic are tabulated in Appendix B.

Existing Intersection Levels of Service

Intersection levels of service were evaluated against City of Palo Alto and CMP standards. The results of the intersection level of service analysis (see Table 3) show that both intersections are operating at LOS D or better during the AM and PM peak hours.

The intersection levels of service calculation sheets are included in Appendix C.

Table 3
Existing Intersection Levels of Service

ID	Intersection (Jurisdiction)	LOS Standard	Peak Hour	Count Date[2]	Avg. Delay[1]	LOS
1	Geng Road and Embarcadero Road (Palo Alto)	D	AM	08/15/18	7.6	A
			PM	08/15/18	9.9	A
2	E. Bayshore Road and Embarcadero Road (Palo Alto)	D	AM	02/23/22	24.4	C
			PM	02/23/22	35.5	D+

Notes:
[1] Overall weighted average control delay (seconds per vehicle) is reported for signalized intersections.
[2] The E. Bayshore Road/Embarcadero Road counts were factored to pre-COVID conditions.
Bold indicates a substandard level of service.

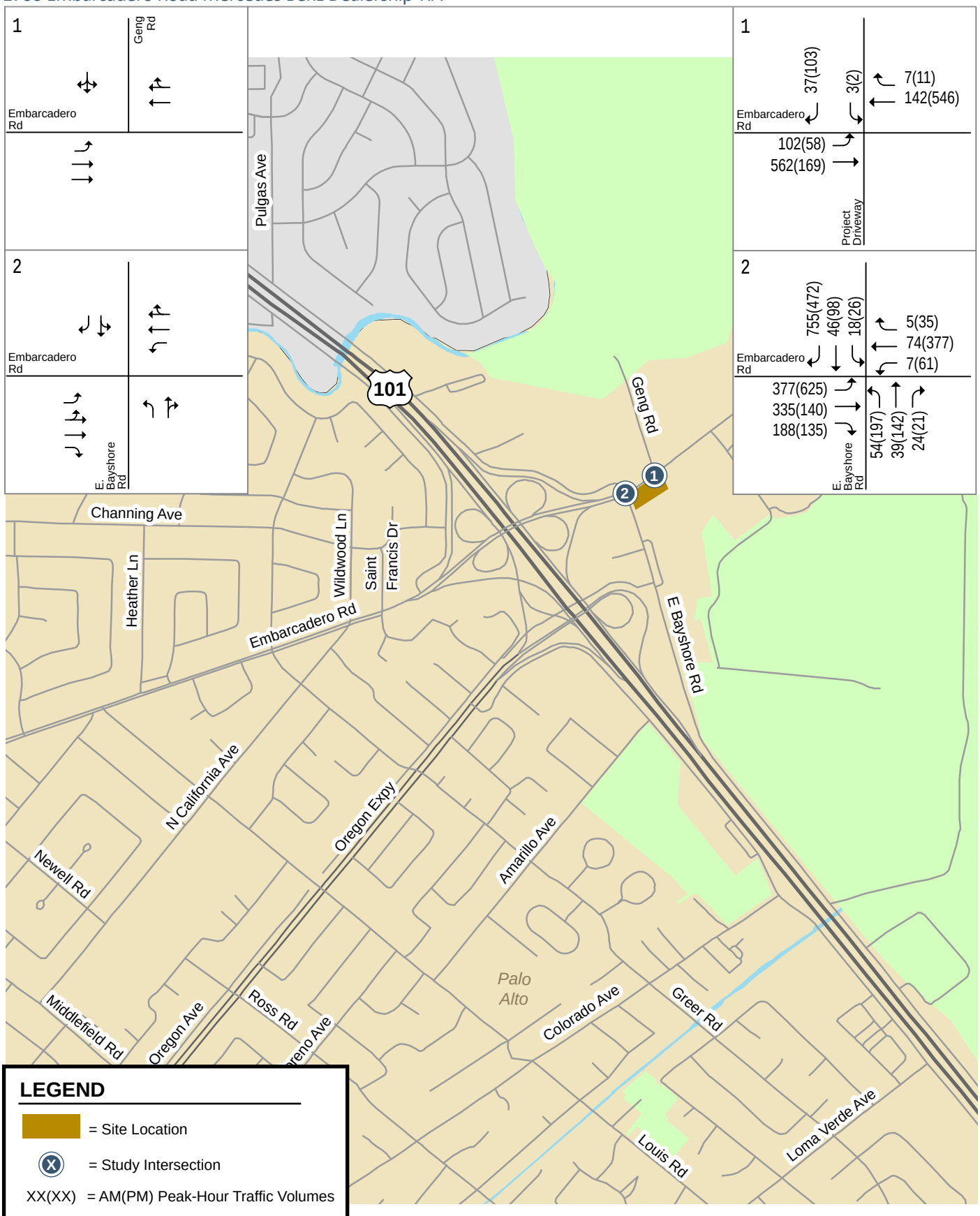


Figure 6
Existing Lane Configurations and Existing Traffic Volumes

4. Existing Plus Project Conditions

This chapter describes existing plus project traffic conditions, including the method by which project traffic is estimated.

Roadway Network under Existing Plus Project Conditions

The roadway network under existing plus project conditions would be the same as the existing roadway network.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed development was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Trip generation for the proposed auto dealership was estimated based on the square footage of the project and using the average trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The ITE trip generation rate for Automobile Sales (New) (Land Use 840) was utilized for the proposed Mercedes Benz Dealership.

Using these average rates, the proposed Mercedes Benz dealership is estimated to produce 57 trips in the AM peak hour (42 inbound and 15 outbound) and 74 trips in the PM peak hour (30 inbound and 44 outbound) (see Table 4). No credit was given for the existing restaurant on the site because the restaurant has been closed for several years, and the site is used to store Audi dealership's vehicles.

Table 4
Project Trip Generation Estimates

Land Use	Size (sq. ft.)	Daily Trip Rate[1]	Daily Trips Total	AM Peak Hour Trip Rate[1]	AM Splits In	AM Splits Out	AM Trips In	AM Trips Out	AM Trips Total	PM Peak Hour Trip Rate[1]	PM Splits In	PM Splits Out	PM Trips In	PM Trips Out	PM Trips Total
Proposed Land Uses															
Mercedes Benz	30,433	27.84	847	1.86	73%	27%	42	15	57	2.42	40%	60%	30	44	74
Net Project Trips							**42**	**15**	**57**				**30**	**44**	**74**

Notes:
Trip rates for Automobile Sales (New) are from the ITE Trip Generation Manual, 11th Edition, 2021.

1. Automobile Sales (New) (Land Use 840) averages rates expressed in trips per 1,000 square feet are used.

Trip Distribution and Assignment

The trip distribution pattern for the proposed auto dealership was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses.

The peak-hour trips generated by the project were assigned to the roadway system based on the directions of approach and departure, the roadway network connections, and the locations of project driveways. Project trip assignment assumptions are discussed below:

- The dealership trips would access the site via a right-in only driveway on Embarcadero Road and an existing full-access driveway on E. Bayshore Road. It was assumed that most inbound trips would enter the site via the Embarcadero Road driveway.

Figure 7 show the trip distribution and assignment of the project traffic at the study intersections and the gross project trips at each driveway.

A tabular summary of project traffic at each study intersection is contained in Appendix B.

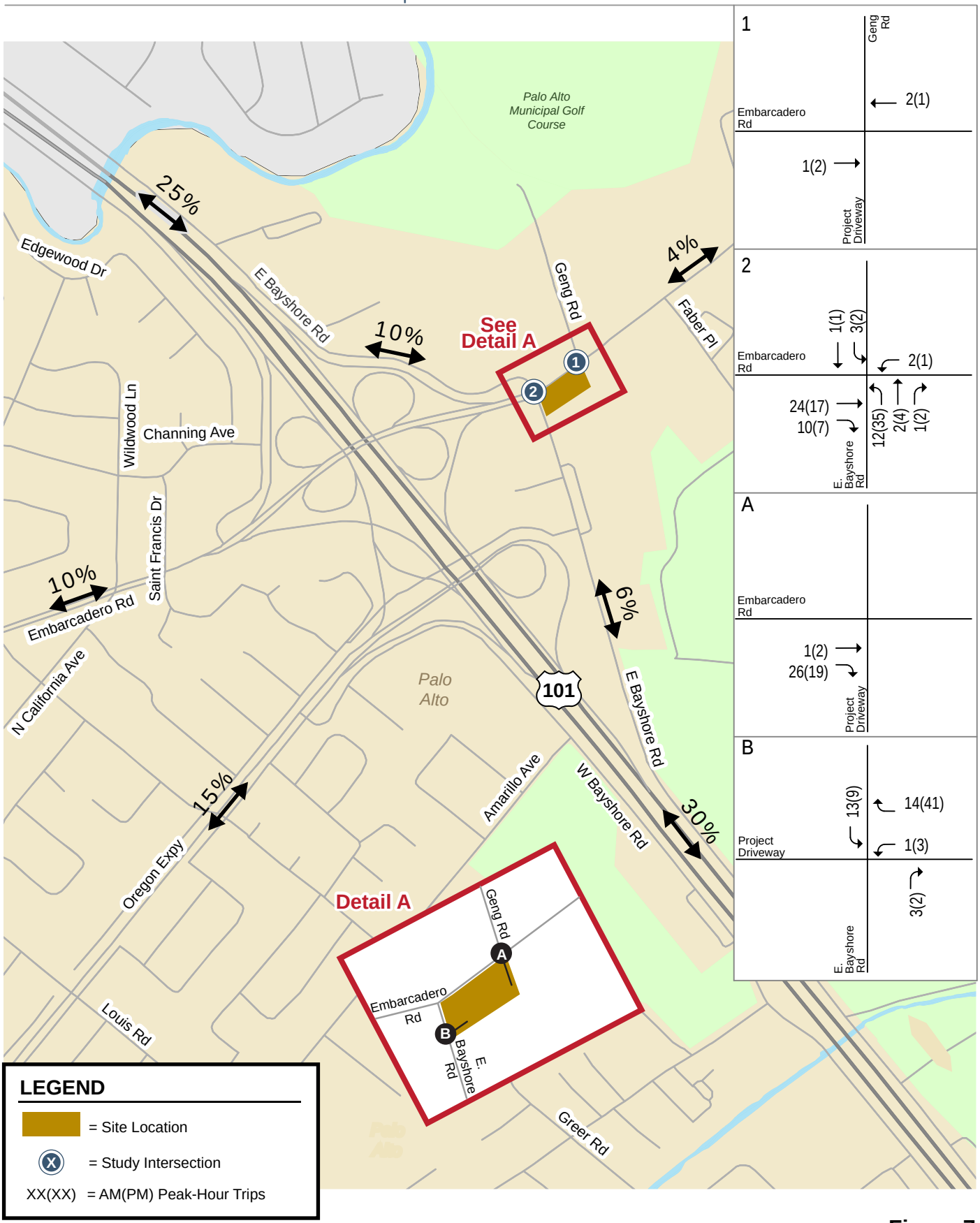


Figure 7
Project Trip Distribution and Assignment

Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes (see Figure 8).

Existing Plus Project Intersection Levels of Service

The level of service analysis under existing plus project conditions analysis is presented for information only as the criteria that define an adverse effect at a signalized intersection are based on background plus project conditions.

The results of the intersection level of service analysis show that both study intersections would operate at LOS D or better under existing plus project conditions during both AM and PM peak hours (see Table 5).

Table 5
Existing Plus Project Intersection Levels of Service

ID	Intersection (Jurisdiction)	LOS Standard	Peak Hour	Existing		Existing+Project	
				Avg. Delay[1]	LOS	Avg. Delay[1]	LOS
1	Geng Road and Embarcadero Road (Palo Alto)	D	AM	7.6	A	7.6	A
			PM	9.9	A	9.9	A
2	E. Bayshore Road and Embarcadero Road (Palo Alto)	D	AM	24.4	C	24.5	C
			PM	35.5	D+	36.5	D+

Notes:
[1] Overall weighted average control delay (seconds per vehicle) is reported for signalized intersections.
Bold indicates a substandard level of service.

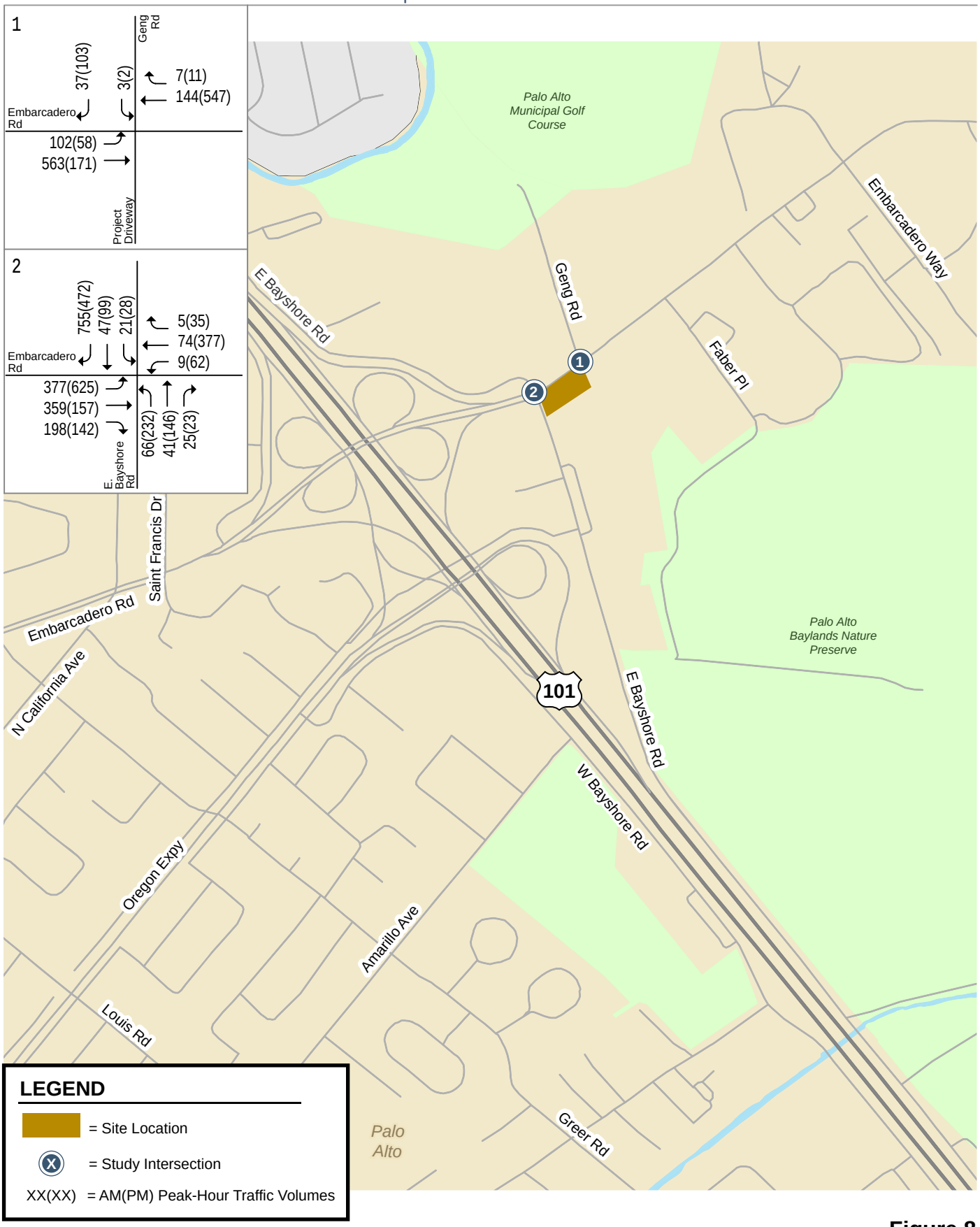


Figure 8
Existing Plus Project Traffic Volumes

5. Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion of the proposed project. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Roadway Network Under Background Conditions

The roadway network under background conditions would be the same as the existing roadway network because there are no planned and funded transportation improvements at the study intersections that would alter the existing intersection lane configurations.

Background Traffic Volumes

Background traffic volumes for the study intersections (see Figure 9) were estimated by applying a compound growth factor of 1.4 percent per year for 2 years to the existing traffic volumes. This growth assumption was taken from the 2019 study. The estimated trips were assigned to the study intersections according to distributions identified in the development traffic studies. There are no approved projects within the project vicinity that would add traffic to the study intersections.

Background Intersection Levels of Service

The results the level of service analysis under background conditions (see Table 6) show that both study intersections would operate at LOS D or better during the AM and PM peak hours.

Intersection level of service calculation sheets are included in Appendix C.

Table 6
Background Intersection Levels of Service

				Existing		Background	
ID	Intersection (Jurisdiction)	LOS Standard	Peak Hour	Avg. Delay[1]	LOS	Avg. Delay[1]	LOS
1	Geng Road and Embarcadero Road (Palo Alto)	D	AM	7.6	A	7.6	A
			PM	9.9	A	9.9	A
2	E. Bayshore Road and Embarcadero Road (Palo Alto)	D	AM	24.4	C	24.7	C
			PM	35.5	D+	35.9	D+

Notes:
[1] Overall weighted average control delay (seconds per vehicle) is reported for signalized intersections.
Bold indicates a substandard level of service.

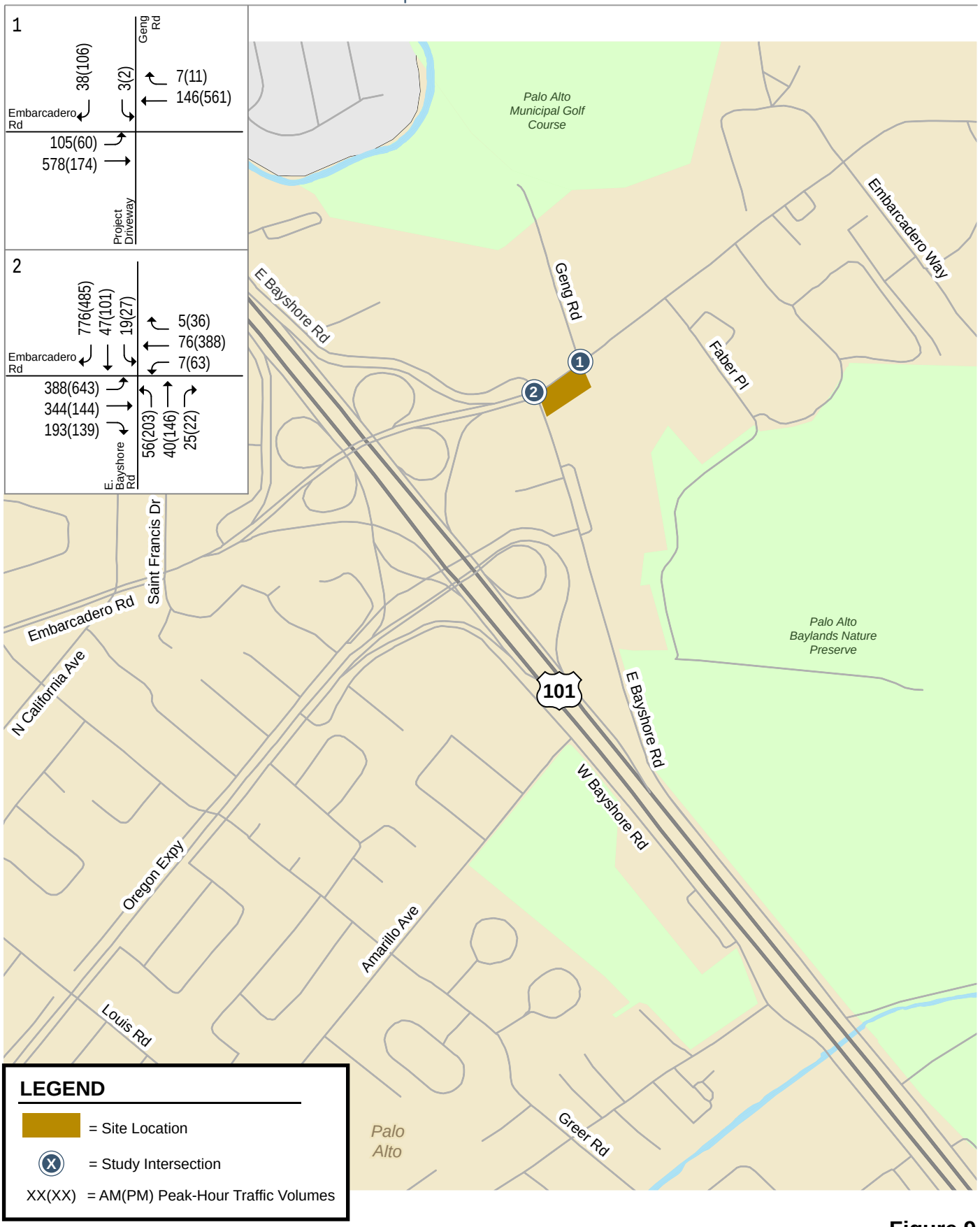


Figure 9
Background Traffic Volumes

6.
Background Plus Project Conditions

This chapter describes background plus project traffic conditions. Background plus project conditions were evaluated relative to background conditions in order to determine potential project effects.

Roadway Network Under Background Plus Project Conditions

The roadway network under background plus project conditions would be the same as the existing plus project roadway network as described in Chapter 4.

Project Trip Estimates

The estimated project trip generation, distribution and assignment are the same under background plus project conditions as previously described under existing plus project conditions (see Chapter 4).

Background Plus Project Traffic Volumes

Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 10).

Background Plus Project Intersection Levels of Service

The results of the level of service analysis under background plus project conditions (see Table 7) show that both study intersections would operate at LOS D or better under both AM and PM peak hours. Therefore, the project would not generate adverse intersection effects at these intersections.

Intersection level of service calculation sheets are included in Appendix C.

Table 7
Background Plus Project Intersection Levels of Service

				Background		Background+Project			
ID	Intersection (Jurisdiction)	LOS Standard	Peak Hour	Avg. Delay[1]	LOS	Avg. Delay[1]	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	Geng Road and Embarcadero Road (Palo Alto)	D	AM	7.6	A	7.6	A	0.0	0.001
			PM	9.9	A	9.9	A	0.0	0.000
2	E. Bayshore Road and Embarcadero Road (Palo Alto)	D	AM	24.7	C	24.8	C	0.0	0.003
			PM	35.9	D+	36.9	D+	1.2	0.024

Notes:
[1] Overall weighted average control delay (seconds per vehicle) is reported for signalized and roundabout intersections.
Bold indicates a substandard level of service.

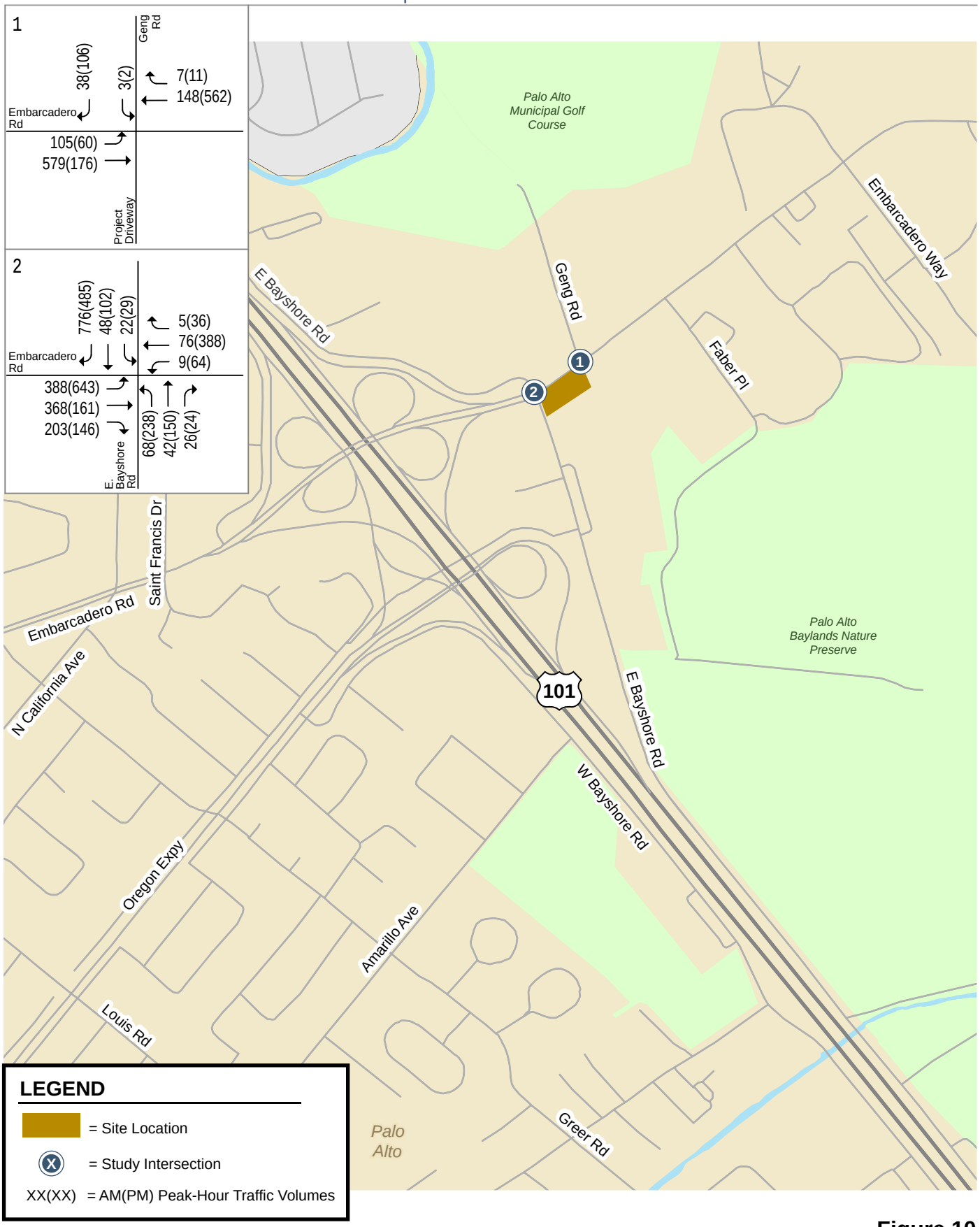


Figure 10
Background Plus Project Traffic Volumes

7. Cumulative Conditions

This chapter describes the roadway traffic operations under cumulative no project conditions and cumulative plus project conditions. Cumulative traffic volumes reflect traffic generated by the approved development projects and traffic growth contributed by the pending developments in the study area. Cumulative plus project conditions were evaluated relative to cumulative no project conditions in order to determine potential project impacts.

Roadway Network under Cumulative Conditions

The roadway network under cumulative conditions would be the same as the existing plus project roadway network as described in Chapter 4.

Cumulative Traffic Volumes

The cumulative no project traffic volumes were estimated by applying a compound growth factor of 1.4 percent per year for 5 years to the existing traffic volumes. There are no approved or pending projects within the project vicinity. This growth assumption was furnished by the City of Palo Alto.

The project trip estimates in Chapter 4 were then added to the cumulative no project traffic volumes to yield cumulative plus project traffic volumes (see Figure 11). Traffic volumes for all components of traffic are tabulated in Appendix B.

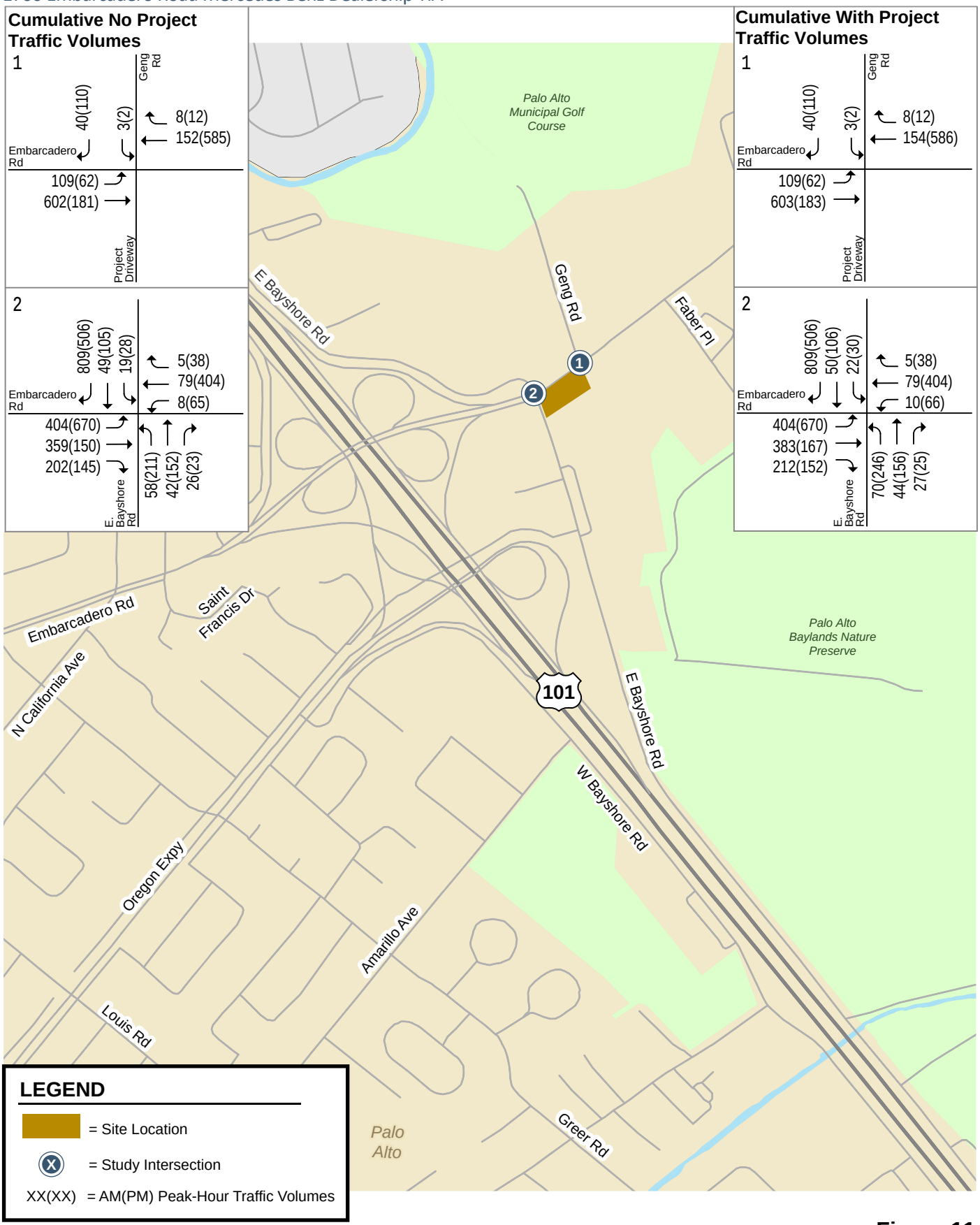


Figure 11
Cumulative No Project and With Project Traffic Volumes

Cumulative Intersection Levels of Service Analysis

The results of the level of service analysis under cumulative conditions (see Table 8) show that both study intersections would operate at LOS D or better during the AM and PM peak hours under cumulative conditions, both without and with the project. Based on City of Palo Alto level of service impact criteria, this would not constitute in an adverse effect.

Intersection level of service calculation sheets are included in Appendix C.

Table 8
Cumulative plus Project Levels of Service

ID	Intersection (Jurisdiction)	LOS Standard	Peak Hour	Cumulative Avg. Delay[1]	Cumulative LOS	Cumulative+Project Avg. Delay[1]	Cumulative+Project LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	Geng Road and Embarcadero Road (Palo Alto)	D	AM	7.6	A	7.7	A	0.0	0.001
			PM	9.9	A	9.9	A	0.0	0.000
2	E. Bayshore Road and Embarcadero Road (Palo Alto)	D	AM	25.3	C	25.4	C	0.0	0.003
			PM	36.2	D+	37.3	D+	1.2	0.024

Notes:
[1] Overall weighted average control delay (seconds per vehicle) is reported for signalized and roundabout intersections.
Bold indicates a substandard level of service.

8.
Other Transportation Issues

This chapter presents other transportation issues associated with the project, including:

- Driveway queuing analysis
- Site access and circulation
- Effects on pedestrians, bicycles, and transit facilities

The analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Driveway Queuing Analysis

The driveway queuing analysis (see Table 9) was performed to show the traffic operations (vehicle delay and queue length) at the full-access driveway under background plus project conditions. The analysis indicates that the estimated 95th percentile vehicle queues for the inbound and outbound traffic at the project driveway would be minor (1-3 vehicles) in both AM and PM peak hours and are not expected to create any operational issues related to vehicle queueing on the street or on the project site. The right-in access only driveway on Embarcadero Road is expected to operate well based on the intersection level of service analysis results for the Geng Road/Embarcadero Road intersection.

The driveway on E. Bayshore Road is located approximately 290 feet south of the E. Bayshore Road/Embarcadero Road intersection. Field observations indicated that during the PM peak hour, the northbound left-turn and through/right-turn queues constantly extended past the driveway and did not clear during most of the peak commute period. It is expected that the northbound vehicle queues would break at the driveway as a courtesy when there are vehicles entering or exiting the site. Additionally, most of the inbound traffic would enter the site via the inbound-only driveway on Embarcadero Road. Therefore, the existing queuing issue on E. Bayshore Road is not expected to cause operational problems at the driveway.

Based on the site plan and field observations, adequate sight distance is available at the project driveways to ensure that exiting vehicles can see pedestrians on the sidewalk, as well as vehicles on the street.

Table 9
Driveway Traffic Operations under Background Plus Project Conditions

Intersection	E. Bayshore Rd Driveway at Mercedes Benz Site			
Movement	SB LT & TH[2]	WB	SB LT & TH[2]	WB
Peak Hour Period	AM	AM	PM	PM
Project Trips (vph)	4	9	3	17
Average Delay[2] (sec/veh)	7.5	9.1	8	10.9
Level of Service	A	A	A	B
Volume (vph)	260	15	312	44
Avg. Queue (veh/ln)	1	1	1	1
Avg. Queue (ft/ln)	25	25	25	25
95th% Queue (veh)	3	3	3	3
95th% Queue[3] (ft)	75	75	75	75

Notes:
NB = northbound; SB = southbound; WB = westbound; LT = left-turn movement; TH = through movement.

1. Vehicle queue accounts for the delay of the SB traffic.
2. Average delay of stop-controlled approaches (outbound movement at the project driveway and left-turn inbound movement on the street).
3. Assumes 25 feet per vehicle queued.

Site Access and Circulation

A review of site access and circulation was completed based on the site plan dated February 14, 2022 and shown in Figure 2.

Vehicle Site Access and Circulation

Vehicle access to the site is provided via an existing driveway on Embarcadero Road with right-in access only and an existing full-access driveway on E. Bayshore Road. It is expected that most dealership inbound trips would enter the site via the Embarcadero Road driveway because it provides direct access to the service drive. According to the City of Palo Alto Municipal Code, the minimum typical width for a one-way driveway is 12 feet, and the minimum typical width for a two-way driveway is 20 feet. The site plan shows that the right-in access only driveway on Embarcadero Road is approximately 18 feet wide, and the full access driveway on E. Bayshore Road is approximately 28 feet wide, which meet the City's standard. Figure 7 shows the gross project trips at each driveway.

Customer and Employee Parking

The customer and employee parking spaces would be located throughout the project site. The site plan shows the parking along the outer spaces (grey shaded spaces) along the Bayshore Road frontage would be for vehicle display parking. The outer spaces (white shaded with squares spaces) along the east and south side of the project site would be for vehicle inventory parking. The parking spaces adjacent to the drive aisles would be for general parking, which includes vehicles being serviced, customers, and employees. The project site would employ a porter to shift vehicles around the site to access vehicles in the vehicle inventory parking spaces. Sales customer vehicles would park in front of the building on site. Parking stalls would be accessed via the 24-foot drive aisle around the project site.

The 24-foot drive aisle meets the City's standard minimum width for the two-way drive aisles where 90-degree parking is provided.

Customers arriving to service their vehicles would drop off/pickup their vehicles at the service drive located between the two buildings. The entrance to the service drive would be located on the west side of the project site. It is likely that most service customers would use the E. Bayshore Road driveway to arrive at the site. Employees would park their vehicles on-site.

Parking Stall Dimensions

The City's off-street parking design standard for 90-degree uniform parking stalls is 9 feet wide by 17.5 feet long. The site plan shows 141 90-degree parking spaces that measure 9 feet wide by 18 feet long. The handicap stalls all measure 9 feet wide by 18 feet long and include access aisles of 8 feet for van accessibility, which meets the City's standards.

Truck Access and Circulation

Emergency response vehicles and trucks would access the project site from the E. Bayshore Road project driveway. As shown in figure 2, the site provides adequate access and circulation around the project site. The site plan also shows two loading areas at the south end of the project site. Car haulers that can haul up to three cars will unload vehicles on site. Larger vehicles will unload off-site.

The site plan shows a trash enclosure located at the southeast corner of the site. The site provides adequate access and circulation for trucks to access the trash enclosure. It is presumed that all garbage and delivery trucks (other than large semi-trucks) would perform their operations by entering and exiting through the E. Bayshore Road driveway.

Pedestrian Site Access and Circulation

Pedestrian access to the project site is provided via sidewalks on Embarcadero Road and E. Bayshore Road and crosswalks at the Embarcadero Road/E. Bayshore Road intersection. Pedestrian access on Embarcadero Road between W. Bayshore Road and E. Bayshore Road is inadequate because crosswalks are lacking. However, pedestrians can utilize the pedestrian/bike bridge that crosses US 101 700 feet south of Embarcadero Road. In addition to the bridge, bicycle access to the site is provided via bike lanes on E. Bayshore Road, south of Watson Court, and bike routes on E. Bayshore Road north of Embarcadero Road. Within the site, there would be pedestrian paths between buildings and the streets. The project would provide bike racks near the main entrance and/or in other highly visible areas.

Effects on Pedestrians, Bicycles, and Transit Facilties

The following describes the existing and future transit, pedestrian and bicycle facilities that serve the site and evaluates whether appropriate bicycle and pedestrian access and transit service are provided between the site and nearby destinations. As discussed below, the project would not cause any adverse effects to the existing or planned pedestrian, bicycle, and transit facilities.

Pedestrian Facilities

Pedestrian facilities consist of sidewalks and crosswalks along the streets in the study area. East of E. Bayshore Road, sidewalks exist along both sides of Embarcadero Road, Geng Road, and E. Bayshore Road south of Embarcadero Road. North of Embarcadero Road, sidewalks exist on the east side of E. Bayshore Road. Between W. and E. Bayshore Road, sidewalks exist only on the north side of Embarcadero Road. West of W. Bayshore Road, sidewalks are found along both sides of Embarcadero Road and most residential roadways.

Crosswalks are present on some legs at the study intersections. However, many intersections within the project vicinity lack crosswalks on the north leg. Also, no crosswalks exist at the US101/Embarcadero Road interchange. Pedestrians can cross US 101 via a dedicated pedestrian/bike overcrossing that can be accessed near the St. Francis Drive/Oregon Avenue intersection on the west side of US 101 and via E. Bayshore Road about 700 feet south of Embarcadero Road on the east side of US 101.

The project plans to modify the sidewalks along the frontages of the project site by installing a 10-foot wide Class I multi-use path, which is further discussed in the next section. The 10-foot multi-use path would accommodate both bicyclists and pedestrians and would represent an improvement over the existing 6-foot sidewalks.

Bicycles Facilities

The bicycle facilities in the vicinity of the project include a multi-use trail (Class I bikeway), striped bike lanes (Class II bikeway), and shared bike routes (Class III bikeway).

The Renzel Trail extends between Faber Place and the Adobe Creek Loop Trail and runs parallel to Bayshore Road. It connects the Adobe Creek Loop Trail with the San Francisquito Creek Trail through bike lanes on Embarcadero Road and Geng Road and bike routes on Faber Place. It is part of the Baylands trail system that traverses through the Baylands open space area of Palo Alto.

Bike lanes exist along both sides of Embarcadero Road east of Geng Road and along both sides of E. Bayshore Road south of Embarcadero Road. Bike routes exist along of E. Bayshore Road north of Embarcadero Road. In addition, bicyclists and pedestrians are able to cross US 101 via a dedicated pedestrian/bike bridge that can be accessed via E. Bayshore Road.

According to the Palo Alto Bicycle and Pedestrian Transportation Plan, there is a proposed shared bike route along Embarcadero Road west of Geng Road. The project would be compatible with this planned bike route.

The project also proposes to install a 10-foot wide Class I multi-use path along the project frontage on E. Bayshore Road and on Embarcadero Road. Currently, there is a bicycle lane gap on E. Bayshore Road between Embarcadero Road and the southern edge of the project site. The proposed multi-use path would connect the northbound bike lane along Bayshore Road to provide bicyclists a complete bicycle facility. The section of the proposed multi-use path along Embarcadero Road would also provide bicyclists a complete bicycle facility connecting Bayshore Road and the bike lanes on Geng Road. The proposed multi-use path would separate bicyclists from vehicles, providing a safer environment for bicyclists along E. Bayshore Road and along Embarcadero Road in front of the building frontage. It is assumed that the City will in the future implement a plan for bicyclists on southbound E. Bayshore Road to be able to use the Class I multi-use path and then continue south using the existing on-street bike lanes.

Transit Services

There are currently no public transit servicing the study area, and the project is not expected to generate a significant number of transit trips. It is unlikely that the project would by itself generate enough demand for transit service to justify a new transit line or shuttle services.

9. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the the City of Palo Alto, the Santa Clara Valley Transportation Authority (VTA), and the City/County Association of Governments of San Mateo County (C/CAG). The study analyzes the traffic impacts of the proposed development on the key intersections during the weekday AM and PM peak hours of traffic. In addition, the study includes driveway queuing analysis at selected intersections, a review of site access and circulation, and an evaluation of potential impacts to transit services and pedestrian and bicycle facilities.

VMT Analysis

The VMT analysis was conducted by comparing the existing and existing plus project scenarios to determine the relative impact of the proposed project on VMT. The project VMT is defined as the total distance traveled by vehicles traveling to and from the proposed project over a typical day. The citywide model is the best available model to represent travel within the City of Palo Alto and serves as the primary forecasting tool for the City. The model was used to estimate the proposed project's effect on total daily boundary VMT in accordance with the City's VMT guidelines. The project is expected to draw customers from existing Mercedes-Benz dealerships as well as other premium brand dealerships within a 20-mile radius. Hexagon compared the total daily boundary VMT generated within the 20-mile radius with and without the proposed project. The proposed project was shown to slightly reduce total daily boundary VMT generated by land uses within a 20-mile radius of the project site.

Project Trip Estimates

Trip generation for the proposed auto dealership was estimated based on the square footage of the project and using the average trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The ITE trip generation rate for Automobile Sales (New) (Land Use 840) was utilized for the proposed Mercedes Benz Dealership. The proposed Mercedes Benz dealership is estimated to generate 57 trips in the AM peak hour (42 inbound and 15 outbound) and 74 trips in the PM peak hour (30 inbound and 44 outbound).

Intersection Level of Service Analysis

The results of the intersection level of service analysis show that both study intersections are operating at LOS D or better during the AM and PM peak hours and would continue to operate at LOS D under background and cumulative conditions. The addition of project-generated traffic would not create an

adverse effect, as defined by the City of Palo Alto, at the intersection during the AM and PM peak hour under background plus project and cumulative plus project conditions.

Other Transportation Issues

The site plan shows adequate site access and circulation, and no significant traffic operational issues are expected to occur as a result of the project. The project would not have an adverse effect on the existing or planned transit, pedestrian, or bicycle facilities in the study area.

1700 Embarcadero Road
Mercedes Benz Dealership TIA

Technical Appendices

October 2022

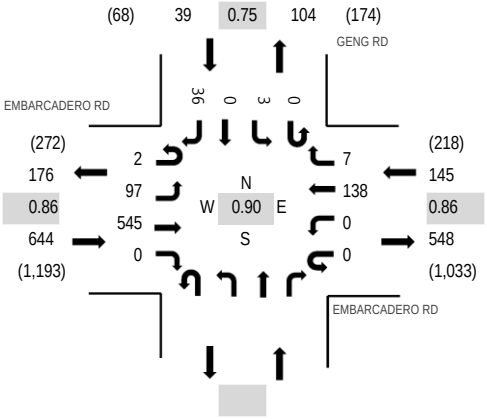
Appendix A

Traffic Counts

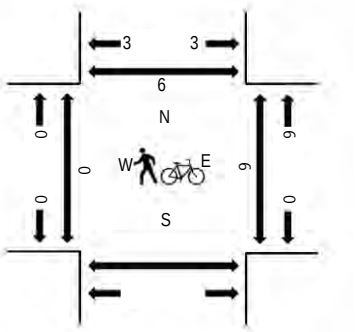
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 1 GENG RD & EMBARCADERO RD AM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	EMBARCADERO RD Eastbound				EMBARCADERO RD Westbound				Northbound				GENG RD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	11	84	0	0	0	11	1					0	0	0	10	118	651	0	1		1
7:15 AM	0	9	123	0	0	0	14	1					0	0	0	4	151	747	0	0		0
7:30 AM	0	13	116	0	0	0	22	1					0	1	0	6	159	780	0	0		1
7:45 AM	0	33	159	0	0	0	22	1					0	2	0	6	223	820	0	0		3
8:00 AM	0	30	139	0	0	0	29	3					0	0	0	13	214	828	0	1		1
8:15 AM	2	22	119	0	0	0	35	2					0	0	0	4	184		0	0		1
8:30 AM	0	19	134	0	0	0	33	1					0	2	0	10	199		0	1		0
8:45 AM	0	26	153	0	0	0	41	1					0	1	0	9	231		0	4		3

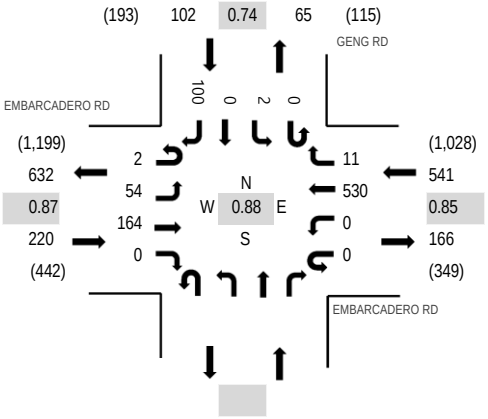
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	5	4	0	0	0	5	0					0	0	0	6	20
Lights	2	83	526	0	0	0	120	5					0	0	0	16	752
Mediums	0	9	15	0	0	0	13	2					0	3	0	14	56
Total	2	97	545	0	0	0	138	7					0	3	0	36	828

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

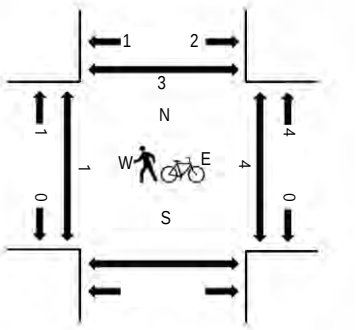
Location: 1 GENG RD & EMBARCADERO RD PM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	EMBARCADERO RD Eastbound				EMBARCADERO RD Westbound				Northbound				GENG RD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	2	13	50	0	0	0	137	3					0	2	0	23	230	849	0	2		0
4:15 PM	1	10	47	0	0	0	134	2					0	1	0	34	229	863	0	0		0
4:30 PM	1	12	32	0	0	0	128	5					0	1	0	23	202	836	1	2		1
4:45 PM	0	16	41	0	0	0	109	3					0	0	0	19	188	827	0	2		0
5:00 PM	0	16	44	0	0	0	159	1					0	0	0	24	244	814	0	0		1
5:15 PM	0	11	43	0	0	0	122	3					0	0	0	23	202		0	3		0
5:30 PM	0	13	37	0	0	0	120	2					0	2	0	19	193		0	5		2
5:45 PM	0	4	49	0	0	0	99	1					0	0	0	22	175		0	1		1

Peak Rolling Hour Flow Rates

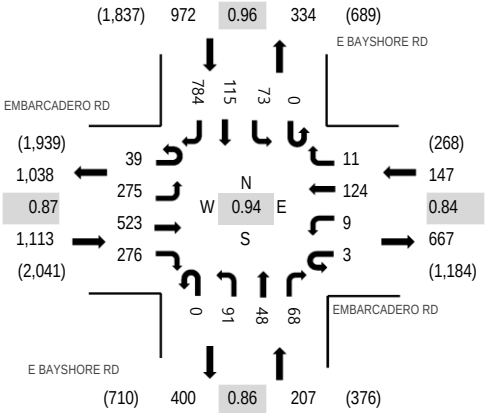
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	2	54	160	0	0	0	524	11					0	2	0	96	849
Mediums	0	0	4	0	0	0	6	0					0	0	0	4	14
Total	2	54	164	0	0	0	530	11					0	2	0	100	863

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

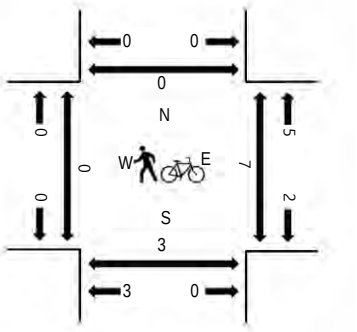
Location: 2 E BAYSHORE RD & EMBARCADERO RD AM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	EMBARCADERO RD Eastbound				EMBARCADERO RD Westbound				E BAYSHORE RD Northbound				E BAYSHORE RD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	10	63	82	35	1	1	17	4	0	12	6	5	0	9	17	141	403	2,112	0	0	0	0
7:15 AM	6	84	97	38	1	3	15	1	0	16	12	9	0	23	18	187	510	2,309	0	0	3	0
7:30 AM	4	70	102	42	0	3	22	2	0	14	23	4	0	14	28	222	550	2,363	0	0	0	0
7:45 AM	9	83	161	68	0	1	26	0	0	16	11	15	0	22	25	212	649	2,439	0	2	0	0
8:00 AM	11	61	128	64	1	4	33	2	0	14	9	14	0	20	25	214	600	2,410	0	0	2	0
8:15 AM	11	61	122	53	1	4	34	4	0	34	14	20	0	10	25	171	564		0	0	0	0
8:30 AM	8	70	112	91	1	0	31	5	0	27	14	19	0	21	40	187	626		0	0	1	0
8:45 AM	19	70	120	86	0	9	36	6	0	23	14	31	0	19	30	157	620		0	0	0	0

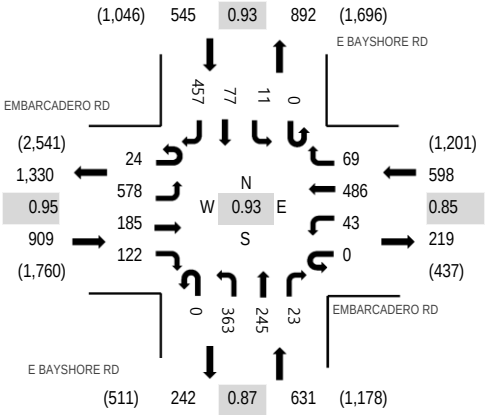
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	11	0	0	0	8	0	0	1	0	0	0	0	0	3	23
Lights	39	272	490	268	0	8	98	11	0	79	45	67	0	72	115	776	2,340
Mediums	0	3	22	8	3	1	18	0	0	11	3	1	0	1	0	5	76
Total	39	275	523	276	3	9	124	11	0	91	48	68	0	73	115	784	2,439

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

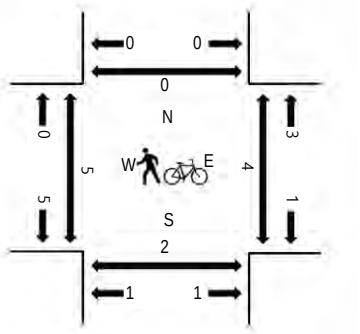
Location: 2 E BAYSHORE RD & EMBARCADERO RD PM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	EMBARCADERO RD Eastbound				EMBARCADERO RD Westbound				E BAYSHORE RD Northbound				E BAYSHORE RD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	4	138	59	27	0	7	115	15	0	99	50	3	0	4	14	85	620	2,557	0	0	0	0
4:15 PM	3	152	46	30	0	23	150	15	0	70	46	8	0	2	23	84	652	2,655	0	0	0	0
4:30 PM	4	109	35	30	0	22	115	21	0	94	47	4	0	5	37	110	633	2,674	0	0	0	0
4:45 PM	6	152	47	35	0	17	95	12	0	74	63	6	0	2	22	121	652	2,683	1	0	0	0
5:00 PM	6	144	55	28	0	9	136	22	0	120	57	5	0	2	16	118	718	2,628	1	1	0	0
5:15 PM	7	131	47	30	0	11	133	19	0	91	62	5	0	3	26	106	671		0	2	2	0
5:30 PM	5	151	36	29	0	6	122	16	0	78	63	7	0	4	13	112	642		1	0	0	0
5:45 PM	3	144	45	22	0	6	100	14	0	70	53	3	0	4	28	105	597		0	1	0	0

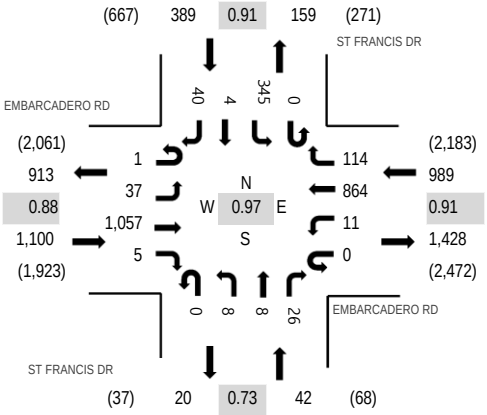
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Lights	24	574	180	118	0	42	482	69	0	362	245	22	0	11	77	453	2,659
Mediums	0	3	4	4	0	1	4	0	0	1	0	1	0	0	0	3	21
Total	24	578	185	122	0	43	486	69	0	363	245	23	0	11	77	457	2,683

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

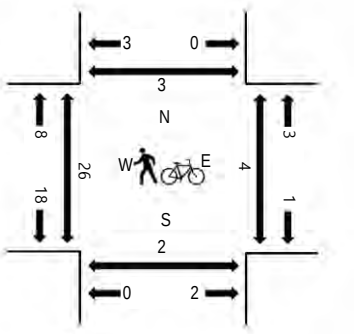
Location: 3 ST FRANCIS DR & EMBARCADERO RD AM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	EMBARCADERO RD Eastbound				EMBARCADERO RD Westbound				ST FRANCIS DR Northbound				ST FRANCIS DR Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	3	138	0	0	3	312	17	0	0	0	4	0	43	2	10	532	2,382	3	2	2	1
7:15 AM	0	7	177	1	0	2	293	26	0	1	0	6	0	59	0	13	585	2,496	4	0	0	0
7:30 AM	0	3	236	1	0	1	280	17	0	0	4	5	0	70	0	11	628	2,500	2	1	0	0
7:45 AM	0	7	258	0	0	2	235	26	0	5	4	6	0	79	0	15	637	2,520	9	1	0	0
8:00 AM	0	13	249	2	0	4	242	22	0	1	2	4	0	98	2	7	646	2,459	5	0	1	0
8:15 AM	1	8	249	2	0	2	180	35	0	2	1	10	0	88	1	10	589		5	0	0	1
8:30 AM	0	9	301	1	0	3	207	31	0	0	1	6	0	80	1	8	648		0	1	0	1
8:45 AM	0	13	242	2	0	3	219	21	0	0	1	5	0	59	2	9	576		2	0	0	0

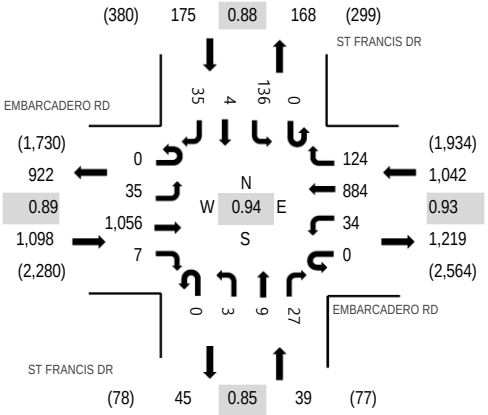
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
Lights	1	37	1,035	5	0	11	820	112	0	8	8	26	0	340	4	38	2,445
Mediums	0	0	22	0	0	0	40	2	0	0	0	0	0	5	0	2	71
Total	1	37	1,057	5	0	11	864	114	0	8	8	26	0	345	4	40	2,520

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

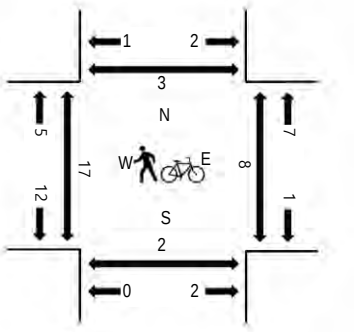
Location: 3 ST FRANCIS DR & EMBARCADERO RD PM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	EMBARCADERO RD Eastbound				EMBARCADERO RD Westbound				ST FRANCIS DR Northbound				ST FRANCIS DR Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	10	323	0	0	6	174	17	0	0	1	7	0	43	3	12	596	2,317	3	3	2	1
4:15 PM	0	5	309	0	0	7	197	23	0	2	0	10	0	48	0	5	606	2,244	1	3	1	0
4:30 PM	0	7	259	2	0	4	190	34	0	1	2	7	0	40	3	5	554	2,264	2	4	3	1
4:45 PM	0	6	257	4	0	4	212	24	0	1	2	5	0	37	0	9	561	2,301	2	2	0	1
5:00 PM	0	9	226	2	0	12	189	26	0	0	3	8	0	39	0	9	523	2,354	1	1	1	0
5:15 PM	0	6	298	2	0	5	225	33	0	2	2	6	0	35	2	10	626		3	0	0	1
5:30 PM	0	8	257	2	0	6	236	30	0	1	0	6	0	35	2	8	591		2	3	1	0
5:45 PM	0	12	275	1	0	11	234	35	0	0	4	7	0	27	0	8	614		2	1	0	2

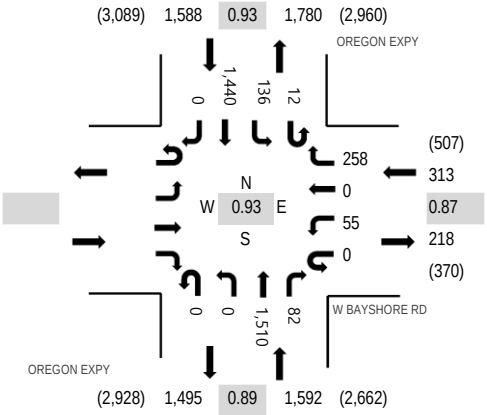
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	35	1,042	7	0	34	877	124	0	3	9	27	0	135	4	35	2,332
Mediums	0	0	14	0	0	0	7	0	0	0	0	0	0	1	0	0	22
Total	0	35	1,056	7	0	34	884	124	0	3	9	27	0	136	4	35	2,354

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

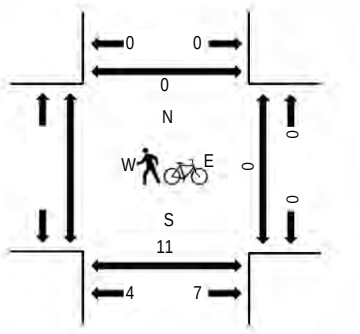
Location: 4 OREGON EXPY & W BAYSHORE RD AM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	W BAYSHORE RD Eastbound				W BAYSHORE RD Westbound				OREGON EXPY Northbound				OREGON EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM					0	8	0	20	0	0	161	10	1	13	364	0	577	2,812		0	0	0
7:15 AM					0	10	0	31	0	0	222	6	0	25	372	0	666	3,078		0	0	0
7:30 AM					0	13	0	40	0	0	296	5	0	29	365	0	748	3,351		0	0	0
7:45 AM					0	24	0	59	0	0	280	15	3	45	395	0	821	3,493		0	2	0
8:00 AM					0	14	0	41	0	0	376	21	2	26	363	0	843	3,446		0	0	0
8:15 AM					0	4	0	81	0	0	408	22	3	40	381	0	939			0	3	0
8:30 AM					0	13	0	77	0	0	446	24	4	25	301	0	890			0	0	0
8:45 AM					0	14	0	58	0	0	350	20	1	44	287	0	774			0	2	0

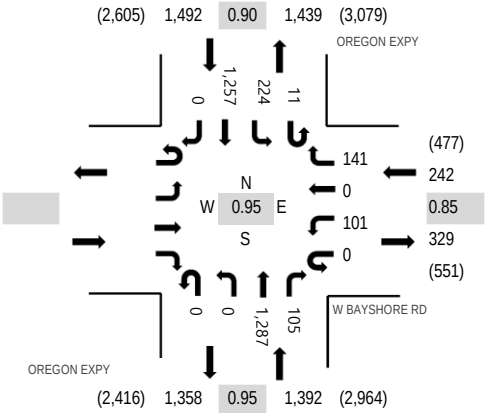
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	1	0	0	2	0	0	1	8	0	12
Lights					0	54	0	255	0	0	1,472	82	10	130	1,400	0	3,403
Mediums					0	1	0	2	0	0	36	0	2	5	32	0	78
Total					0	55	0	258	0	0	1,510	82	12	136	1,440	0	3,493

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

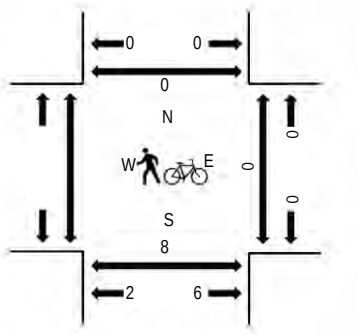
Location: 4 OREGON EXPY & W BAYSHORE RD PM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	W BAYSHORE RD Eastbound				W BAYSHORE RD Westbound				OREGON EXPY Northbound				OREGON EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM					0	23	0	39	0	0	398	15	4	16	198	0	693	2,920		0	2	0
4:15 PM					0	25	0	32	0	0	375	23	4	36	234	0	729	2,971		0	0	0
4:30 PM					0	25	0	35	0	0	348	15	1	41	263	0	728	3,003		0	1	0
4:45 PM					0	20	0	36	0	0	367	31	1	45	270	0	770	3,076		0	0	0
5:00 PM					0	17	0	38	0	0	332	22	4	42	289	0	744	3,126		0	1	0
5:15 PM					0	20	0	33	0	0	333	29	2	59	285	0	761			0	1	0
5:30 PM					0	30	0	33	0	0	313	29	4	56	336	0	801			0	1	0
5:45 PM					0	34	0	37	0	0	309	25	1	67	347	0	820			0	0	0

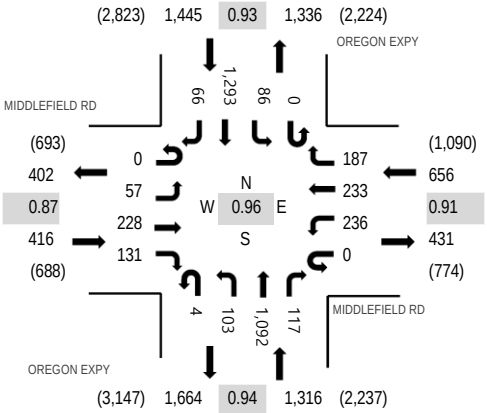
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	101	0	139	0	0	1,269	103	11	223	1,244	0	3,090
Mediums					0	0	0	2	0	0	18	2	0	1	13	0	36
Total					0	101	0	141	0	0	1,287	105	11	224	1,257	0	3,126

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

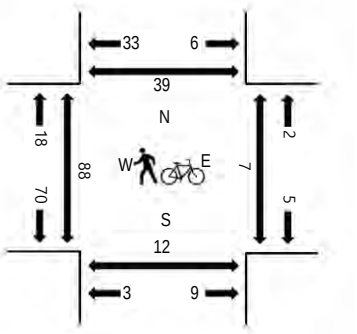
Location: 5 OREGON EXPY & MIDDLEFIELD RD AM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	MIDDLEFIELD RD Eastbound				MIDDLEFIELD RD Westbound				OREGON EXPY Northbound				OREGON EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	19	17	0	27	36	18	0	13	110	13	0	23	297	10	587	3,039	0	0	0	0
7:15 AM	0	3	27	12	0	32	32	22	0	9	177	23	0	38	343	10	728	3,450	0	0	2	0
7:30 AM	0	2	25	33	0	40	55	39	0	25	236	24	0	28	301	14	822	3,694	1	0	1	2
7:45 AM	0	10	59	26	0	51	58	47	0	48	212	27	0	24	314	26	902	3,833	2	1	1	3
8:00 AM	0	15	60	36	0	75	63	42	2	18	295	35	0	21	316	20	998	3,799	2	0	0	4
8:15 AM	0	14	64	31	0	59	57	43	0	19	282	33	0	22	339	9	972		2	1	0	3
8:30 AM	0	18	45	38	0	51	55	55	2	18	303	22	0	19	324	11	961		3	1	2	2
8:45 AM	0	12	68	50	0	42	56	35	0	19	230	42	0	13	289	12	868		2	0	2	4

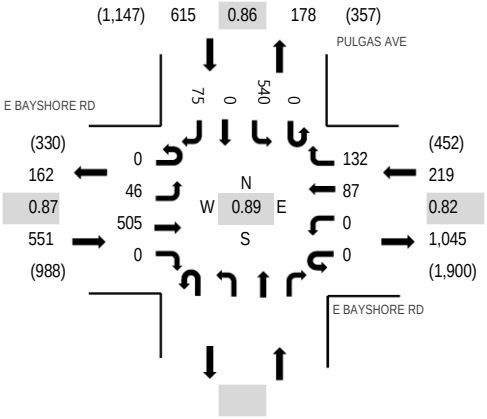
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	2	1	0	0	0	2	1	0	1	2	0	10
Lights	0	57	218	129	0	229	225	183	4	102	1,060	115	0	85	1,263	65	3,735
Mediums	0	0	9	2	0	5	7	4	0	1	30	1	0	0	28	1	88
Total	0	57	228	131	0	236	233	187	4	103	1,092	117	0	86	1,293	66	3,833

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

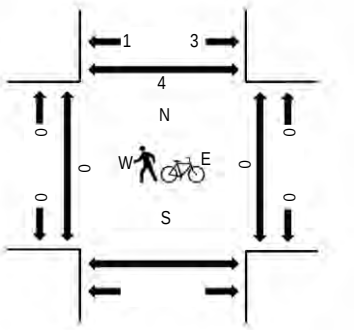
Location: 6 PULGAS AVE & E BAYSHORE RD AM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	E BAYSHORE RD Eastbound				E BAYSHORE RD Westbound				Northbound				PULGAS AVE Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	14	65	0	0	0	21	31					0	120	0	26	277	1,351	0	0		0
7:15 AM	0	15	93	0	0	0	18	34					0	138	0	27	325	1,385	0	0		0
7:30 AM	0	8	136	0	0	0	28	31					0	165	0	20	388	1,361	0	0		0
7:45 AM	0	13	148	0	0	0	18	38					0	125	0	19	361	1,293	0	0		2
8:00 AM	0	10	128	0	0	0	23	29					0	112	0	9	311	1,236	0	0		0
8:15 AM	0	15	103	0	0	0	24	23					0	122	0	14	301		0	0		0
8:30 AM	0	12	110	0	0	0	25	46					0	115	0	12	320		0	0		2
8:45 AM	0	7	111	0	0	0	32	31					0	109	0	14	304		0	0		2

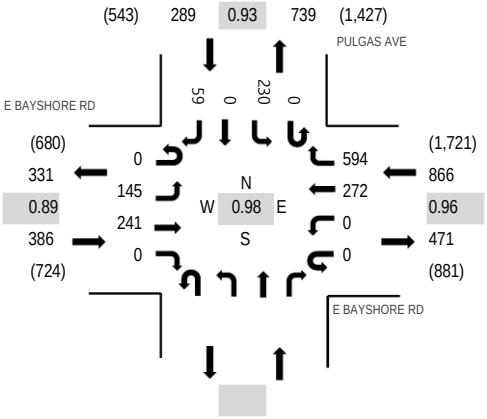
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	2	0	0	2
Lights	0	45	499	0	0	0	86	132					0	527	0	73	1,362
Mediums	0	1	6	0	0	0	1	0					0	11	0	2	21
Total	0	46	505	0	0	0	87	132					0	540	0	75	1,385

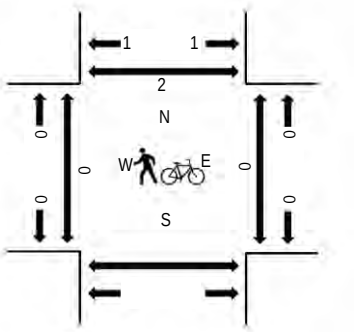
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 6 PULGAS AVE & E BAYSHORE RD PM
Date and Start Time: Wednesday, August 15, 2018
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	E BAYSHORE RD Eastbound				E BAYSHORE RD Westbound				Northbound				PULGAS AVE Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	31	59	0	0	0	75	140					0	38	0	18	361	1,487	0	0		1
4:15 PM	0	19	61	0	0	0	73	149					0	50	0	17	369	1,519	0	0		0
4:30 PM	0	41	68	0	0	0	63	137					0	60	0	18	387	1,541	0	0		0
4:45 PM	0	36	50	0	0	0	66	149					0	53	0	16	370	1,518	0	0		1
5:00 PM	0	31	67	0	0	0	77	152					0	55	0	11	393	1,501	0	0		0
5:15 PM	0	37	56	0	0	0	66	156					0	62	0	14	391		0	0		1
5:30 PM	0	32	60	0	0	0	81	131					0	36	0	24	364		0	0		1
5:45 PM	0	28	48	0	0	0	48	158					0	58	0	13	353		0	0		1

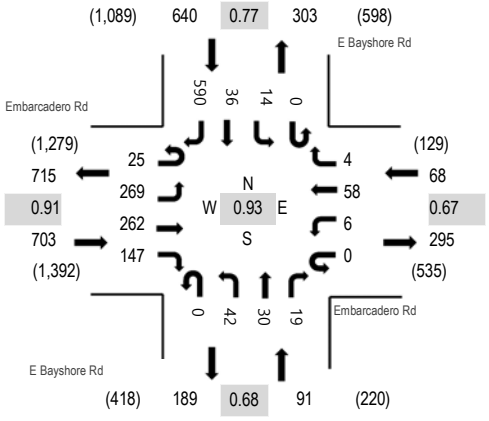
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	0	144	240	0	0	0	271	591					0	228	0	58	1,532
Mediums	0	1	1	0	0	0	1	3					0	2	0	1	9
Total	0	145	241	0	0	0	272	594					0	230	0	59	1,541

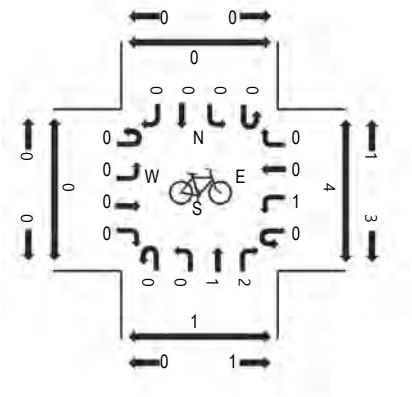
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 E Bayshore Rd & Embarcadero Rd AM
Date: Wednesday, February 23, 2022
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

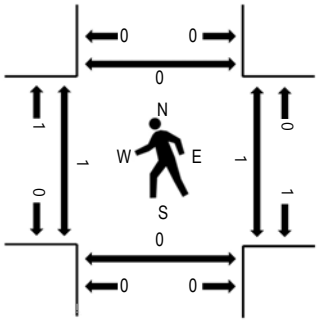
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	Embarcadero Rd Eastbound				Embarcadero Rd Westbound				E Bayshore Rd Northbound				E Bayshore Rd Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	7	55	32	26	0	2	3	0	0	9	8	3	0	1	2	71	219	1,330	0	1	0	1
7:15 AM	7	70	52	35	0	0	7	1	0	16	13	2	0	1	14	107	325	1,463	0	0	0	0
7:30 AM	6	66	70	28	0	0	7	0	0	10	8	5	0	3	13	165	381	1,502	1	1	0	0
7:45 AM	5	55	68	32	0	2	21	0	0	7	4	4	0	5	9	193	405	1,499	0	0	0	0
8:00 AM	6	62	73	41	0	1	16	1	0	12	9	7	0	1	7	116	352	1,500	0	0	0	0
8:15 AM	8	86	51	46	0	3	14	3	0	13	9	3	0	5	7	116	364		0	0	0	0
8:30 AM	4	69	55	63	0	1	15	0	0	17	10	3	0	1	6	134	378		0	0	0	0
8:45 AM	6	57	80	71	0	3	27	2	0	32	10	6	0	4	6	102	406		1	1	0	0

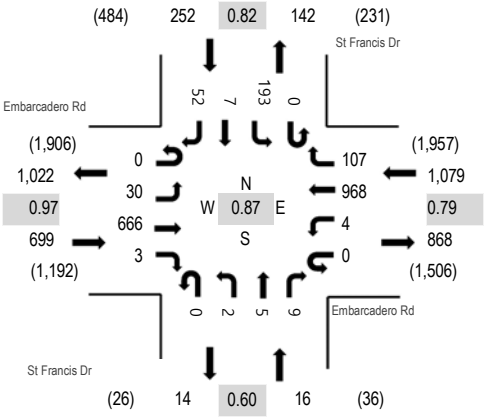
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Lights	25	266	253	140	0	6	45	3	0	32	29	16	0	14	36	580	1,445
Mediums	0	3	9	7	0	0	13	1	0	10	1	3	0	0	0	9	56
Total	25	269	262	147	0	6	58	4	0	42	30	19	0	14	36	590	1,502

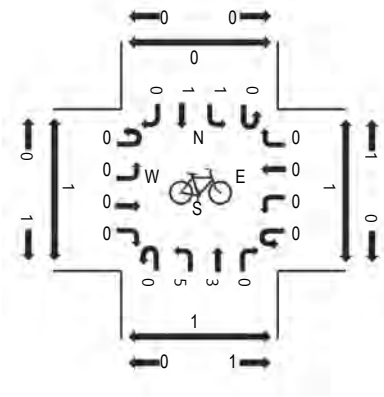
(303) 216-2439
www.alltrafficdata.net

Location: 2 St Francis Dr & Embarcadero Rd AM
Date: Wednesday, February 23, 2022
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

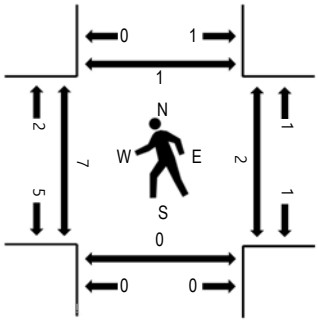
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	Embarcadero Rd Eastbound				Embarcadero Rd Westbound				St Francis Dr Northbound				St Francis Dr Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	3	72	0	0	0	212	10	0	0	0	0	0	32	0	12	341	1,821	2	3	2	0
7:15 AM	0	6	84	0	0	0	210	19	0	2	1	1	0	39	0	24	386	1,992	3	0	0	1
7:30 AM	0	6	147	2	0	2	252	26	0	0	0	2	0	44	2	20	503	2,046	1	1	0	0
7:45 AM	0	6	181	0	0	1	299	46	0	0	2	4	0	42	0	10	591	2,025	0	0	0	0
8:00 AM	0	9	177	0	0	0	221	22	0	1	1	1	0	61	2	17	512	1,848	3	1	0	0
8:15 AM	0	9	161	1	0	1	196	13	0	1	2	2	0	46	3	5	440		3	0	0	1
8:30 AM	0	9	179	1	0	3	209	14	0	4	3	3	0	39	4	14	482		3	2	2	0
8:45 AM	0	7	130	2	0	2	182	17	0	2	0	4	0	55	0	13	414		0	0	0	0

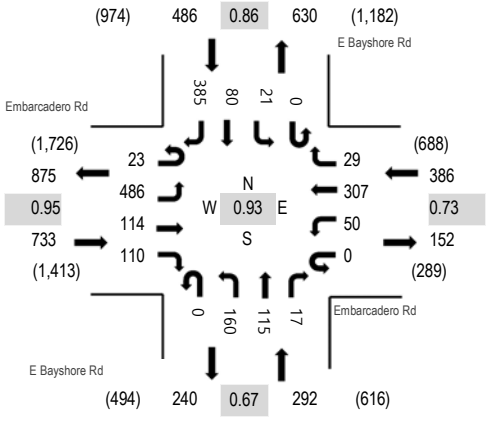
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	29	653	2	0	4	931	103	0	2	5	9	0	188	7	51	1,984
Mediums	0	1	13	1	0	0	36	4	0	0	0	0	0	5	0	1	61
Total	0	30	666	3	0	4	968	107	0	2	5	9	0	193	7	52	2,046

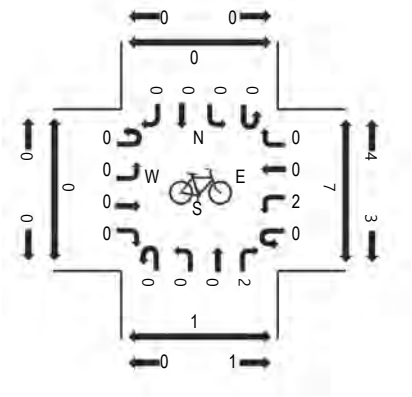
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 E Bayshore Rd & Embarcadero Rd PM
Date: Wednesday, February 23, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

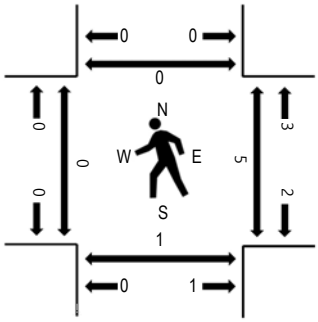
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	Embarcadero Rd Eastbound				Embarcadero Rd Westbound				E Bayshore Rd Northbound				E Bayshore Rd Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	5	95	26	28	0	6	52	4	0	71	53	4	0	8	21	122	495	1,857	0	0	0	0
4:15 PM	5	106	49	27	0	6	59	5	0	32	24	5	0	1	19	102	440	1,874	0	0	0	0
4:30 PM	3	122	34	20	0	10	74	8	0	49	26	5	0	10	21	88	470	1,897	0	2	0	0
4:45 PM	5	117	25	27	0	10	62	5	0	42	27	7	0	0	20	105	452	1,882	0	1	1	0
5:00 PM	9	116	27	35	0	15	106	12	0	41	22	4	0	7	19	99	512	1,834	0	0	0	0
5:15 PM	6	131	28	28	0	15	65	4	0	28	40	1	0	4	20	93	463		0	2	0	0
5:30 PM	14	95	19	53	0	14	69	10	0	49	30	2	0	2	22	76	455		0	0	0	0
5:45 PM	10	108	16	24	0	9	63	5	0	33	17	4	0	1	25	89	404		0	1	0	0

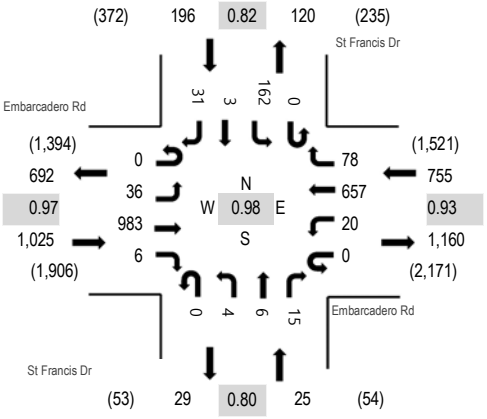
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	3
Lights	23	480	109	108	0	50	305	28	0	158	115	17	0	21	80	385	1,879
Mediums	0	5	4	2	0	0	1	1	0	2	0	0	0	0	0	0	15
Total	23	486	114	110	0	50	307	29	0	160	115	17	0	21	80	385	1,897

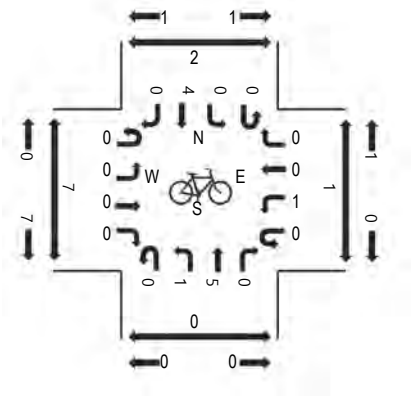
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 St Francis Dr & Embarcadero Rd PM
Date: Wednesday, February 23, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

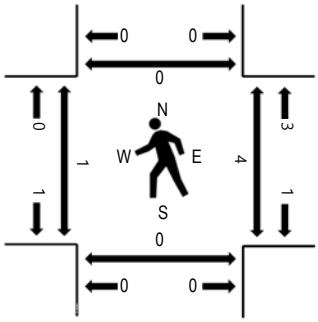
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	Embarcadero Rd Eastbound				Embarcadero Rd Westbound				St Francis Dr Northbound				St Francis Dr Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	10	202	1	0	6	126	18	0	1	2	5	0	39	0	8	418	1,907	0	0	0	1
4:15 PM	0	9	252	4	0	4	170	21	0	1	2	8	0	31	1	2	505	1,998	0	0	0	0
4:30 PM	0	9	244	3	0	5	153	19	0	2	2	4	0	48	0	12	501	2,001	0	0	0	0
4:45 PM	0	5	236	2	0	8	150	22	0	1	1	6	0	43	0	9	483	1,960	0	1	0	0
5:00 PM	0	15	245	1	0	5	176	16	0	1	2	4	0	37	1	6	509	1,946	1	1	0	0
5:15 PM	0	7	258	0	0	2	178	21	0	0	1	1	0	34	2	4	508		0	2	0	0
5:30 PM	0	2	204	2	0	3	179	18	0	1	0	4	0	40	0	7	460		1	1	1	0
5:45 PM	0	11	184	0	0	2	198	21	0	1	1	3	0	39	1	8	469		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	36	976	6	0	19	649	78	0	4	6	14	0	161	3	31	1,983
Mediums	0	0	7	0	0	1	8	0	0	0	0	1	0	1	0	0	18
Total	0	36	983	6	0	20	657	78	0	4	6	15	0	162	3	31	2,001

Appendix B

Volume Summary

Intersection Number: 1
Traffix Node Number: 32
Intersection Name: Geng Road & Embarcadero Road
Peak Hour: AM
Date of Analysis: 03/01/22
Count Date: 08/15/18
Scenario: 1700 Embarcadero Road Mercedes Benz Dealership TIA

Annual Growth Rate 1.4%
Background Growth Years 2
Cumulative Growth Years 5

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	37	0	3	7	142	0	0	0	0	0	562	102	853
Existing Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background Growth	1	0	0	0	4	0	0	0	0	0	16	3	
Background Conditions	38	0	3	7	146	0	0	0	0	0	578	105	877
Background Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Project Trips	0	0	0	0	2	0	0	0	0	0	1	0	3
Existing + Project	37	0	3	7	144	0	0	0	0	0	563	102	856
Background + Project	38	0	3	7	148	0	0	0	0	0	579	105	880
Existing + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background+Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative Baseline Conditions	40	0	3	8	152	0	0	0	0	0	602	109	914
Cumulative + Proj Conditions	40	0	3	8	154	0	0	0	0	0	603	109	917
Cumulative Baseline Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Intersection Number: 2
Traffix Node Number: 31
Intersection Name: E. Bayshore Road & Embarcadero Road
Peak Hour: AM
Date of Analysis: 03/01/22
Count Date: 02/23/22
Scenario: 1700 Embarcadero Road Mercedes Benz Dealership TIA

Annual Growth Rate 1.4%
Background Growth Years 2
Cumulative Growth Years 5

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	755	46	18	5	74	7	24	39	54	188	335	377	1922
Existing Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background Growth	21	1	1	0	2	0	1	1	2	5	9	11	
Background Conditions	776	47	19	5	76	7	25	40	56	193	344	388	1976
Background Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Project Trips	0	1	3	0	0	2	1	2	12	10	24	0	55
Existing + Project	755	47	21	5	74	9	25	41	66	198	359	377	1977
Background + Project	776	48	22	5	76	9	26	42	68	203	368	388	2031
Existing + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background+Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative Baseline Conditions	809	49	19	5	79	8	26	42	58	202	359	404	2060
Cumulative + Proj Conditions	809	50	22	5	79	10	27	44	70	212	383	404	2115
Cumulative Baseline Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Intersection Number: 1
Traffix Node Number: 32
Intersection Name: Geng Road & Embarcadero Road
Peak Hour: PM
Date of Analysis: 03/01/22
Count Date: 08/15/18
Scenario: 1700 Embarcadero Road Mercedes Benz Dealership TIA

Annual Growth Rate 1.4%
Background Growth Years 2
Cumulative Growth Years 5

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	103	0	2	11	546	0	0	0	0	0	169	58	889
Existing Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background Growth	3	0	0	0	15	0	0	0	0	0	5	2	
Background Conditions	106	0	2	11	561	0	0	0	0	0	174	60	914
Background Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Project Trips	0	0	0	0	1	0	0	0	0	0	2	0	3
Existing + Project	103	0	2	11	547	0	0	0	0	0	171	58	892
Background + Project	106	0	2	11	562	0	0	0	0	0	176	60	917
Existing + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background+Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative Baseline Conditions	110	0	2	12	585	0	0	0	0	0	181	62	952
Cumulative + Proj Conditions	110	0	2	12	586	0	0	0	0	0	183	62	955
Cumulative Baseline Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Intersection Number: 2
Traffix Node Number: 31
Intersection Name: E. Bayshore Road & Embarcadero Road
Peak Hour: PM
Date of Analysis: 03/01/22
Count Date: 02/23/22
Scenario: 1700 Embarcadero Road Mercedes Benz Dealership TIA

Annual Growth Rate 1.4%
Background Growth Years 2
Cumulative Growth Years 5

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
User Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	472	98	26	35	377	61	21	142	197	135	140	625	2329
Existing Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background Growth	13	3	1	1	11	2	1	4	6	4	4	18	
Background Conditions	485	101	27	36	388	63	22	146	203	139	144	643	2397
Background Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Project Trips	0	1	2	0	0	1	2	4	35	7	17	0	69
Existing + Project	472	99	28	35	377	62	23	146	232	142	157	625	2398
Background + Project	485	102	29	36	388	64	24	150	238	146	161	643	2466
Existing + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Background+Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative Baseline Conditions	506	105	28	38	404	65	23	152	211	145	150	670	2497
Cumulative + Proj Conditions	506	106	30	38	404	66	25	156	246	152	167	670	2566
Cumulative Baseline Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Cumulative + Project Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

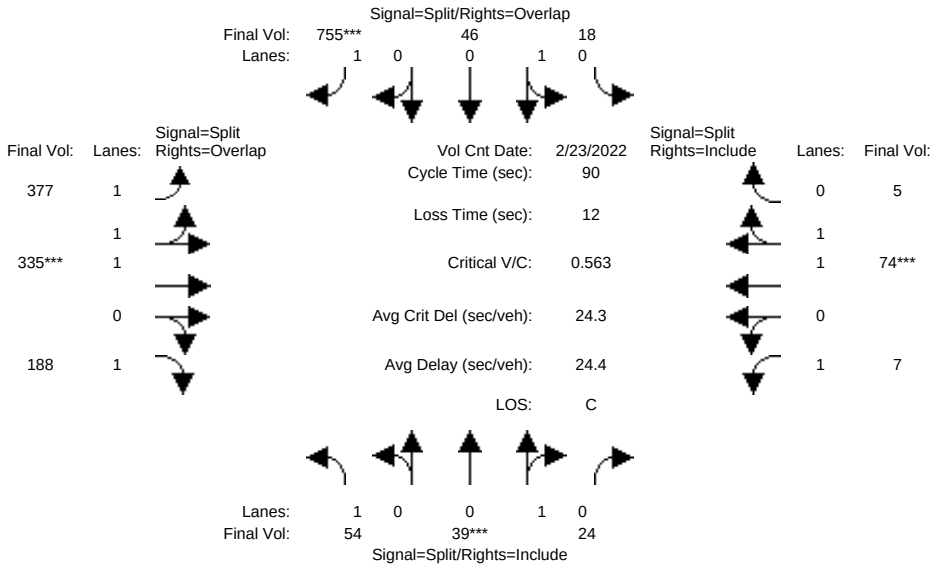
Appendix C

Level of Service Calculations

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #31: E Bayshore Rd/Embarcadero Rd



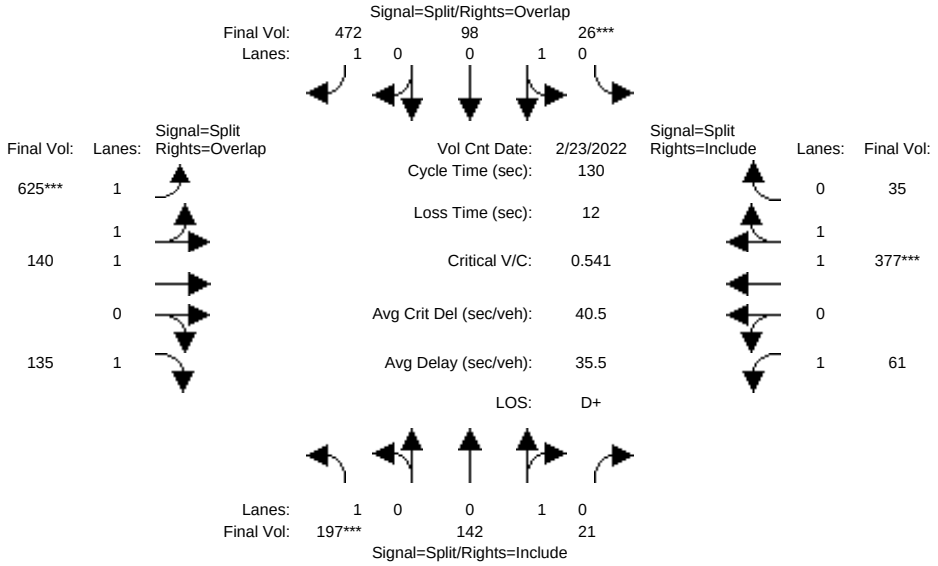
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 23 Feb 2022 << 7:45 - 8:45 AM												
Base Vol:	54	39	24	18	46	755	377	335	188	7	74	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	39	24	18	46	755	377	335	188	7	74	5
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	39	24	18	46	755	377	335	188	7	74	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	39	24	18	46	755	377	335	188	7	74	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	39	24	18	46	755	377	335	188	7	74	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	39	24	18	46	755	377	335	188	7	74	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.93	0.98	0.92	0.92	0.98	0.95
Lanes:	1.00	0.62	0.38	0.28	0.72	1.00	1.63	1.37	1.00	1.00	1.87	0.13
Final Sat.:	1750	1114	686	506	1294	1750	2883	2562	1750	1750	3466	234
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.03	0.04	0.04	0.43	0.13	0.13	0.11	0.00	0.02	0.02
Crit Moves:		****				****		****			****	
Green Time:	10.0	10.0	10.0	40.4	40.4	58.0	17.6	17.6	27.6	10.0	10.0	10.0
Volume/Cap:	0.28	0.32	0.31	0.08	0.08	0.67	0.67	0.67	0.35	0.04	0.19	0.19
Delay/Veh:	37.5	37.8	37.8	14.2	14.2	11.6	35.2	35.2	24.7	35.8	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.5	37.8	37.8	14.2	14.2	11.6	35.2	35.2	24.7	35.8	36.6	36.6
LOS by Move:	D+	D+	D+	B	B	B+	D+	D+	C	D+	D+	D+
HCM2k95thQ:	4	4	4	2	2	25	14	14	9	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #31: E Bayshore Rd/Embarcadero Rd



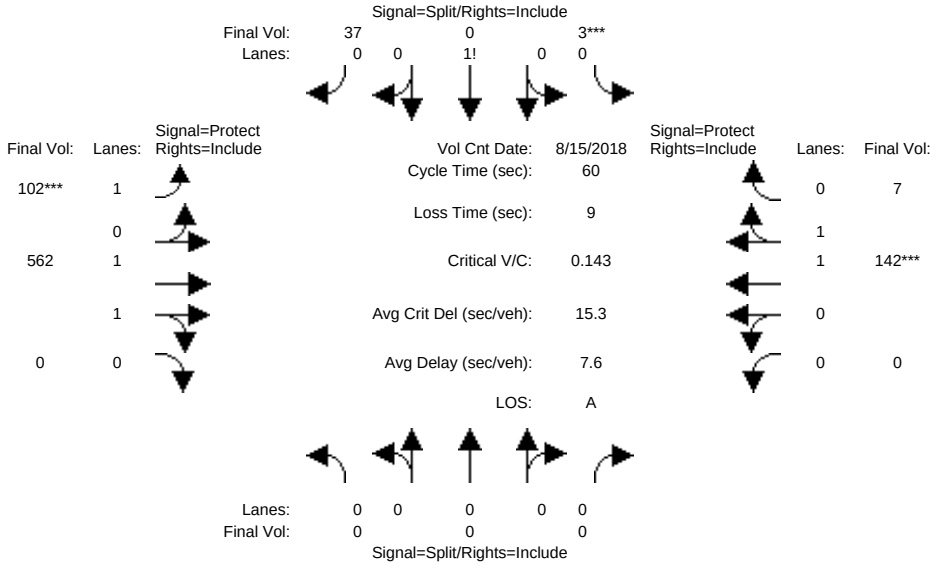
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 23 Feb 2022 << 4:45 - 5:45 PM												
Base Vol:	197	142	21	26	98	472	625	140	135	61	377	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	197	142	21	26	98	472	625	140	135	61	377	35
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	197	142	21	26	98	472	625	140	135	61	377	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	197	142	21	26	98	472	625	140	135	61	377	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	142	21	26	98	472	625	140	135	61	377	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	197	142	21	26	98	472	625	140	135	61	377	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	1.00	0.87	0.13	0.21	0.79	1.00	2.00	1.00	1.00	1.00	1.83	0.17
Final Sat.:	1750	1568	232	377	1423	1750	3150	1900	1750	1750	3385	314
Capacity Analysis Module:												
Vol/Sat:	0.11	0.09	0.09	0.07	0.07	0.27	0.20	0.07	0.08	0.03	0.11	0.11
Crit Moves:	****			****			****				****	
Green Time:	27.0	27.0	27.0	17.1	17.1	64.8	47.7	47.7	74.7	26.7	26.7	26.7
Volume/Cap:	0.54	0.44	0.44	0.52	0.52	0.54	0.54	0.20	0.13	0.17	0.54	0.54
Delay/Veh:	47.6	45.6	45.6	54.7	54.7	23.1	33.0	28.2	12.8	42.7	46.9	46.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.6	45.6	45.6	54.7	54.7	23.1	33.0	28.2	12.8	42.7	46.9	46.9
LOS by Move:	D	D	D	D-	D-	C	C-	C	B	D	D	D
HCM2k95thQ:	15	12	12	9	9	24	22	7	5	4	14	14

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #32: Geng Rd/Embarcadero Rd



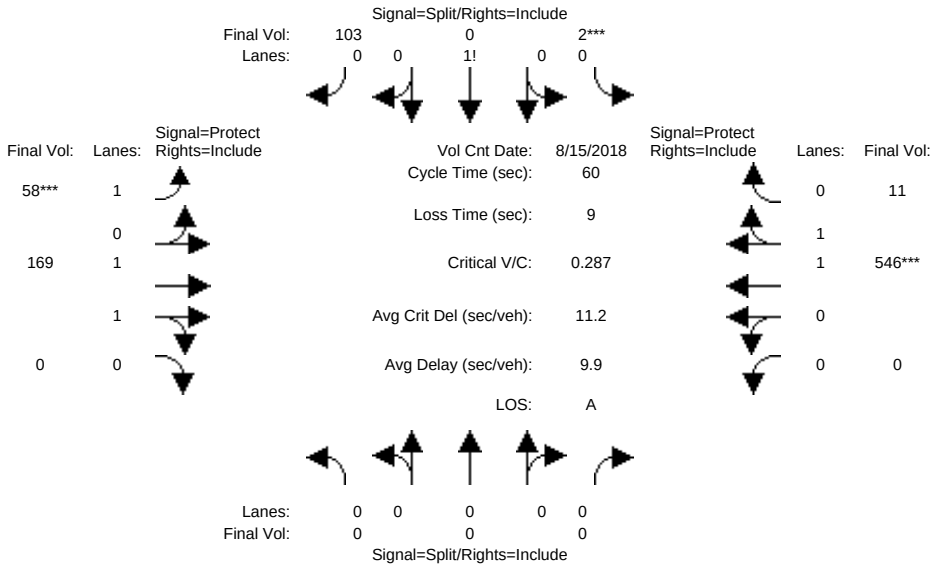
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 Aug 2018 << 8:00 - 9:00 AM												
Base Vol:	0	0	0	3	0	37	102	562	0	0	142	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	37	102	562	0	0	142	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	37	102	562	0	0	142	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	37	102	562	0	0	142	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	3	0	37	102	562	0	0	142	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	3	0	37	102	562	0	0	142	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.07	0.00	0.93	1.00	2.00	0.00	0.00	1.90	0.10
Final Sat.:	0	0	0	131	0	1619	1750	3700	0	0	3526	174
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.02	0.06	0.15	0.00	0.00	0.04	0.04
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	10.0	0.0	10.0	24.2	41.0	0.0	0.0	16.8	16.8
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.14	0.14	0.22	0.00	0.00	0.14	0.14
Delay/Veh:	0.0	0.0	0.0	21.5	0.0	21.5	11.4	3.6	0.0	0.0	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.5	0.0	21.5	11.4	3.6	0.0	0.0	16.3	16.3
LOS by Move:	A	A	A	C+	A	C+	B+	A	A	A	B	B
HCM2k95thQ:	0	0	0	2	0	2	3	4	0	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #32: Geng Rd/Embarcadero Rd



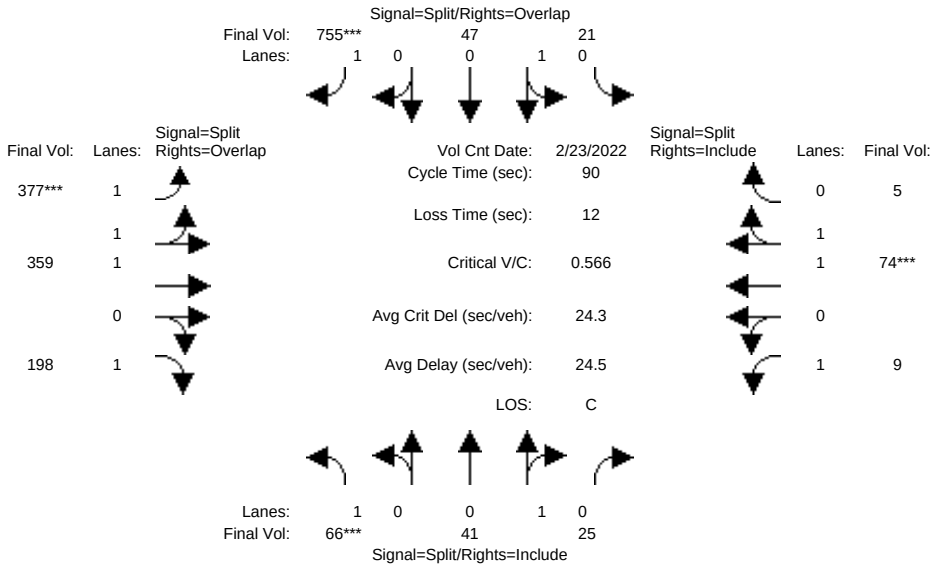
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 Aug 2018 << 4:15 - 5:15 PM												
Base Vol:	0	0	0	2	0	103	58	169	0	0	546	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	2	0	103	58	169	0	0	546	11
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	103	58	169	0	0	546	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	2	0	103	58	169	0	0	546	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	103	58	169	0	0	546	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	2	0	103	58	169	0	0	546	11
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.02	0.00	0.98	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	0	0	0	33	0	1717	1750	3700	0	0	3627	73
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.03	0.05	0.00	0.00	0.15	0.15
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	12.5	0.0	12.5	7.0	38.5	0.0	0.0	31.5	31.5
Volume/Cap:	0.00	0.00	0.00	0.29	0.00	0.29	0.28	0.07	0.00	0.00	0.29	0.29
Delay/Veh:	0.0	0.0	0.0	20.4	0.0	20.4	25.0	4.1	0.0	0.0	8.1	8.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.4	0.0	20.4	25.0	4.1	0.0	0.0	8.1	8.1
LOS by Move:	A	A	A	C+	A	C+	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	4	2	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project AM

Intersection #31: E Bayshore Rd/Embarcadero Rd



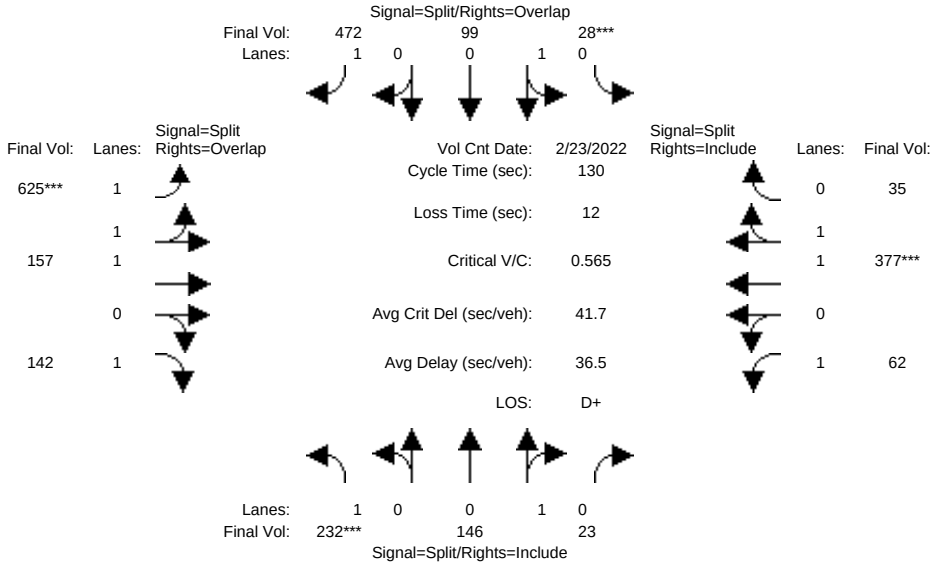
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 23 Feb 2022 << 7:45 - 8:45 AM												
Base Vol:	54	39	24	18	46	755	377	335	188	7	74	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	39	24	18	46	755	377	335	188	7	74	5
Added Vol:	12	2	1	3	1	0	0	24	10	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	66	41	25	21	47	755	377	359	198	9	74	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	41	25	21	47	755	377	359	198	9	74	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	41	25	21	47	755	377	359	198	9	74	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	66	41	25	21	47	755	377	359	198	9	74	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.93	0.98	0.92	0.92	0.98	0.95
Lanes:	1.00	0.62	0.38	0.31	0.69	1.00	1.58	1.42	1.00	1.00	1.87	0.13
Final Sat.:	1750	1118	682	556	1244	1750	2789	2656	1750	1750	3466	234
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.04	0.04	0.43	0.14	0.14	0.11	0.01	0.02	0.02
Crit Moves:	****					****	****				****	
Green Time:	10.0	10.0	10.0	39.8	39.8	58.0	18.2	18.2	28.2	10.0	10.0	10.0
Volume/Cap:	0.34	0.33	0.33	0.09	0.09	0.67	0.67	0.67	0.36	0.05	0.19	0.19
Delay/Veh:	38.0	37.9	37.9	14.6	14.6	11.6	34.8	34.8	24.4	35.8	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.0	37.9	37.9	14.6	14.6	11.6	34.8	34.8	24.4	35.8	36.6	36.6
LOS by Move:	D+	D+	D+	B	B	B+	C-	C-	C	D+	D+	D+
HCM2k95thQ:	4	4	4	2	2	25	15	15	9	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project PM

Intersection #31: E Bayshore Rd/Embarcadero Rd



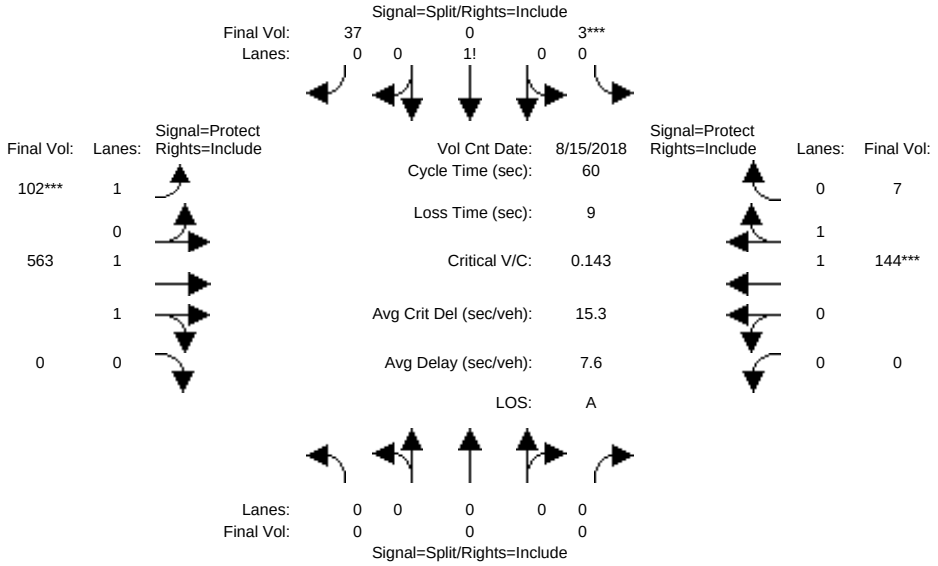
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 23 Feb 2022 << 4:45 - 5:45 PM												
Base Vol:	197	142	21	26	98	472	625	140	135	61	377	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	197	142	21	26	98	472	625	140	135	61	377	35
Added Vol:	35	4	2	2	1	0	0	17	7	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	232	146	23	28	99	472	625	157	142	62	377	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	232	146	23	28	99	472	625	157	142	62	377	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	232	146	23	28	99	472	625	157	142	62	377	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	232	146	23	28	99	472	625	157	142	62	377	35
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	1.00	0.86	0.14	0.22	0.78	1.00	2.00	1.00	1.00	1.00	1.83	0.17
Final Sat.:	1750	1555	245	397	1403	1750	3150	1900	1750	1750	3385	314
Capacity Analysis Module:												
Vol/Sat:	0.13	0.09	0.09	0.07	0.07	0.27	0.20	0.08	0.08	0.04	0.11	0.11
Crit Moves:	****			****			****				****	
Green Time:	30.5	30.5	30.5	16.4	16.4	62.1	45.6	45.6	76.1	25.6	25.6	25.6
Volume/Cap:	0.57	0.40	0.40	0.56	0.56	0.57	0.57	0.24	0.14	0.18	0.57	0.57
Delay/Veh:	45.7	42.6	42.6	56.5	56.5	25.2	34.7	29.9	12.2	43.7	48.2	48.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.7	42.6	42.6	56.5	56.5	25.2	34.7	29.9	12.2	43.7	48.2	48.2
LOS by Move:	D	D	D	E+	E+	C	C-	C	B	D	D	D
HCM2k95thQ:	17	12	12	10	10	25	22	9	5	4	14	14

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project AM

Intersection #32: Geng Rd/Embarcadero Rd



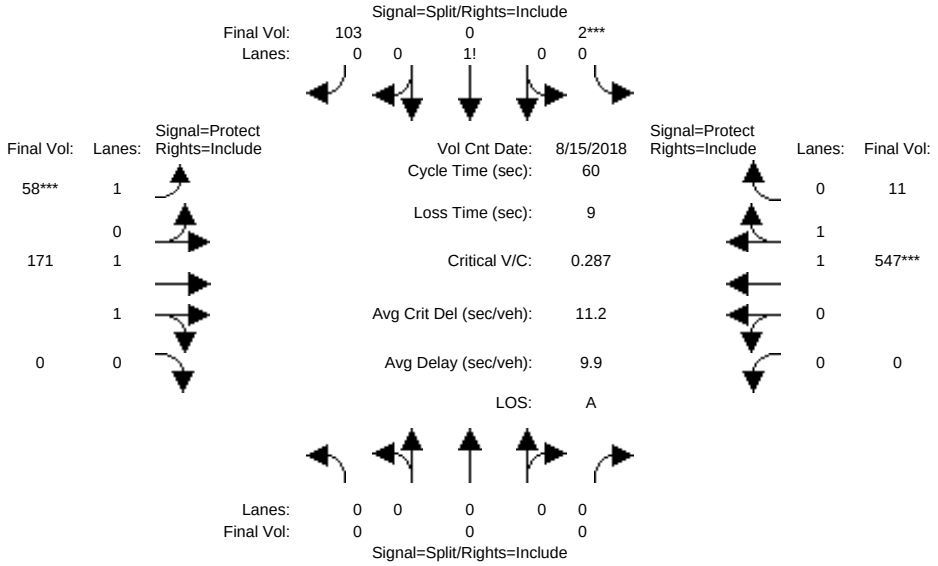
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 Aug 2018 << 8:00 - 9:00 AM												
Base Vol:	0	0	0	3	0	37	102	562	0	0	142	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	37	102	562	0	0	142	7
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	37	102	563	0	0	144	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	37	102	563	0	0	144	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	3	0	37	102	563	0	0	144	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	3	0	37	102	563	0	0	144	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.07	0.00	0.93	1.00	2.00	0.00	0.00	1.90	0.10
Final Sat.:	0	0	0	131	0	1619	1750	3700	0	0	3528	172
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.02	0.06	0.15	0.00	0.00	0.04	0.04
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	10.0	0.0	10.0	24.1	41.0	0.0	0.0	16.9	16.9
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.14	0.15	0.22	0.00	0.00	0.15	0.15
Delay/Veh:	0.0	0.0	0.0	21.5	0.0	21.5	11.5	3.6	0.0	0.0	16.2	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.5	0.0	21.5	11.5	3.6	0.0	0.0	16.2	16.2
LOS by Move:	A	A	A	C+	A	C+	B+	A	A	A	B	B
HCM2k95thQ:	0	0	0	2	0	2	3	4	0	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project PM

Intersection #32: Geng Rd/Embarcadero Rd



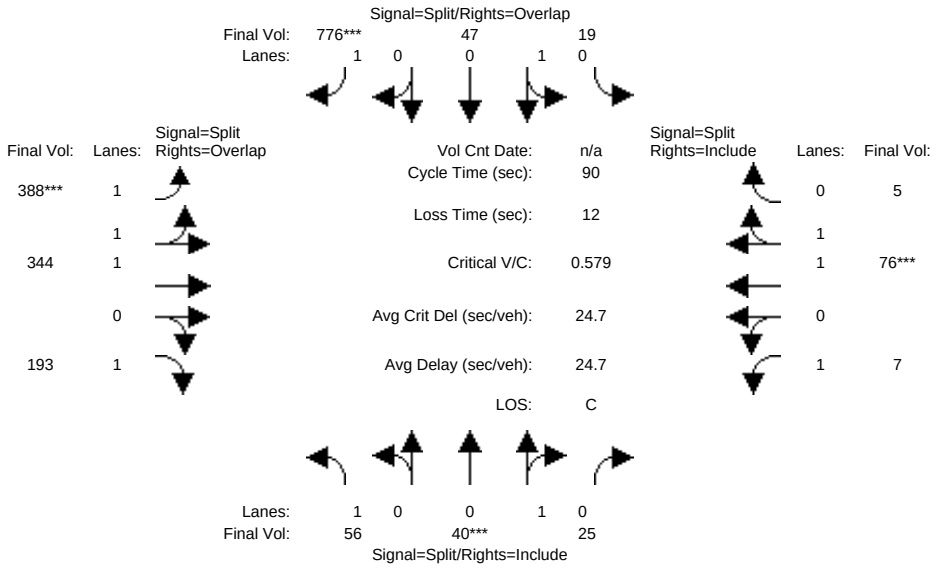
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 Aug 2018 << 4:15 - 5:15 PM												
Base Vol:	0	0	0	2	0	103	58	169	0	0	546	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	2	0	103	58	169	0	0	546	11
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	103	58	171	0	0	547	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	2	0	103	58	171	0	0	547	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	103	58	171	0	0	547	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	2	0	103	58	171	0	0	547	11
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.02	0.00	0.98	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	0	0	0	33	0	1717	1750	3700	0	0	3627	73
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.03	0.05	0.00	0.00	0.15	0.15
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	12.5	0.0	12.5	7.0	38.5	0.0	0.0	31.5	31.5
Volume/Cap:	0.00	0.00	0.00	0.29	0.00	0.29	0.28	0.07	0.00	0.00	0.29	0.29
Delay/Veh:	0.0	0.0	0.0	20.4	0.0	20.4	25.0	4.1	0.0	0.0	8.1	8.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.4	0.0	20.4	25.0	4.1	0.0	0.0	8.1	8.1
LOS by Move:	A	A	A	C+	A	C+	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	4	2	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #31: E Bayshore Rd/Embarcadero Rd



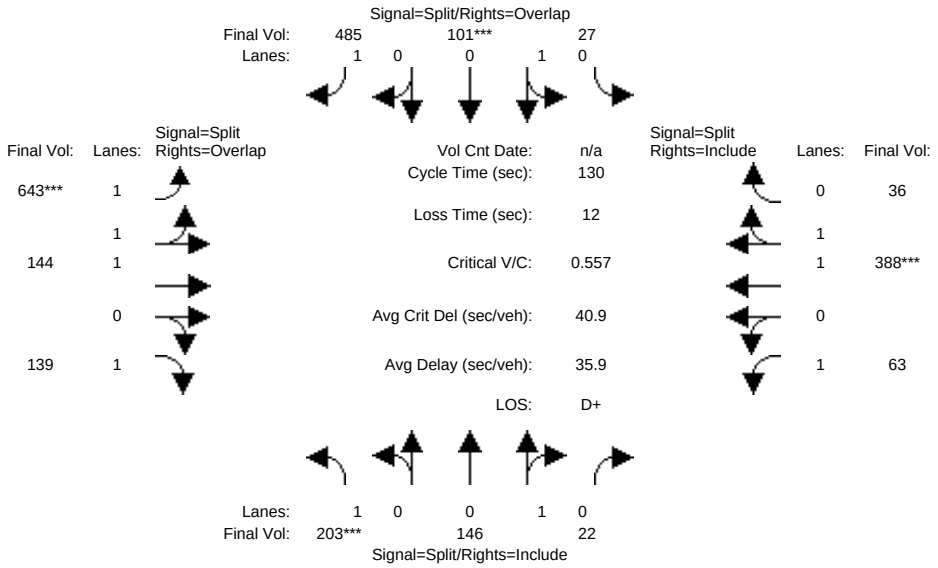
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	56	40	25	19	47	776	388	344	193	7	76	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	40	25	19	47	776	388	344	193	7	76	5
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	56	40	25	19	47	776	388	344	193	7	76	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	40	25	19	47	776	388	344	193	7	76	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	40	25	19	47	776	388	344	193	7	76	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	40	25	19	47	776	388	344	193	7	76	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.93	0.98	0.92	0.92	0.98	0.95
Lanes:	1.00	0.62	0.38	0.29	0.71	1.00	1.63	1.37	1.00	1.00	1.87	0.13
Final Sat.:	1750	1108	692	518	1282	1750	2887	2559	1750	1750	3471	228
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.04	0.04	0.04	0.44	0.13	0.13	0.11	0.00	0.02	0.02
Crit Moves:		****				****	****				****	
Green Time:	10.0	10.0	10.0	40.4	40.4	58.0	17.6	17.6	27.6	10.0	10.0	10.0
Volume/Cap:	0.29	0.32	0.33	0.08	0.08	0.69	0.69	0.69	0.36	0.04	0.20	0.20
Delay/Veh:	37.6	37.8	37.8	14.2	14.2	12.0	35.6	35.6	24.7	35.8	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.6	37.8	37.8	14.2	14.2	12.0	35.6	35.6	24.7	35.8	36.6	36.6
LOS by Move:	D+	D+	D+	B	B	B	D+	D+	C	D+	D+	D+
HCM2k95thQ:	4	4	4	2	2	27	15	15	9	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #31: E Bayshore Rd/Embarcadero Rd



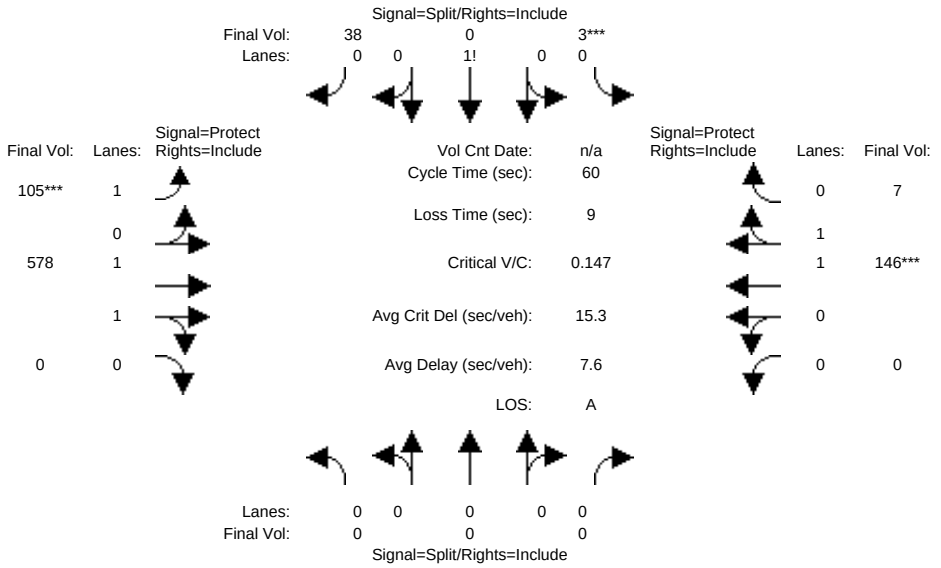
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	203	146	22	27	101	485	643	144	139	63	388	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	203	146	22	27	101	485	643	144	139	63	388	36
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	203	146	22	27	101	485	643	144	139	63	388	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	203	146	22	27	101	485	643	144	139	63	388	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	146	22	27	101	485	643	144	139	63	388	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	203	146	22	27	101	485	643	144	139	63	388	36
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	1.00	0.87	0.13	0.21	0.79	1.00	2.00	1.00	1.00	1.00	1.83	0.17
Final Sat.:	1750	1564	236	380	1420	1750	3150	1900	1750	1750	3386	314
Capacity Analysis Module:												
Vol/Sat:	0.12	0.09	0.09	0.07	0.07	0.28	0.20	0.08	0.08	0.04	0.11	0.11
Crit Moves:	****				****		****				****	
Green Time:	27.1	27.1	27.1	17.0	17.0	64.7	47.6	47.6	74.7	26.7	26.7	26.7
Volume/Cap:	0.56	0.45	0.45	0.54	0.54	0.56	0.56	0.21	0.14	0.18	0.56	0.56
Delay/Veh:	48.0	45.8	45.8	55.4	55.4	23.5	33.3	28.3	12.9	42.8	47.2	47.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.0	45.8	45.8	55.4	55.4	23.5	33.3	28.3	12.9	42.8	47.2	47.2
LOS by Move:	D	D	D	E+	E+	C	C-	C	B	D	D	D
HCM2k95thQ:	16	12	12	10	10	25	22	8	5	4	14	14

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #32: Geng Rd/Embarcadero Rd



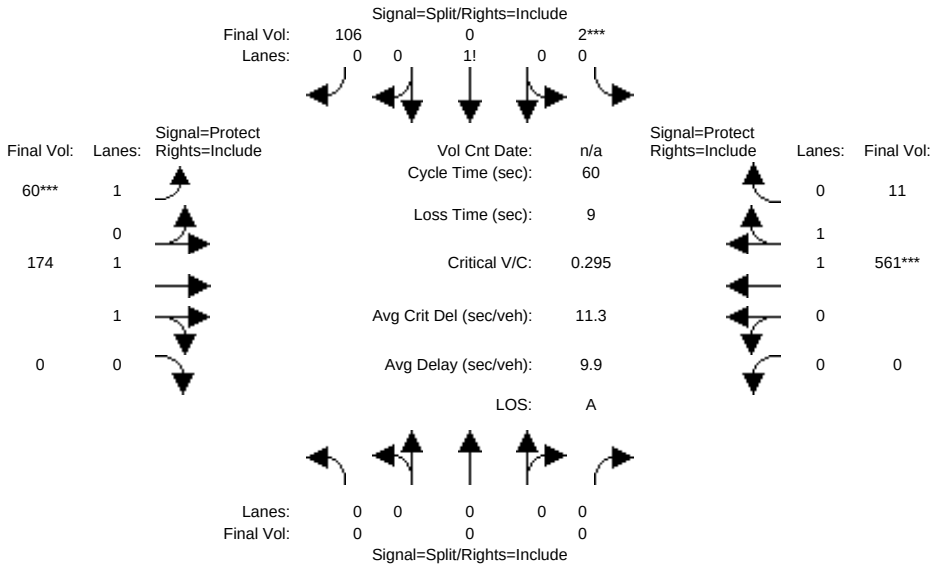
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	3	0	38	105	578	0	0	146	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	38	105	578	0	0	146	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	38	105	578	0	0	146	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	38	105	578	0	0	146	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	3	0	38	105	578	0	0	146	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	3	0	38	105	578	0	0	146	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.07	0.00	0.93	1.00	2.00	0.00	0.00	1.91	0.09
Final Sat.:	0	0	0	128	0	1622	1750	3700	0	0	3531	169
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.02	0.06	0.16	0.00	0.00	0.04	0.04
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	10.0	0.0	10.0	24.3	41.0	0.0	0.0	16.7	16.7
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.14	0.15	0.23	0.00	0.00	0.15	0.15
Delay/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.4	3.6	0.0	0.0	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.4	3.6	0.0	0.0	16.3	16.3
LOS by Move:	A	A	A	C+	A	C+	B+	A	A	A	B	B
HCM2k95thQ:	0	0	0	2	0	2	3	4	0	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #32: Geng Rd/Embarcadero Rd



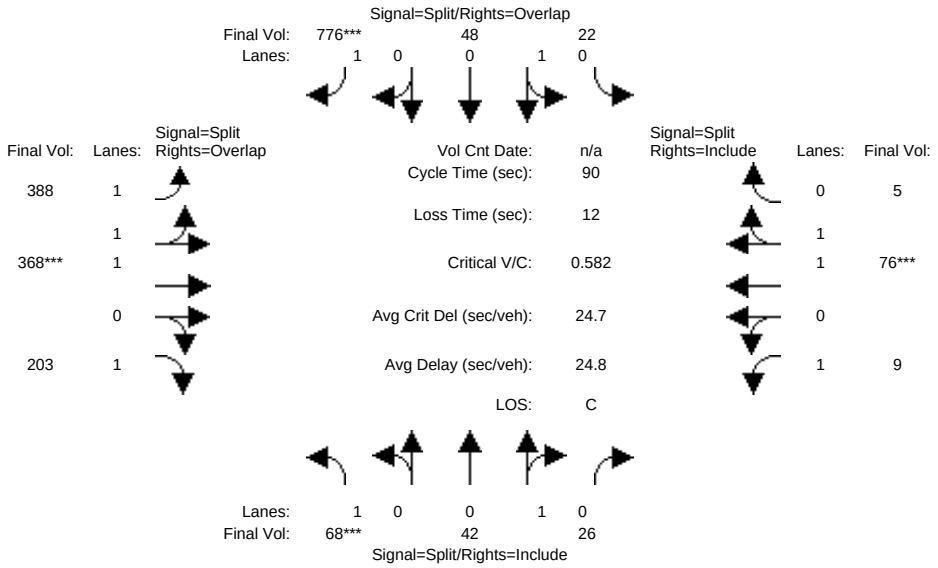
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	2	0	106	60	174	0	0	561	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	2	0	106	60	174	0	0	561	11
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	106	60	174	0	0	561	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	2	0	106	60	174	0	0	561	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	106	60	174	0	0	561	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	2	0	106	60	174	0	0	561	11
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.02	0.00	0.98	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	0	0	0	32	0	1718	1750	3700	0	0	3629	71
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.03	0.05	0.00	0.00	0.15	0.15
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	12.6	0.0	12.6	7.0	38.4	0.0	0.0	31.4	31.4
Volume/Cap:	0.00	0.00	0.00	0.29	0.00	0.29	0.29	0.07	0.00	0.00	0.29	0.29
Delay/Veh:	0.0	0.0	0.0	20.4	0.0	20.4	25.0	4.1	0.0	0.0	8.1	8.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.4	0.0	20.4	25.0	4.1	0.0	0.0	8.1	8.1
LOS by Move:	A	A	A	C+	A	C+	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	4	2	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #31: E Bayshore Rd/Embarcadero Rd



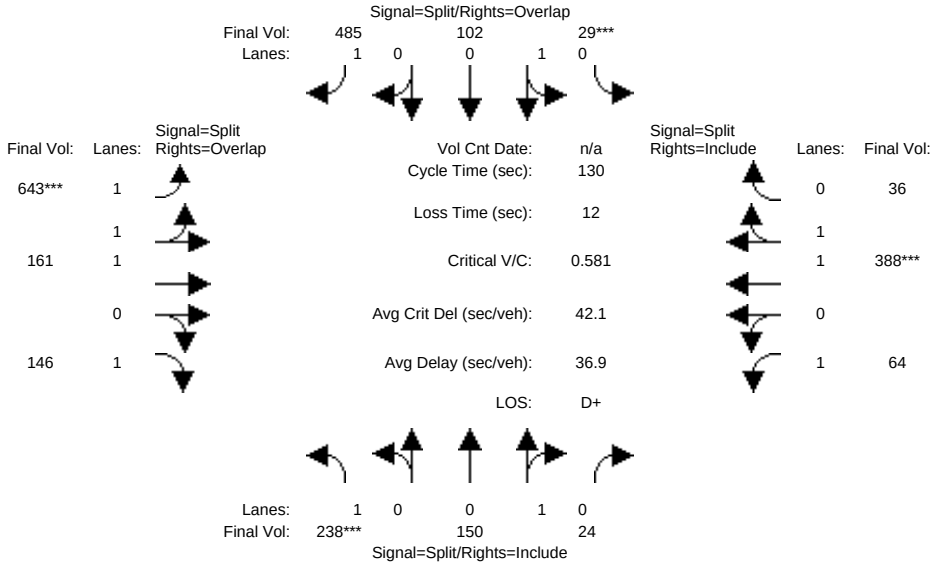
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	56	40	25	19	47	776	388	344	193	7	76	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	40	25	19	47	776	388	344	193	7	76	5
Added Vol:	12	2	1	3	1	0	0	24	10	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	68	42	26	22	48	776	388	368	203	9	76	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	42	26	22	48	776	388	368	203	9	76	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	42	26	22	48	776	388	368	203	9	76	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	42	26	22	48	776	388	368	203	9	76	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.93	0.98	0.92	0.92	0.98	0.95
Lanes:	1.00	0.62	0.38	0.31	0.69	1.00	1.58	1.42	1.00	1.00	1.87	0.13
Final Sat.:	1750	1112	688	566	1234	1750	2795	2651	1750	1750	3471	228
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.04	0.04	0.44	0.14	0.14	0.12	0.01	0.02	0.02
Crit Moves:	****					****		****			****	
Green Time:	10.0	10.0	10.0	39.8	39.8	58.0	18.2	18.2	28.2	10.0	10.0	10.0
Volume/Cap:	0.35	0.34	0.34	0.09	0.09	0.69	0.69	0.69	0.37	0.05	0.20	0.20
Delay/Veh:	38.1	38.0	38.0	14.6	14.6	12.0	35.2	35.2	24.5	35.8	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.1	38.0	38.0	14.6	14.6	12.0	35.2	35.2	24.5	35.8	36.6	36.6
LOS by Move:	D+	D+	D+	B	B	B	D+	D+	C	D+	D+	D+
HCM2k95thQ:	5	4	4	2	2	27	15	15	10	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #31: E Bayshore Rd/Embarcadero Rd



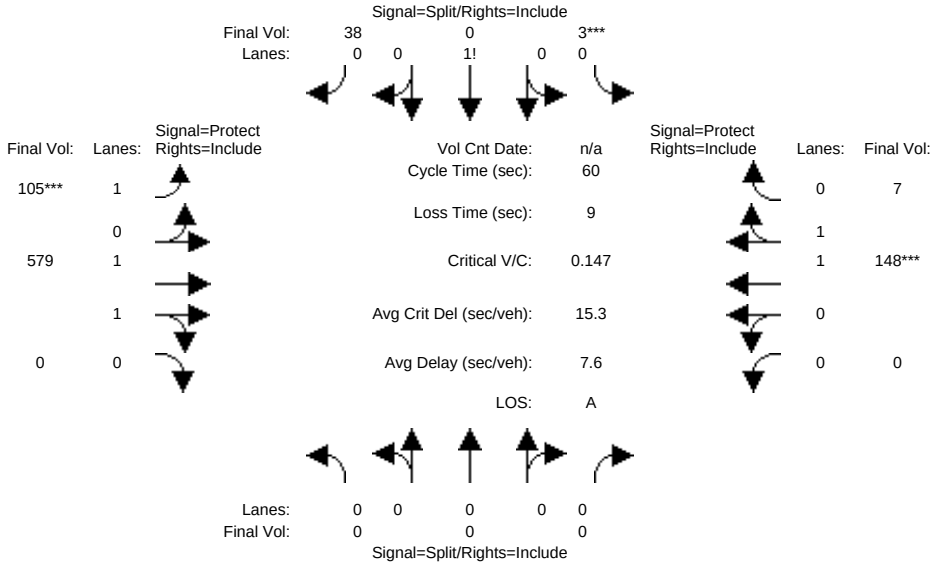
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	203	146	22	27	101	485	643	144	139	63	388	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	203	146	22	27	101	485	643	144	139	63	388	36
Added Vol:	35	4	2	2	1	0	0	17	7	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	238	150	24	29	102	485	643	161	146	64	388	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	238	150	24	29	102	485	643	161	146	64	388	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	238	150	24	29	102	485	643	161	146	64	388	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	238	150	24	29	102	485	643	161	146	64	388	36
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	1.00	0.86	0.14	0.22	0.78	1.00	2.00	1.00	1.00	1.00	1.83	0.17
Final Sat.:	1750	1552	248	398	1402	1750	3150	1900	1750	1750	3386	314
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.10	0.07	0.07	0.28	0.20	0.08	0.08	0.04	0.11	0.11
Crit Moves:	****			****			****				****	
Green Time:	30.4	30.4	30.4	16.3	16.3	62.0	45.7	45.7	76.1	25.6	25.6	25.6
Volume/Cap:	0.58	0.41	0.41	0.58	0.58	0.58	0.58	0.24	0.14	0.19	0.58	0.58
Delay/Veh:	46.3	42.9	42.9	57.3	57.3	25.6	35.0	29.9	12.3	43.7	48.5	48.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.3	42.9	42.9	57.3	57.3	25.6	35.0	29.9	12.3	43.7	48.5	48.5
LOS by Move:	D	D	D	E+	E+	C	D+	C	B	D	D	D
HCM2k95thQ:	18	12	12	10	10	26	23	9	6	4	15	15

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #32: Geng Rd/Embarcadero Rd



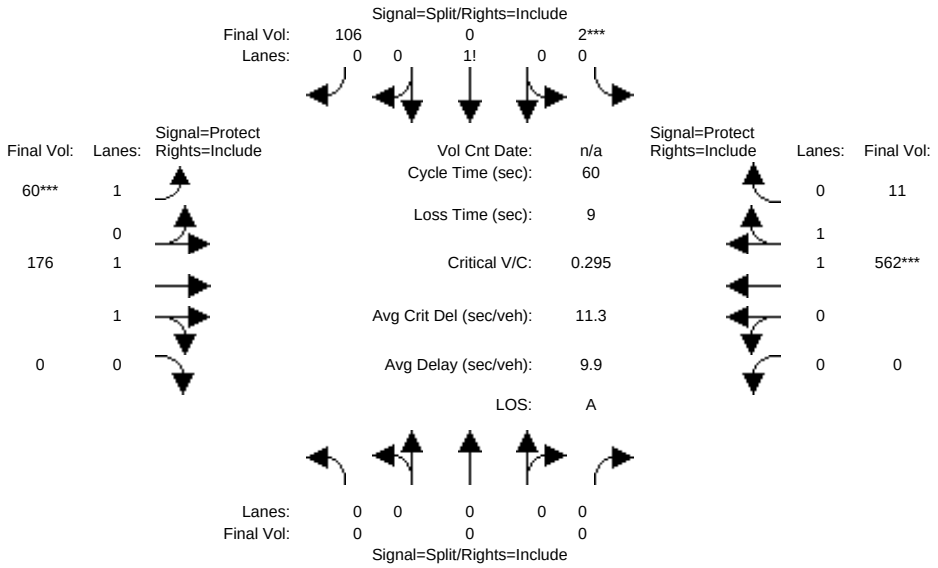
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	3	0	38	105	578	0	0	146	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	38	105	578	0	0	146	7
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	38	105	579	0	0	148	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	38	105	579	0	0	148	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	3	0	38	105	579	0	0	148	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	3	0	38	105	579	0	0	148	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.07	0.00	0.93	1.00	2.00	0.00	0.00	1.91	0.09
Final Sat.:	0	0	0	128	0	1622	1750	3700	0	0	3533	167
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.02	0.06	0.16	0.00	0.00	0.04	0.04
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	10.0	0.0	10.0	24.1	41.0	0.0	0.0	16.9	16.9
Volume/Cap:	0.00	0.00	0.00	0.14	0.00	0.14	0.15	0.23	0.00	0.00	0.15	0.15
Delay/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.5	3.6	0.0	0.0	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.5	3.6	0.0	0.0	16.3	16.3
LOS by Move:	A	A	A	C+	A	C+	B+	A	A	A	B	B
HCM2k95thQ:	0	0	0	2	0	2	3	4	0	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #32: Geng Rd/Embarcadero Rd



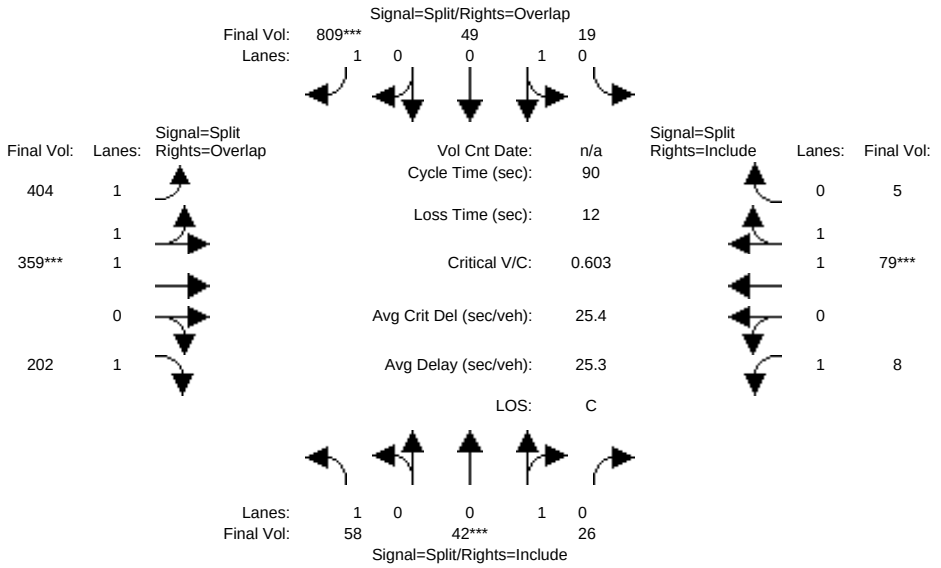
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	2	0	106	60	174	0	0	561	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	2	0	106	60	174	0	0	561	11
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	106	60	176	0	0	562	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	2	0	106	60	176	0	0	562	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	106	60	176	0	0	562	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	2	0	106	60	176	0	0	562	11
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.02	0.00	0.98	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	0	0	0	32	0	1718	1750	3700	0	0	3629	71
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.03	0.05	0.00	0.00	0.15	0.15
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	12.5	0.0	12.5	7.0	38.5	0.0	0.0	31.5	31.5
Volume/Cap:	0.00	0.00	0.00	0.30	0.00	0.30	0.29	0.07	0.00	0.00	0.30	0.30
Delay/Veh:	0.0	0.0	0.0	20.5	0.0	20.5	25.0	4.1	0.0	0.0	8.1	8.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.5	0.0	20.5	25.0	4.1	0.0	0.0	8.1	8.1
LOS by Move:	A	A	A	C+	A	C+	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	4	2	1	0	0	6	6

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative No Project AM

Intersection #31: E Bayshore Rd/Embarcadero Rd



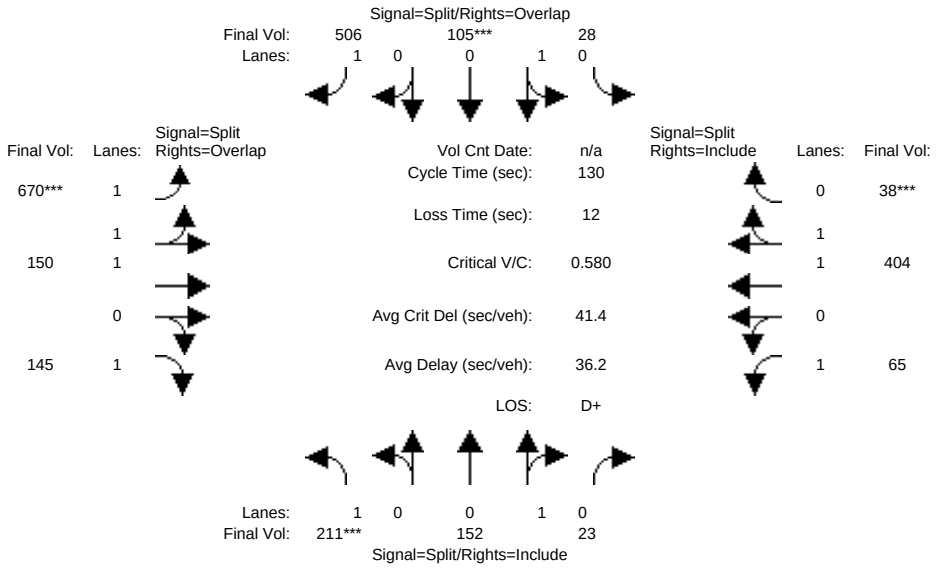
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	58	42	26	19	49	809	404	359	202	8	79	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	42	26	19	49	809	404	359	202	8	79	5
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	58	42	26	19	49	809	404	359	202	8	79	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	58	42	26	19	49	809	404	359	202	8	79	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	42	26	19	49	809	404	359	202	8	79	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	58	42	26	19	49	809	404	359	202	8	79	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.93	0.98	0.92	0.92	0.98	0.95
Lanes:	1.00	0.62	0.38	0.28	0.72	1.00	1.63	1.37	1.00	1.00	1.88	0.12
Final Sat.:	1750	1112	688	503	1297	1750	2883	2562	1750	1750	3480	220
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.04	0.04	0.04	0.46	0.14	0.14	0.12	0.00	0.02	0.02
Crit Moves:		****				****		****			****	
Green Time:	10.0	10.0	10.0	40.4	40.4	58.0	17.6	17.6	27.6	10.0	10.0	10.0
Volume/Cap:	0.30	0.34	0.34	0.08	0.08	0.72	0.72	0.72	0.38	0.04	0.20	0.20
Delay/Veh:	37.6	38.0	38.0	14.2	14.2	12.8	36.3	36.3	24.9	35.8	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.6	38.0	38.0	14.2	14.2	12.8	36.3	36.3	24.9	35.8	36.6	36.6
LOS by Move:	D+	D+	D+	B	B	B	D+	D+	C	D+	D+	D+
HCM2k95thQ:	4	4	4	2	2	29	16	16	10	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative No Project PM

Intersection #31: E Bayshore Rd/Embarcadero Rd



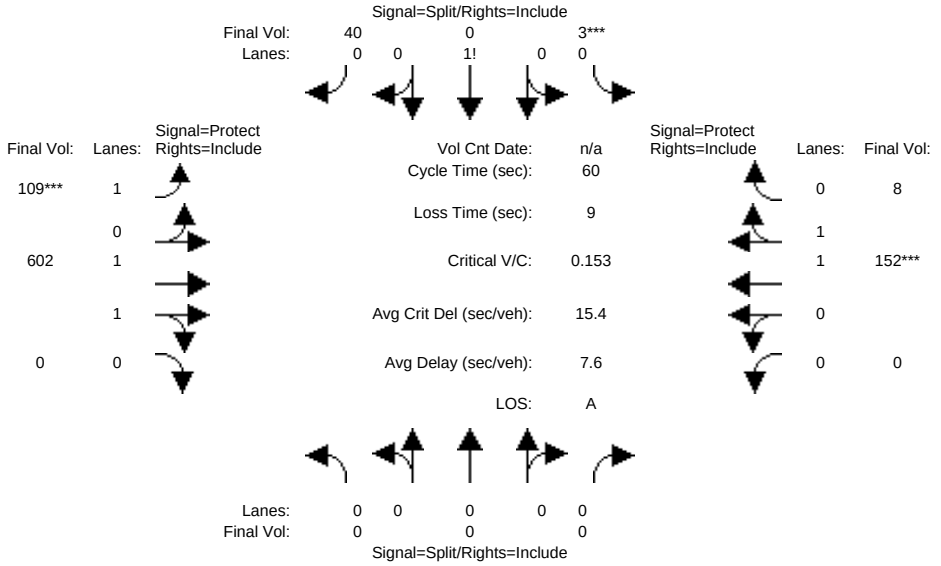
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	211	152	23	28	105	506	670	150	145	65	404	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	211	152	23	28	105	506	670	150	145	65	404	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	211	152	23	28	105	506	670	150	145	65	404	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	211	152	23	28	105	506	670	150	145	65	404	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	152	23	28	105	506	670	150	145	65	404	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	211	152	23	28	105	506	670	150	145	65	404	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	1.00	0.87	0.13	0.21	0.79	1.00	2.00	1.00	1.00	1.00	1.82	0.18
Final Sat.:	1750	1563	237	379	1421	1750	3150	1900	1750	1750	3382	318
Capacity Analysis Module:												
Vol/Sat:	0.12	0.10	0.10	0.07	0.07	0.29	0.21	0.08	0.08	0.04	0.12	0.12
Crit Moves:	****				****		****					****
Green Time:	27.0	27.0	27.0	17.1	17.1	64.8	47.7	47.7	74.7	26.8	26.8	26.8
Volume/Cap:	0.58	0.47	0.47	0.56	0.56	0.58	0.58	0.22	0.14	0.18	0.58	0.58
Delay/Veh:	48.7	46.1	46.1	55.9	55.9	24.0	33.7	28.3	12.9	42.8	47.7	47.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.7	46.1	46.1	55.9	55.9	24.0	33.7	28.3	12.9	42.8	47.7	47.7
LOS by Move:	D	D	D	E+	E+	C	C-	C	B	D	D	D
HCM2k95thQ:	16	13	13	10	10	27	23	8	6	4	15	15

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative No Project AM

Intersection #32: Geng Rd/Embarcadero Rd



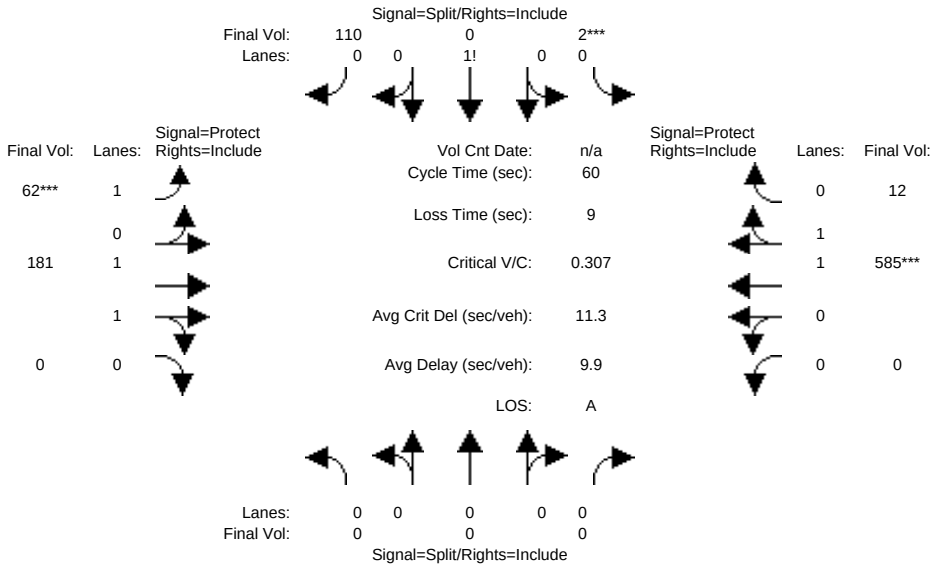
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	3	0	40	109	602	0	0	152	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	40	109	602	0	0	152	8
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	40	109	602	0	0	152	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	40	109	602	0	0	152	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	3	0	40	109	602	0	0	152	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	3	0	40	109	602	0	0	152	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.98	0.95
Lanes:	0.00	0.00	0.00	0.07	0.00	0.93	1.00	2.00	0.00	0.00	1.90	0.10
Final Sat.:	0	0	0	122	0	1628	1750	3700	0	0	3515	185
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.02	0.06	0.16	0.00	0.00	0.04	0.04
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	10.0	0.0	10.0	24.2	41.0	0.0	0.0	16.8	16.8
Volume/Cap:	0.00	0.00	0.00	0.15	0.00	0.15	0.15	0.24	0.00	0.00	0.15	0.15
Delay/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.5	3.6	0.0	0.0	16.3	16.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.5	3.6	0.0	0.0	16.3	16.3
LOS by Move:	A	A	A	C+	A	C+	B+	A	A	A	B	B
HCM2k95thQ:	0	0	0	2	0	2	3	4	0	0	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative No Project PM

Intersection #32: Geng Rd/Embarcadero Rd



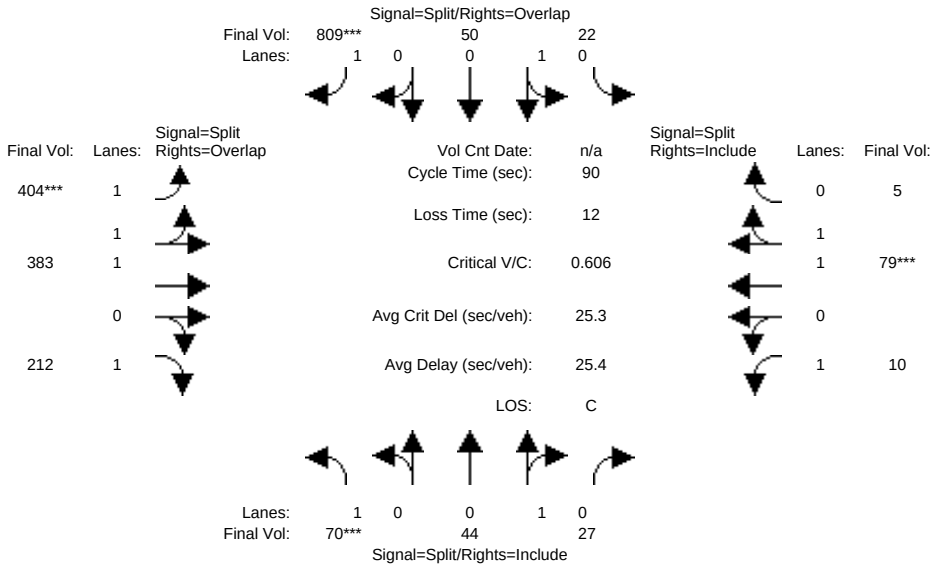
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	2	0	110	62	181	0	0	585	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	2	0	110	62	181	0	0	585	12
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	110	62	181	0	0	585	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	2	0	110	62	181	0	0	585	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	110	62	181	0	0	585	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	2	0	110	62	181	0	0	585	12
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.02	0.00	0.98	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	0	0	0	31	0	1719	1750	3700	0	0	3626	74
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.04	0.05	0.00	0.00	0.16	0.16
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	12.5	0.0	12.5	7.0	38.5	0.0	0.0	31.5	31.5
Volume/Cap:	0.00	0.00	0.00	0.31	0.00	0.31	0.30	0.08	0.00	0.00	0.31	0.31
Delay/Veh:	0.0	0.0	0.0	20.6	0.0	20.6	25.1	4.1	0.0	0.0	8.2	8.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.6	0.0	20.6	25.1	4.1	0.0	0.0	8.2	8.2
LOS by Move:	A	A	A	C+	A	C+	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	4	2	1	0	0	7	7

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project AM

Intersection #31: E Bayshore Rd/Embarcadero Rd



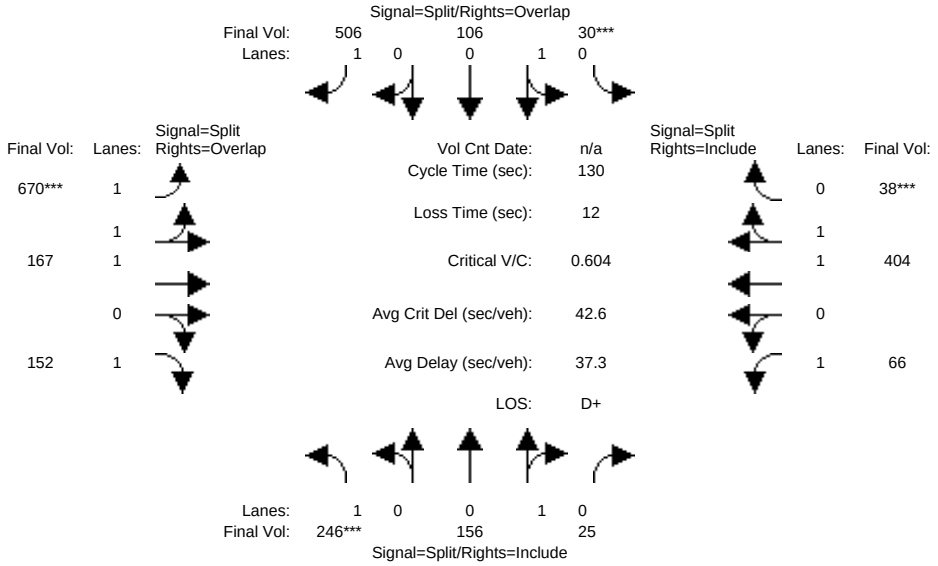
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	58	42	26	19	49	809	404	359	202	8	79	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	58	42	26	19	49	809	404	359	202	8	79	5
Added Vol:	12	2	1	3	1	0	0	24	10	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	44	27	22	50	809	404	383	212	10	79	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	44	27	22	50	809	404	383	212	10	79	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	44	27	22	50	809	404	383	212	10	79	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	44	27	22	50	809	404	383	212	10	79	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.93	0.98	0.92	0.92	0.98	0.95
Lanes:	1.00	0.62	0.38	0.31	0.69	1.00	1.58	1.42	1.00	1.00	1.88	0.12
Final Sat.:	1750	1115	685	550	1250	1750	2796	2650	1750	1750	3480	220
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.04	0.04	0.46	0.14	0.14	0.12	0.01	0.02	0.02
Crit Moves:	****					****	****				****	
Green Time:	10.0	10.0	10.0	39.9	39.9	58.0	18.1	18.1	28.1	10.0	10.0	10.0
Volume/Cap:	0.36	0.35	0.36	0.09	0.09	0.72	0.72	0.72	0.39	0.05	0.20	0.20
Delay/Veh:	38.2	38.1	38.1	14.6	14.6	12.8	35.9	35.9	24.7	35.9	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.2	38.1	38.1	14.6	14.6	12.8	35.9	35.9	24.7	35.9	36.6	36.6
LOS by Move:	D+	D+	D+	B	B	B	D+	D+	C	D+	D+	D+
HCM2k95thQ:	5	5	5	2	2	29	16	16	10	1	2	2

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project PM

Intersection #31: E Bayshore Rd/Embarcadero Rd



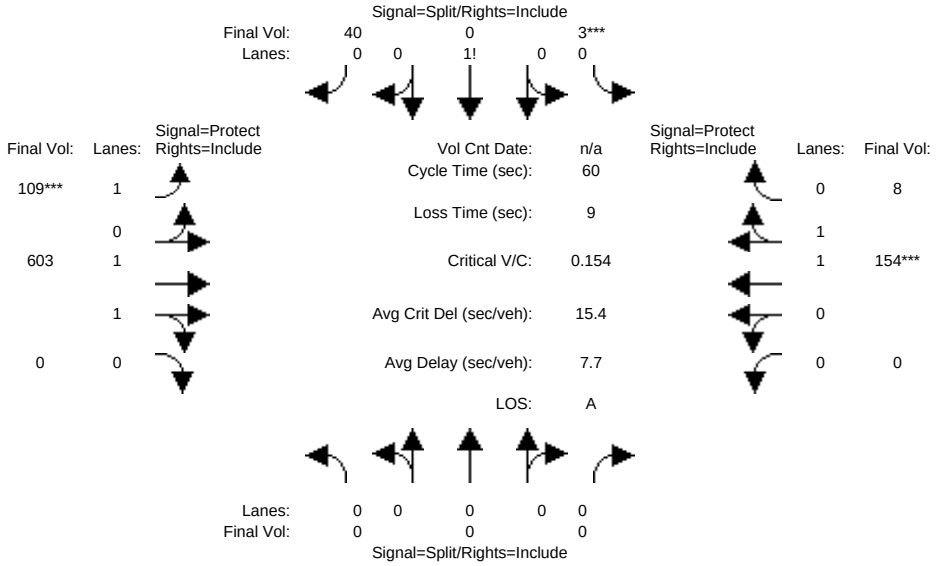
Street Name:	E Bayshore Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	211	152	23	28	105	506	670	150	145	65	404	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	211	152	23	28	105	506	670	150	145	65	404	38
Added Vol:	35	4	2	2	1	0	0	17	7	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	246	156	25	30	106	506	670	167	152	66	404	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	246	156	25	30	106	506	670	167	152	66	404	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	246	156	25	30	106	506	670	167	152	66	404	38
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	246	156	25	30	106	506	670	167	152	66	404	38
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.95	0.95	0.92	0.83	1.00	0.92	0.92	0.98	0.95
Lanes:	1.00	0.86	0.14	0.22	0.78	1.00	2.00	1.00	1.00	1.00	1.82	0.18
Final Sat.:	1750	1551	249	397	1403	1750	3150	1900	1750	1750	3382	318
Capacity Analysis Module:												
Vol/Sat:	0.14	0.10	0.10	0.08	0.08	0.29	0.21	0.09	0.09	0.04	0.12	0.12
Crit Moves:	****			****			****					****
Green Time:	30.3	30.3	30.3	16.5	16.5	62.2	45.8	45.8	76.0	25.7	25.7	25.7
Volume/Cap:	0.60	0.43	0.43	0.60	0.60	0.60	0.60	0.25	0.15	0.19	0.60	0.60
Delay/Veh:	47.1	43.3	43.3	57.9	57.9	26.1	35.4	30.0	12.3	43.7	48.9	48.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.1	43.3	43.3	57.9	57.9	26.1	35.4	30.0	12.3	43.7	48.9	48.9
LOS by Move:	D	D	D	E+	E+	C	D+	C	B	D	D	D
HCM2k95thQ:	19	13	13	11	11	28	24	9	6	5	15	15

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project AM

Intersection #32: Geng Rd/Embarcadero Rd



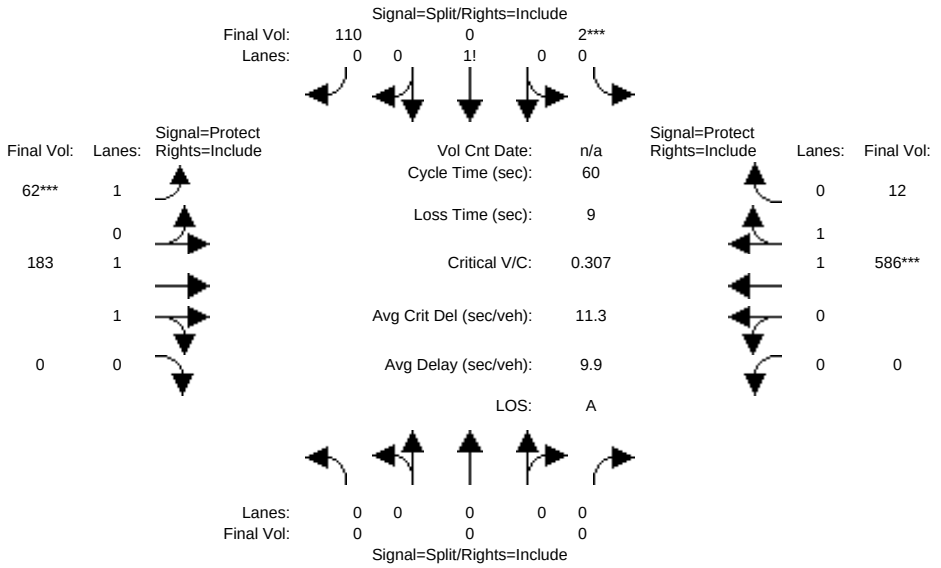
Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	3	0	40	109	602	0	0	152	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	3	0	40	109	602	0	0	152	8
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	3	0	40	109	603	0	0	154	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	3	0	40	109	603	0	0	154	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	3	0	40	109	603	0	0	154	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	3	0	40	109	603	0	0	154	8
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.98	0.95
Lanes:	0.00	0.00	0.00	0.07	0.00	0.93	1.00	2.00	0.00	0.00	1.90	0.10
Final Sat.:	0	0	0	122	0	1628	1750	3700	0	0	3517	183
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.02	0.00	0.02	0.06	0.16	0.00	0.00	0.04	0.04
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	10.0	0.0	10.0	24.1	41.0	0.0	0.0	16.9	16.9
Volume/Cap:	0.00	0.00	0.00	0.15	0.00	0.15	0.16	0.24	0.00	0.00	0.16	0.16
Delay/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.6	3.6	0.0	0.0	16.2	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.6	0.0	21.6	11.6	3.6	0.0	0.0	16.2	16.2
LOS by Move:	A	A	A	C+	A	C+	B+	A	A	A	B	B
HCM2k95thQ:	0	0	0	2	0	2	3	4	0	0	3	3

Note: Queue reported is the number of cars per lane.

1700 Embarcadero Road Mercedes TIA
Palo Alto, CA
Hexagon Transportation Consultants

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative+Project PM

Intersection #32: Geng Rd/Embarcadero Rd



Street Name:	Geng Rd						Embarcadero Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	10	10	10	7	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	0	0	2	0	110	62	181	0	0	585	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	2	0	110	62	181	0	0	585	12
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	2	0	110	62	183	0	0	586	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	2	0	110	62	183	0	0	586	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	2	0	110	62	183	0	0	586	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	2	0	110	62	183	0	0	586	12
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.92	0.92	0.92	0.97	0.92	0.92	0.97	0.95
Lanes:	0.00	0.00	0.00	0.02	0.00	0.98	1.00	2.00	0.00	0.00	1.96	0.04
Final Sat.:	0	0	0	31	0	1719	1750	3700	0	0	3626	74
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.06	0.04	0.05	0.00	0.00	0.16	0.16
Crit Moves:				****			****				****	
Green Time:	0.0	0.0	0.0	12.5	0.0	12.5	7.0	38.5	0.0	0.0	31.5	31.5
Volume/Cap:	0.00	0.00	0.00	0.31	0.00	0.31	0.30	0.08	0.00	0.00	0.31	0.31
Delay/Veh:	0.0	0.0	0.0	20.6	0.0	20.6	25.1	4.1	0.0	0.0	8.2	8.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.6	0.0	20.6	25.1	4.1	0.0	0.0	8.2	8.2
LOS by Move:	A	A	A	C+	A	C+	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	4	2	1	0	0	7	7

Note: Queue reported is the number of cars per lane.