Hexagon Transportation Consultants, Inc.

619-625 California Drive Live/Work Development

Draft Traffic Impact Analysis

Prepared for:

First Carbon Solutions

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Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400
San Jose, CA 95113
Hexagon Job Number: 20GB13
Phone: 408.971.6100
Client Name: ICF

Table of Contents

Appendices

List of Tables

List of Figures

Executive Summary

This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed live/work development at 619-625 California Drive. The project site is located on the southwest corner of the intersection of California Drive and Oak Grove Avenue. As proposed, the project would demolish all existing structures on the project site and construct a new five-story, 44 unit live/work development. Currently one of the existing parcels is vacant and the other two are occupied by an automobile repair shop and residential houses. Access to the site would be provided via a single full-access driveway on Oak Grove Avenue across from San Mateo Avenue.

This study was conducted for the purpose of identifying the potential transportation deficiencies in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County. The transportation study includes an analysis of AM and PM peak hour traffic conditions for two (2) signalized intersections and two (2) unsignalized intersections in the vicinity of the project site. The study also includes an analysis of vehicle miles travelled, site access and on-site circulation, vehicle queuing, and transit, bicycle, and pedestrian access.

Because the project is located within ½ mile of the Burlingame Caltrain Station, it can be presumed to have a less-than-significant impact on VMT based on the Governor's Office of Planning and Research (OPR) guidelines.

Based on the project description and ITE trip generation rates, the proposed development would generate a total of 195 net daily vehicle trips, with 13 net trips (3 inbound and 10 outbound) occurring during the AM peak hour and 14 net trips (10 inbound and 4 outbound) occurring during the PM peak hour.

The results of the intersection level of service analysis are summarized in Table ES-1. The results determined that under all scenarios with and without the project, all of the study intersections would operate in accordance with local standards during both AM and PM peak hours.

Review of the project site plan resulted in the following recommendations. Per the California Building Code (CBC) Table 11B-6, two (2) ADA accessible spaces are required for projects with 26 to 50 parking spaces. Of the required accessible parking spaces, one van accessible space is required. The plans show only one (1) ADA accessible van parking space. Thus, the project does not provide sufficient ADA accessible parking per the CBC. Hexagon recommends converting the standard residential parking space into an additional ADA accessible parking space to meet CBC requirements.

Table ES-1
Intersection Levels of Service Summary

					Existing		Existing plus Project			Background		Background plus Project			Background plus 2 Projects		
#	Intersection	Control*	Peak Hour	Count Date**	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Avg. Delay	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. in Avg. Delay	Avg. Delay (sec)	LOS	Incr. in Avg. Delay
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	B	14.5	B	0.0	15.2	C	15.3	C	0.1	15.4	C	0.2
			PM	05/23/17	12.3	B	12.3	B	0.0	12.9	B	12.9	B	0.0	12.9	B	0.0
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	B	18.9	B	0.1	19.6	B	19.7	B	0.1	19.7	B	0.1
			PM	04/24/19	15.2	B	15.3	B	0.1	15.9	B	16.0	B	0.1	16.0	B	0.1
3	Oak Grove Avenue & Ansel Avenue	TWSC	AM	01/11/18	11.3	B	11.3	B	0.0	11.5	B	11.5	B	0.0	11.5	B	0.0
			PM	01/11/18	10.9	B	10.9	B	0.0	11.0	B	11.1	B	0.1	11.1	B	0.1
4	Oak Grove Avenue & El Camino Real	Signalized	AM	01/11/18	13.3	B	13.3	B	0.0	13.2	B	13.2	B	0.0	13.2	B	0.0
			PM	01/11/18	12.8	B	12.8	B	0.0	12.7	B	12.6	B	-0.1	12.6	B	-0.1

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020.

1. Introduction

This report presents the results of the Transportation Impact Analysis (TIA) conducted for the proposed live/work development at 619-625 California Drive in Burlingame, CA. The project site is located on the southwest corner of the intersection of California Drive and Oak Grove Avenue (See Figure 1). As proposed, the project would demolish all existing structures on the project site and construct a new five-story, 44 unit live/work development. Currently one of the existing parcels is vacant and the other two are occupied by an automobile repair shop and residential houses. Access to the site would be provided via a single full-access driveway on Oak Grove Avenue across from San Mateo Avenue.

Scope of Study

This study was conducted for the purpose of identifying the potential transportation deficiencies related to the proposed development. The potential deficiencies caused by the project were evaluated in accordance with the standards set forth by the City of Burlingame and the City/County Association of Governments (C/CAG) of San Mateo County. The C/CAG administers the San Mateo County Congestion Management Program (CMP). Given that the project is expected to add fewer than 100 peak hour trips to CMP roadways (El Camino Real), a C/CAG trip reduction analysis was not prepared.

The traffic study includes an analysis of AM and PM peak hour traffic conditions for two (2) signalized intersections and two (2) unsignalized intersections in the vicinity of the project site. The study also includes an analysis of Vehicle Miles Traveled (VMT), site access and on-site circulation, vehicle queuing, and transit, bicycle, and pedestrian access.

Study Intersections

1. Carolan Avenue and Oak Grove Avenue *
2. California Drive and Oak Grove Avenue
3. Ansel Avenue and Oak Grove Avenue *
4. El Camino Real and Oak Grove Avenue

* Denotes Unsignalized Intersections

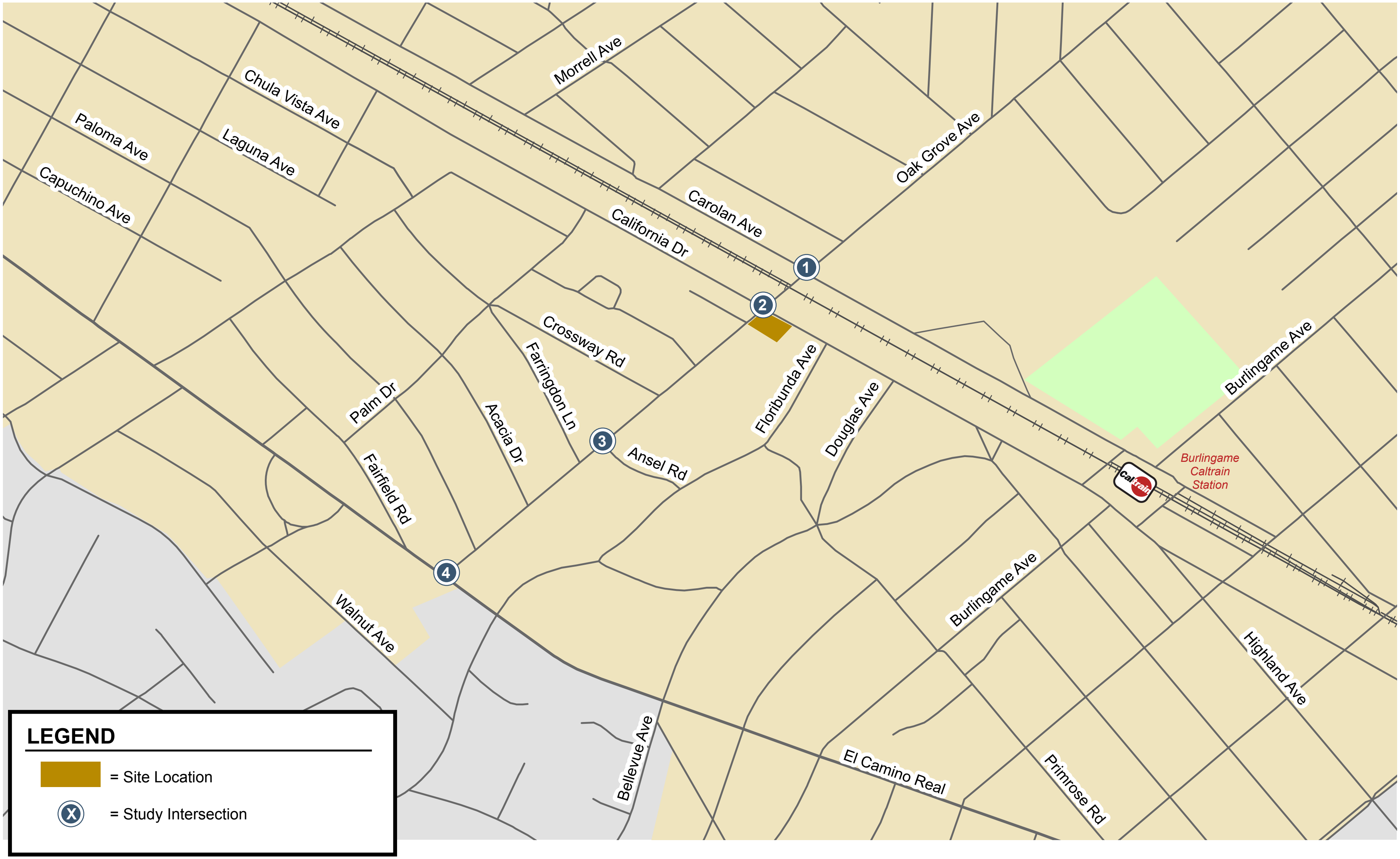

Figure 1
Site Location and Study Intersections

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways in the study area.

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Due to the COVID-19 pandemic, most businesses and schools are closed, and people are working at home to the extent possible. As a result, traffic volume is a fraction of what it was prior to the virus outbreak. Current traffic counts would not accurately reflect traffic conditions at the completion of the project. Therefore, it is necessary to estimate traffic volume based on older available traffic counts.. A 1% per year growth factor was applied to escalate the counts to 2021. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the *2010 Highway Capacity Manual* methodology.

Scenario 2: *Background Conditions.* Background traffic volumes reflect traffic added by projected volumes from approved but not yet completed developments in the project area. The approved project trips and/or approved project information were obtained from the City of Burlingame.

Scenario 3: *Existing plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

Scenario 4: *Project Conditions.* Background traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to background traffic volumes the additional traffic generated by the project. Project Conditions were evaluated relative to background conditions to determine potential project impacts.

Scenario 5: *Background Plus 2 Project Conditions.* A proposed live/work development is also planned at 601 California Drive. Project traffic volumes with the 601 California Drive project were estimated by adding to project traffic volumes the additional traffic generated by the 601 California Drive project. Background Plus 2 Project Conditions were evaluated relative to background conditions to determine potential impacts if both projects are built.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. 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 counts, the City of Burlingame, local traffic studies and EIRs, and field observations. The following data were collected from these sources:

- historical peak-hour intersection turning-movement volumes
- lane configurations
- intersection signal timing and phasing

- approved project trips

Level of Service Standards and Analysis Methodologies

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 various analysis methods are described below.

Signalized Intersections

The City of Burlingame level of service standards were used to evaluate the signalized study intersections. The City of Burlingame evaluates intersection level of service based on the *Highway Capacity Manual* (HCM) *2010* method using Synchro software. The 2010 HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay can then be correlated to a level of service. While the City of Burlingame does not have a Council-adopted level of service threshold, a standard of LOS D or better has typically been applied in local traffic studies and EIRs. The correlation between delay and level of service is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on 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	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major-contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p18-6.

Unsignalized Intersections

Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

Level of service at unsignalized intersections was based on the 2010 HCM method using the Synchro software. This method is applicable for both side-street and all-way stop-controlled intersections. At side-street stop-controlled intersections, the reported levels of service are reported for the worst stop-controlled approach delay at the intersection. For all-way stop-controlled intersections, a weighted average delay of the entire intersection is presented.

The City of Burlingame does not have a formally-adopted level of service standard for unsignalized intersections. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 2.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short Traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0
Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p20-3.		

<u>Traffic Signal Warrant</u>

The level of service calculations at the unsignalized intersections are supplemented with an assessment of the need for installation of a traffic signal, known as a signal warrant analysis. The need for signalization of unsignalized intersections in an urban or suburban context is typically assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CA MUTCD), Part 4, Highway Traffic Signals. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour volumes are, or would be, sufficiently high to justify installation of a traffic signal.

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the decision should be considered when one or more of the warrants are met, which triggers further feasibility analysis. Engineering judgment should be exercised to determine how a traffic signal could affect collision rates and traffic conditions at the subject intersection, as well as at adjacent intersections. Other options besides a traffic signal should also be considered, such as all-way stop control, new or enhanced signage, or roadway geometry changes; these measures may be more appropriate than a new traffic signal.

Significant Impact Criteria

Pursuant to SB 743, the CEQA 2019 Update Guidelines Section 15064.3, subdivision (b) states that vehicle miles travelled (VMT) will be the metric in analyzing transportation impacts for land use projects for CEQA purposes. The *Technical Advisory on Evaluating Transportation Impacts in CEQA* published by the Governor's Office of Planning and Research (OPR) in December 2018 provides recommendations regarding VMT evaluation methodology, significance thresholds and screening thresholds for land use projects. The following OPR recommendations are relevant to the project:

- OPR recommends that office or residential projects exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact.
- OPR recommends that projects (including office, residential, retail and mixed-use developments) proposed within ½ mile of an existing major transit stop may be presumed to have a less-than-significant impact on VMT.

- OPR recommends that 100 percent affordable residential development in infill locations be presumed to have a less-than-significant impact on VMT.

It should be noted that agencies are not required to adopt VMT analysis guidelines until July 1, 2020. The City of Burlingame, at the time of this report, is undertaking a process of updating its significance thresholds to be consistent with SB 743, but has not released draft thresholds. In the absence of an adopted, or even draft, City policy with numeric thresholds, this study utilized OPR guidelines in analyzing VMT.

Because the project is located within ½ mile of the Burlingame Caltrain Station, it can be presumed to have a less-than-significant impact on VMT based on OPR guidelines.

Intersection Operational Deficiencies

The City of Burlingame does not have Council-adopted definitions of what constitutes an operational deficiency at an intersection. The following standards typically have been used in traffic studies and EIRs. The project is said to create an operational deficiency at a signalized intersection in the City of Burlingame if for any peak-hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under no project conditions to an unacceptable LOS E or F under project conditions; or

2. The level of service at the intersection is an unacceptable LOS E or F under no project conditions and the addition of project trips causes the average delay at the intersection to increase by five (5) or more seconds.

Report Organization

The remainder of this report is divided into five chapters. Chapter 2 describes the existing roadway network, pedestrian and bicycle facilities, and transit services. Chapter 3 presents the intersection operations under background conditions and describes the approved projects in the City of Burlingame that would likely add traffic to the study area. Chapter 4 describes the methods used to estimate project-generated traffic and its potential project deficiencies on the transportation system. Chapter 5 describes project conditions with the 601 California Drive project. Chapter 6 presents the analysis of other transportation related issues including transit, bicycle, and pedestrian facilities.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, pedestrian and bicycle facilities, and the existing levels of service for the key intersections in the study area.

Existing Roadway Network

Regional access to the project site is provided via US 101 and El Camino Real (SR 82). Local access to the site is provided by Broadway, Peninsula Avenue, Carolan Avenue, California Drive, and Oak Grove Avenue. These roadways are described below.

US 101 is a north/south, eight-lane freeway in the vicinity of the site. US 101 extends northward through San Francisco and southward through San Jose. US 101 provides access to and from the project site via a full interchange at Broadway and a partial interchange at Peninsula Avenue.

El Camino Real (SR 82) is a four-lane roadway west of the project site that serves as a north-south route of travel along the Peninsula in the vicinity of the site. El Camino Real extends northward to San Francisco, and southward to San Jose. El Camino Real provides access to and from the project site via Floribunda Avenue.

Broadway is an east/west, two- to four-lane arterial that extends from west of Vancouver Avenue to Old Bayshore Highway, where it transitions into Airport Boulevard. Broadway is located north of the project site, and is one of the main gateways into the city with high volumes and access to other parts to the city. Broadway provides access to and from the project site via California Drive.

Peninsula Avenue is an east/west, two- to three-lane arterial that extends from El Camino Real east to Airport Boulevard, where it transitions into Coyote Point Drive. Peninsula Avenue is located south of the project site and acts as the southern gateway into the city, connecting the downtown Burlingame area with US 101 and El Camino Real. Peninsula Avenue provides access to and from the project site via California Drive.

Carolan Avenue is a north/south roadway that extends from Broadway to Burlingame Avenue. Carolan Avenue consists of one lane in each direction. Carolan Avenue provides access to and from the project site via Oak Grove Avenue.

California Drive is a north/south roadway that extends from Millbrae Avenue in the City of Millbrae to Peninsula Avenue in San Mateo to the south, at which point it becomes North San Mateo Drive.

California Drive consists of two lanes between Millbrae Avenue and Broadway, and four lanes south of Broadway. California Drive provides access to and from the project site via Oak Grove Avenue.

Oak Grove Avenue is an east/west roadway that extends from El Camino Real to Rollins Road. California Drive consists of one lane in each direction. Oak Grove Avenue provides direct access to and from the project site.

Existing Pedestrian and Bicycle Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, existing sidewalks along the west side of California Drive and both sides of Floribunda Avenue, Ansel Avenue, and Oak Grove Avenue provide pedestrian access to and from the project site. Sidewalks also exist on both sides of El Camino Real north of Floribunda Avenue and on the east side of El Camino Real south of Floribunda Avenue. Marked crosswalks with pedestrian signal heads and push buttons are provided on all approaches of the signalized study intersection of California Avenue and Oak Grove Avenue and on the east and north approaches of the signalized study intersection of El Camino Real and Oak Grove Avenue. At the unsignalized study intersections, marked crosswalks are provided along all stop-controlled approaches. An additional marked crosswalk is provided on the west leg of the intersection of Ansel Avenue and Oak Grove Avenue

Although some sidewalk and crosswalk connections are missing, the overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest in the vicinity of the project site.

Existing Bicycle Facilities

Existing bicycle facilities in the project vicinity consist of Class II bicycle lanes and Class III bike routes on some nearby streets. Class II bicycle lanes are lanes on roadways designed for use by bicycles with special lane markings, pavement legends, and signage. Class III bike routes are signed and designated roadways that provide connections to the project site, Class I and Class II bike facilities, as well as parks, schools, other community amenities such as downtown Burlingame, the Burlingame Caltrain Station, and the Millbrae Transit Center. Class II and Class III bike facilities currently exist on the roadway segments listed below and shown on Figure 2.

North-south bicycle connections in the study area include Class III bike routes along California Drive between Millbrae Avenue and Burlingame Avenue and along Primrose Road between Floribunda Avenue and El Camino Real. There are also Class II bike lanes north of the project site along Carolan Avenue between Broadway and Oak Grove Avenue.

East-west bicycle connections in the study area consist of bike routes along Oak Grove Avenue between Acacia Drive and Winchester Drive, Bellevue Avenue between California Drive and El Camino Real, Chapin Avenue between Primrose Road and Occidental Avenue, and Howard Avenue between Occidental Avenue and East Lane. There is also a Class II bike lane along Howard Avenue between East Lane and Humboldt Street.

Although few of the local streets within the project study area have designated bike lanes or are designated as bike routes, many streets in the vicinity of the project site are conducive to bicycle travel due to their low speed limits and traffic volumes.

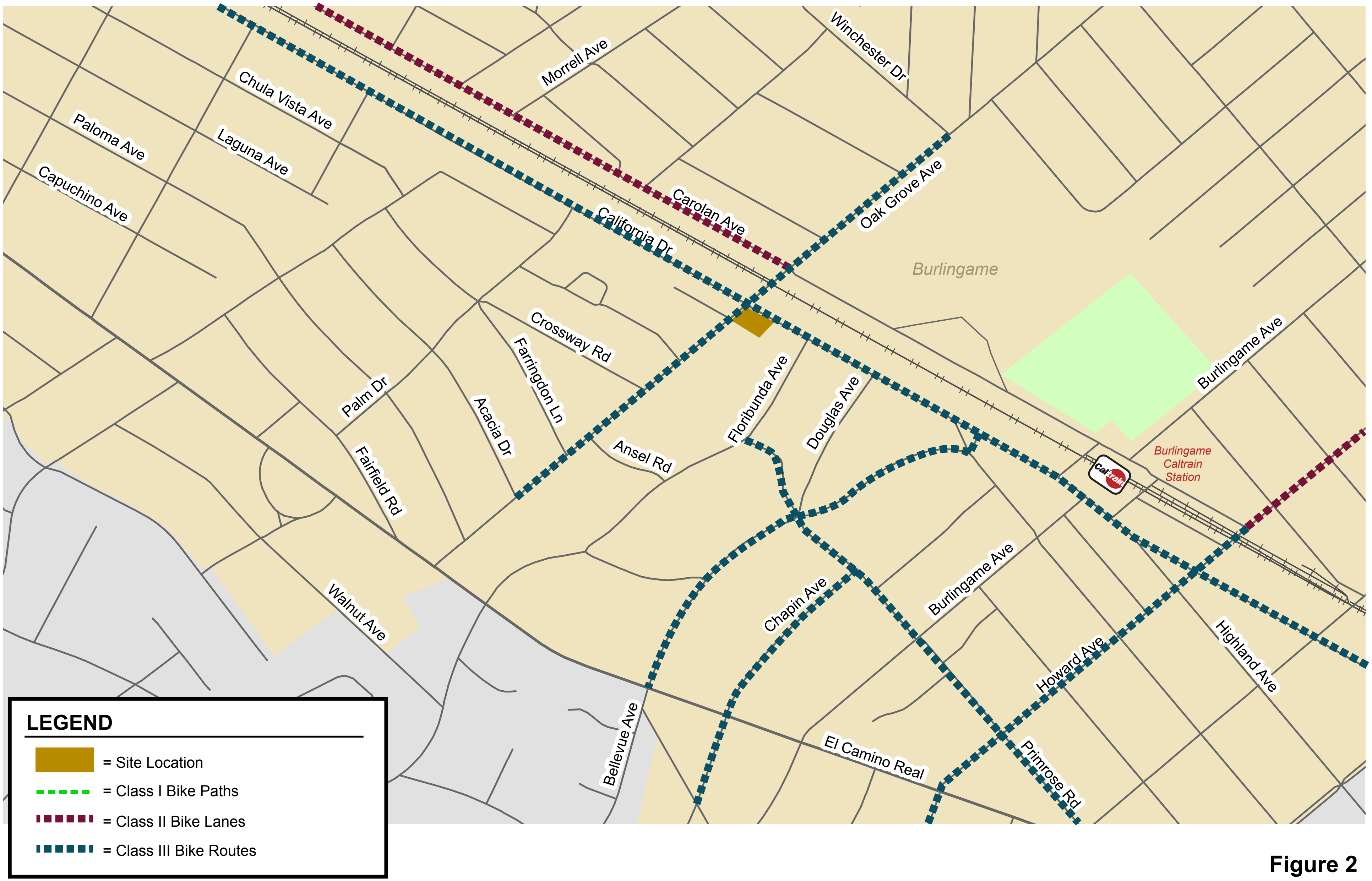

Figure 2
Existing Bicycle Facilties

HEXAGON

Existing Transit Service

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans), the City of Burlingame, and Caltrain (See Figure 3). The transit service routes that run through the study area are listed in Table 3, including their route description and commute hour headways.

Table 3
Existing Transit Services

Transit Route	Route Description	Headway [1]
Operated by SamTrans		
School-Day Only Route 46	Burlingame Intermediate School to Carolan Ave at 1060	See Footnote [2]
Express Route 292	Hillsdale Shopping Center to Downtown San Francisco	30 mins
Express Route 397	Downtown San Francisco to Palo Alto Transit Center	60 mins[3]
Multi-City Route ECR	Daly City BART Station to Palo Alto Transit Center	15-20 mins
Operated by the City of Burlingame		
Burlingame Trolley Service	Burlingame Caltrain Station to San Francisco Airport Marriott Hotel	45 mins

Notes:
1 Approximate headways during peak commute periods. Headways shown reflect the schedule prior to COVID-19 reductions.
2 This route operates with two buses in the Northbound direction in the AM peak hour and two buses in the southbound direction in the school PM hour.
3 This Route does not operate during the PM.

SamTrans Bus Service

The study area is served directly by three bus routes and one school-day only bus route. The nearest bus stop for Route 46 and Route 292 is located at the California Drive/Oak Grove Avenue intersection, adjacent to the project site. The nearest bus stop for Route 397 and Route ECR is located at the El Camino Real/Oak Grove Avenue intersection, approximately 1,900 feet walking distance from the project site.

Caltrain Service

Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy. The closest Caltrain station is the Burlingame Station (approximately a quarter-mile south of the project site), providing weekday and weekend service. The Burlingame Station provides local and limited stop Caltrain service. Prior to COVID-19 service reductions, trains that stop at the Burlingame Station operate at approximately 25-minute headways in both directions during the commute hours, with somewhat less frequent service midday. Service operated between about 5:30 AM and 11:35 PM in the northbound direction and between 5:20 AM and 12:35 AM (next day) in the southbound direction.

As part of the Caltrain Modernization Program, the rail service will be electrified. The electrified Caltrain system will provide increased service and is also expected to help accommodate the increase in system ridership through much improved system operations.

Burlingame Trolley Service

The Burlingame Trolley service provides weekday PM peak-hour service between the Burlingame Caltrain Station and the San Francisco Airport Marriott Hotel. The Burlingame Trolley primarily connects the hotels east of Highway 101 with downtown Burlingame. The trolley service operates between 11:50 AM and 9:45 PM, with approximately 45-minute headways. The nearest trolley stop is located near the project site at the California Drive/Burlingame Avenue intersection, approximately a quarter-mile walking distance from the project site.

Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 4. Due to the COVID-19 pandemic, most businesses and schools are closed, and people are working at home to the extent possible. As a result, traffic volume is a fraction of what it was prior to the virus outbreak. Current traffic counts would not accurately reflect traffic conditions at the completion of the project. Therefore, it is necessary to estimate traffic volume based on older available traffic counts. Existing traffic volumes at the study intersection of Carolan Avenue & Oak Grove Avenue were obtained from traffic counts conducted in May of 2017. Existing traffic volumes at the study intersection of California Avenue & Oak Grove Avenue were obtained from traffic counts conducted in April of 2019. Existing traffic volumes at the study intersections of Ansel Avenue & Oak Grove Avenue and El Camino Real & Oak Grove Avenue were obtained from traffic counts conducted in January of 2018. A 1% per year growth factor was applied to escalate the counts to 2021. The estimated existing peak-hour intersection volumes are shown on Figure 5. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

Figure 3
Existing Transit Services

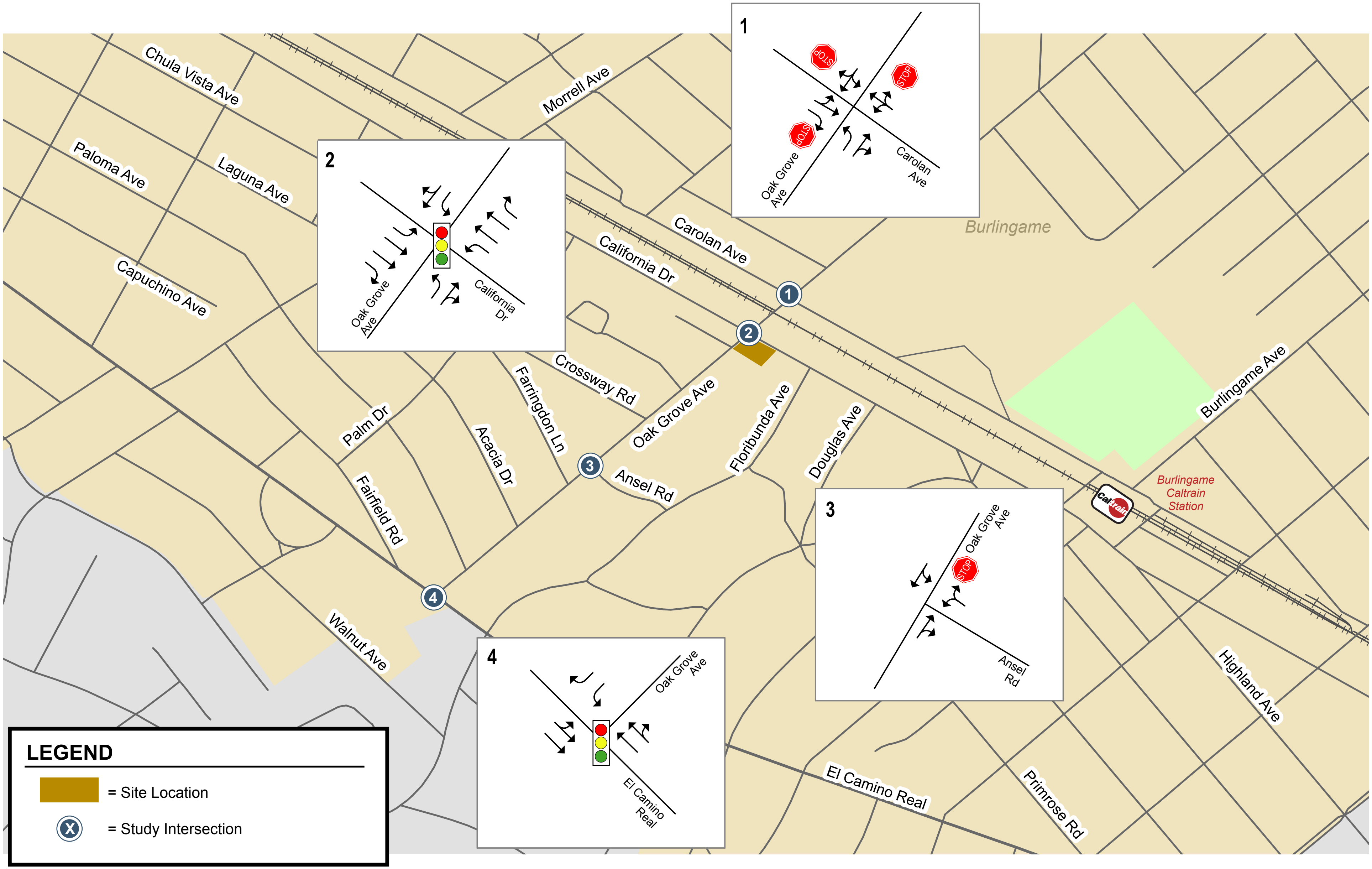

Figure 4
Existing Lane Configurations

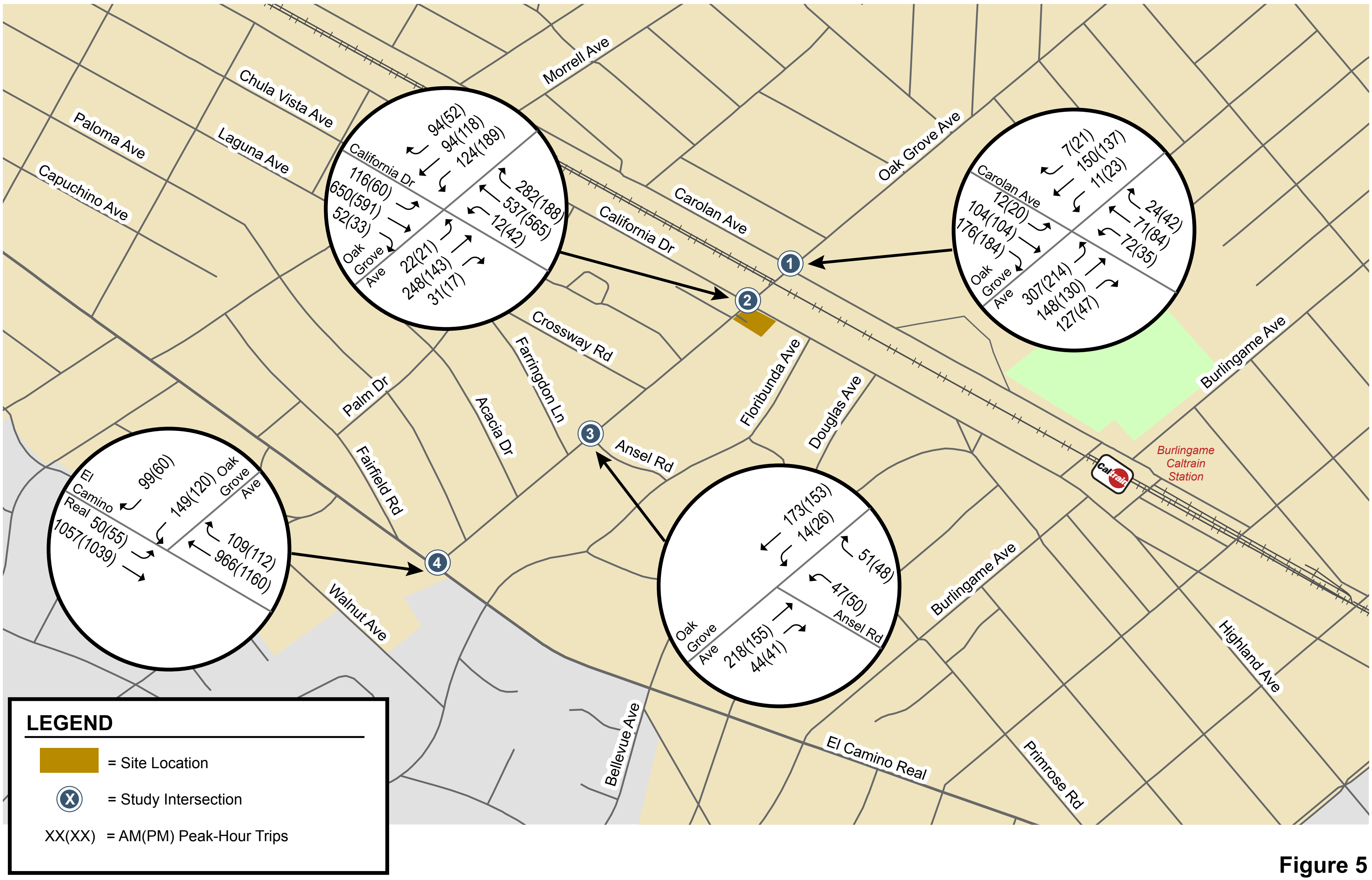

Figure 5
Existing Traffic Volumes

NORTH
Not to Scale

Existing Intersection Levels of Service

The results of the analysis show that both of the signalized study intersections currently operate at an acceptable LOS B during the AM and PM peak hours (see Table 4).

The results of the analysis show that both of the unsignalized study intersections currently operate at LOS B during the AM and PM peak hours. This indicates that vehicles at the stop-controlled approaches experience only minor delays.

The intersection level of service calculation sheets are included in Appendix B.

Table 4
Existing Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing Avg. Delay (sec)	LOS
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	14.5	B
			PM	05/23/17	12.3	12.3	B
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	18.8	B
			PM	04/24/19	15.2	15.2	B
3	Oak Grove Avenue & Ansel Avenue	TWSC	AM	01/11/18	11.3	11.3	B
			PM	01/11/18	10.9	10.9	B
4	Oak Grove Avenue & El Camino Real	Signalized	AM	01/11/18	13.3	13.3	B
			PM	01/11/18	12.8	12.8	B

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020.

3. Background Conditions

This chapter describes background traffic conditions. Background conditions are defined as conditions within the next 3-5 years (a horizon year of 2023-2025) just prior to completion/occupation of the proposed development. Traffic volumes for background conditions comprise existing traffic volumes plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Roadway Network and Traffic Volumes

Under background conditions, it is assumed that the proposed Peninsula Corridor Electrification Project (PCEP), which is a key component of the Caltrain Modernization program, would be completed (projected to be operational between 2022 and 2023). According to Fehr & Peers' *Caltrain Peninsula Corridor Electrification Project Transportation Analysis* (2014), the PCEP is expected to increase service by up to six Caltrain trains per peak hour per direction. The remainder of the transportation network is assumed to be the same under background conditions as that of the existing transportation network.

Background traffic volumes for the study intersections were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects in the area. A list of approved developments was obtained from the City of Burlingame website. The list of background projects is included in Appendix C. Trip generation estimates for the approved projects were based on their respective traffic study, if available. For small projects that did not require a traffic study, trips were estimated based on ITE trip rates. The estimated trips from the approved projects were distributed and assigned throughout the study area based on the trip distribution assumptions present in the traffic studies or based on knowledge of travel patterns in the study area. Background peak hour traffic volumes are shown on Figure 6.

Background Intersection Levels of Service

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B during the AM and PM peak hours under background conditions (see Table 5).

The results of the analysis show that both of the unsignalized study intersections would operate at LOS B or LOS C during the AM and PM peak hours under background conditions. This indicates that vehicles at the stop-controlled approaches would experience only minor or average delays.

The intersection level of service calculation sheets are provided in Appendix B.

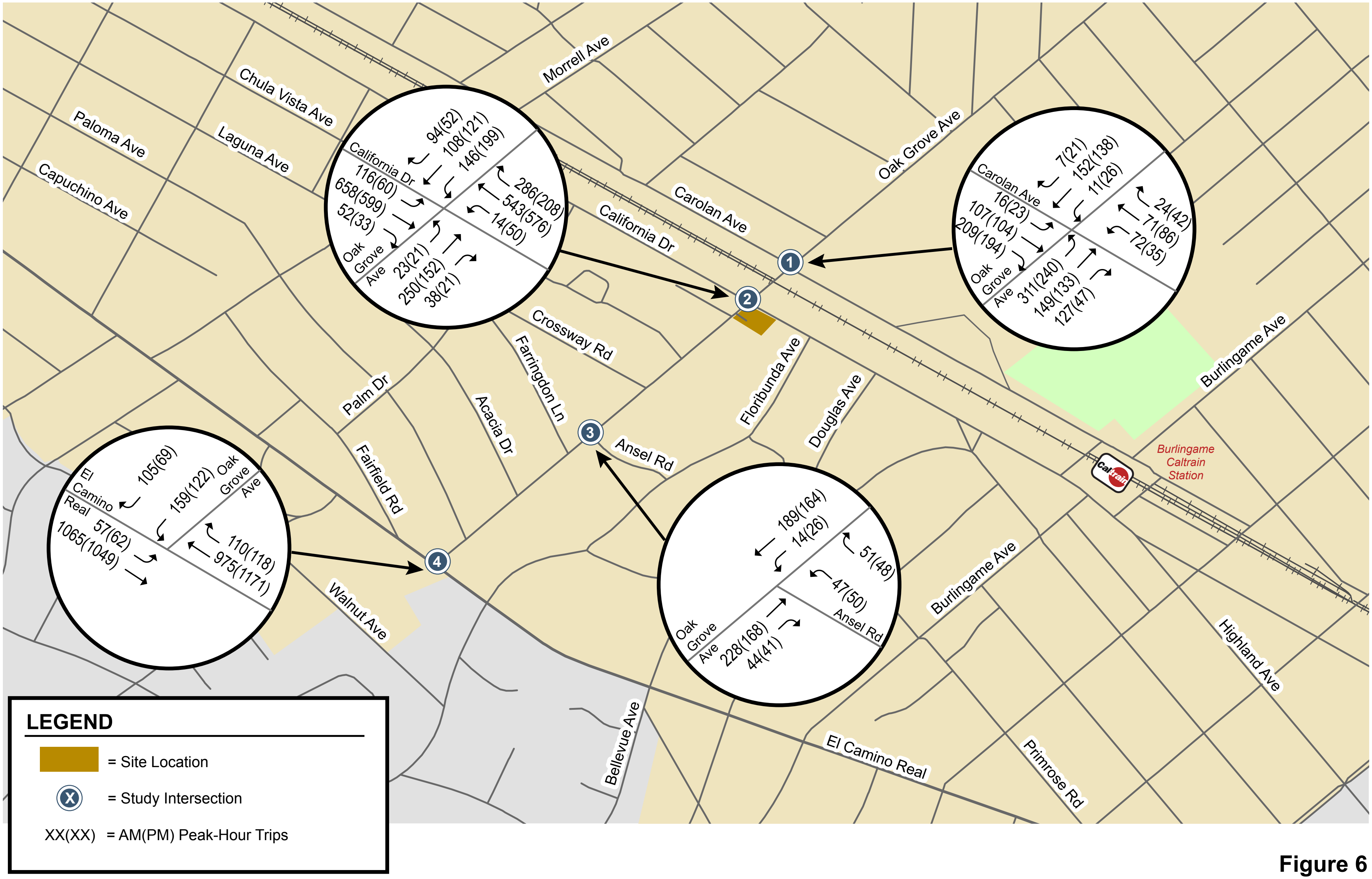

Figure 6
Background Traffic Volumes

Table 5
Background Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Avg. Delay (sec)	Existing Avg. Delay (sec)	Existing LOS	Background Avg. Delay (sec)	Background LOS
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	14.5	B	15.2	C
			PM	05/23/17	12.3	12.3	B	12.9	B
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	18.8	B	19.6	B
			PM	04/24/19	15.2	15.2	B	15.9	B
3	Oak Grove Avenue & Ansel Avenue	TWSC	AM	01/11/18	11.3	11.3	B	11.5	B
			PM	01/11/18	10.9	10.9	B	11.0	B
4	Oak Grove Avenue & El Camino Real	Signalized	AM	01/11/18	13.3	13.3	B	13.2	B
			PM	01/11/18	12.8	12.8	B	12.7	B

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.

**A 1% per year growth factor was applied to escalate the counts to 2020.

4. Project Conditions

This chapter describes traffic conditions with the project and includes: (1) the method by which project traffic is estimated and (2) a level of service summary. Existing plus project conditions are represented by existing traffic conditions with the addition of traffic generated by the project. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. Project conditions are represented by background traffic conditions with the addition of traffic generated by the project.

Roadway Network

It is assumed in this analysis that the transportation network under project conditions would be the same as the background transportation 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 residential 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

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. The research is compiled in the *Trip Generation Manual, 10th Edition (2017)* published by the Institute of Transportation Engineers' (ITE). The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. The average trip generation rates for Multi-Family Housing Mid-Rise (Land Use 221) were applied to the project. Live/work units do not operate the same as regular residential units. Some trips will be made by clients and patrons. However, the trip to work that residents normally would make during peak hours is eliminated due to the in-unit work space. These two factors offset, thus the trip behavior associated with live/work units was assumed to be comparable to that of a traditional residential unit. Based on the project description and ITE trip generation rates, the proposed development would generate a total of 239 gross daily vehicle trips, with 16 gross trips (4 inbound and 12 outbound) occurring during the AM peak hour and 19 gross trips (12 inbound and 7 outbound) occurring during the PM peak hour (see Table 6).

Existing Use Credit

The existing occupied buildings' trip generation can be credited against the proposed mixed-use development, because with the demolition of the existing land uses, their associated traffic would disappear. The trip generation for the existing automobile repair shop was estimated based on driveway counts conducted on January 11, 2018, and the existing residential houses were estimated based on published ITE rates for Single-Family Detached Housing (Land Use 210). Given that one of the residential houses is being used as an office with multiple employees, ITE rates for General Office Building (Land Use 710) were used.

Based on the driveway counts and ITE trip generation rates, it is estimated that the existing uses are generating a total of 44 daily trips, with 3 trips occurring during the AM peak hour and 5 trips occurring in the PM peak hour.

Net Project Trips

After applying the ITE trip rates and existing site trip credits, the project would generate 195 net daily vehicle trips, with 13 net trips (3 inbound and 10 outbound) occurring during the AM peak hour and 14 net trips (10 inbound and 4 outbound) occurring during the PM peak hour (See Table 6).

Table 6
Project Trip Generation Estimates

Land Use	Size		Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project												
Live/Work Residential [1]	44	units	5.44	239	0.36	4	12	16	0.44	12	7	19
Existing Use												
Automobile Shop [2]	6.00	ksf		(15)		0	(1)	(1)		(1)	(1)	(2)
Single-Family Residential [3]	2	units	9.44	(19)	0.74	0	(1)	(1)	0.99	(1)	(1)	(2)
General Office Building [4]	3	employees	3.28	(10)	0.37	(1)	0	(1)	0.40	0	(1)	(1)
Total Existing Trips				**(44)**		**(1)**	**(2)**	**(3)**		**(2)**	**(3)**	**(5)**
Net Project Trips				**195**		**3**	**10**	**13**		**10**	**4**	**14**

Notes:
ksf = 1,000 square feet
[1] Multifamily Housing (Mid-Rise) (Land Use 221) average rates published in ITE's *Trip Generation Manual, 10th Edition*, 2017.
[2] Based on driveway counts conduted on January 11, 2018. Daily trips reductions are the average of the AM and PM peak hour rate multiplied by 10.
[3] Single-Family Detached Housing (Land Use 210) average rates published in ITE's *Trip Generation Manual, 10th Edition,* 2017.
[4] General Office Building (Land Use 710) average rates published in ITE's *Trip Generation Manual, 10th Edition,* 2017.

Trip Distribution and Trip Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern. Figure 7 and Figure 8 show the trip distribution pattern and net trip assignment of project traffic on the local transportation network, respectively.

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. The existing plus project traffic volumes are shown on Figure 9.

Existing Plus Project Intersection Analysis

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B during the AM and PM peak hours under existing plus project conditions (see Table 7).

The results of the analysis show that both of the unsignalized study intersections would continue to operate at LOS B or LOS C during the AM and PM peak hours under existing plus project conditions. This indicates that, with the addition of project traffic under existing conditions, vehicles at the stop-controlled approaches are expected to continue to experience only minor delays.

The intersection level of service calculation sheets are provided in Appendix B.

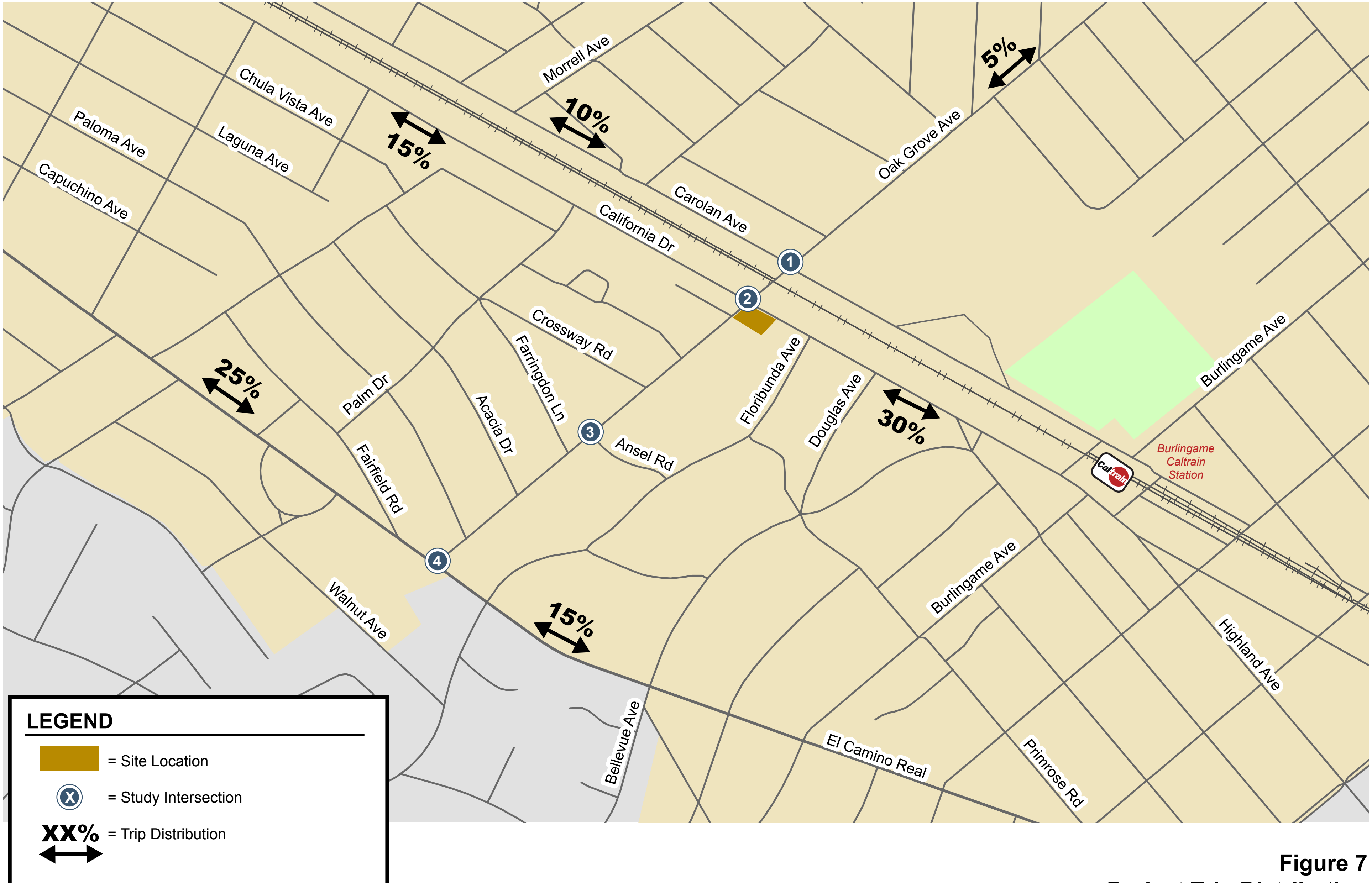

Figure 7
Project Trip Distribution

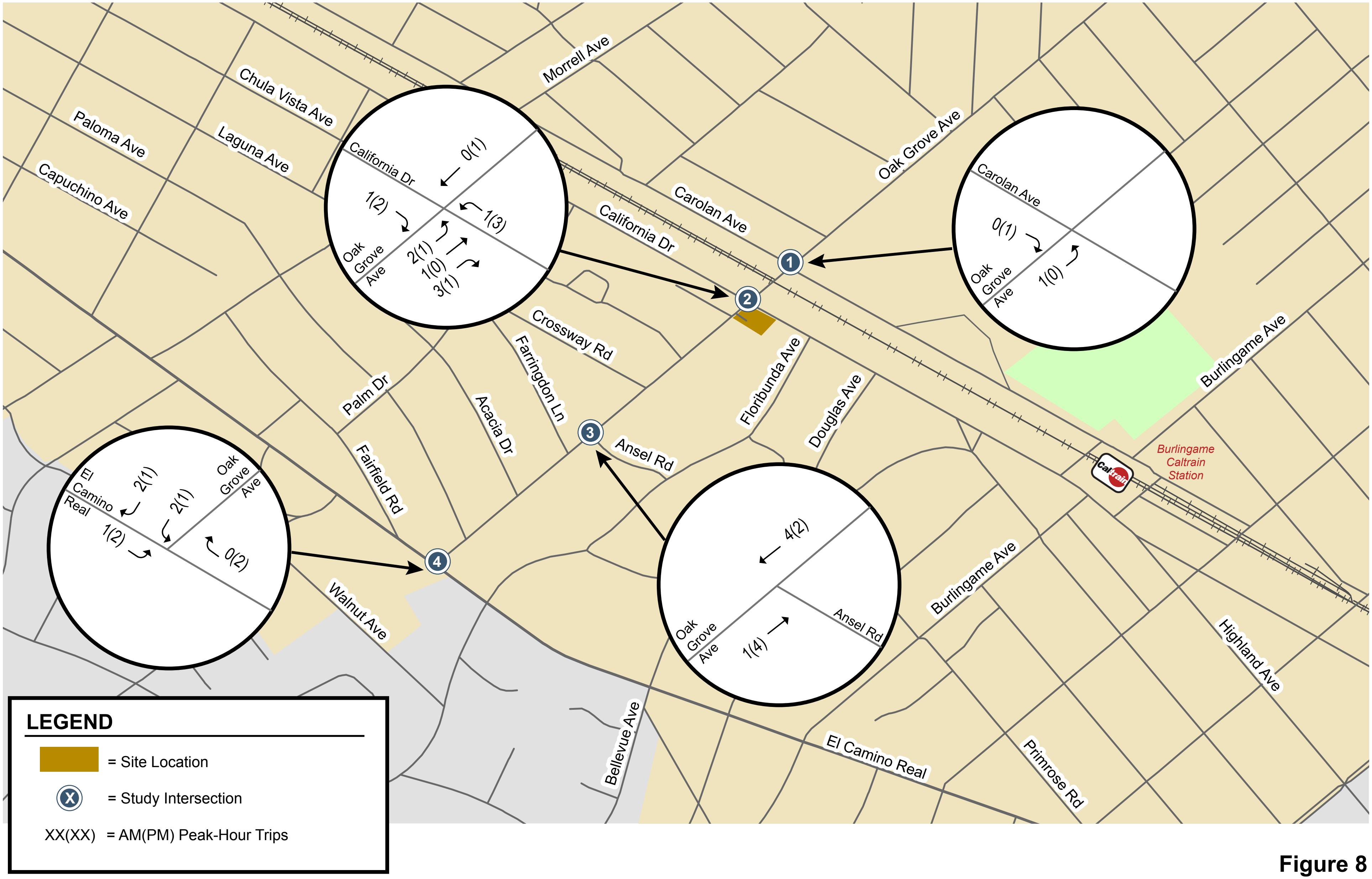

Figure 8
Project Trip Assignment

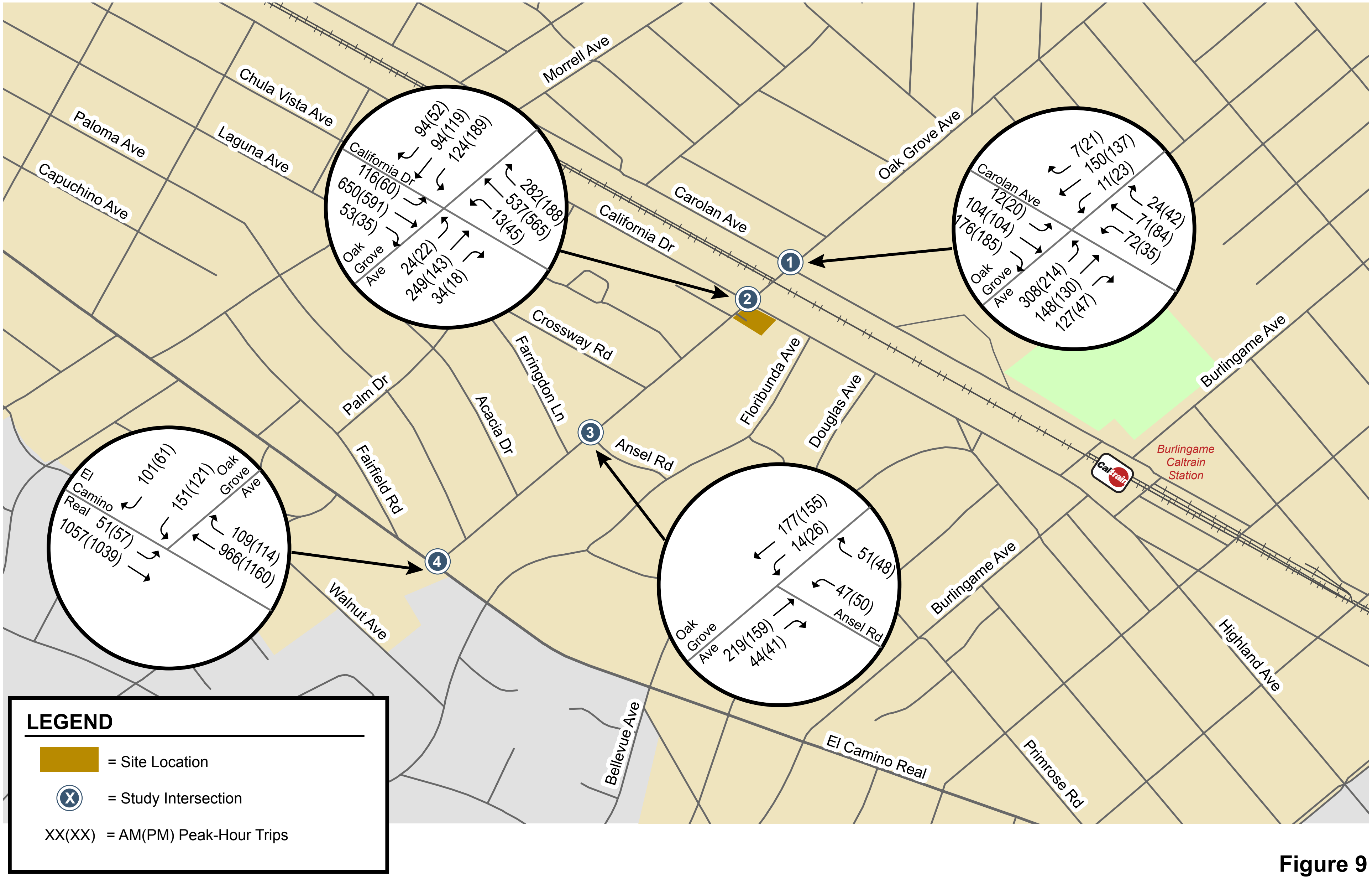

Figure 9
Existing Plus Project Traffic Volumes

HEXAGON

Table 7
Existing Plus Project Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Avg. Delay (sec)	Existing Avg. Delay (sec)	Existing LOS	Existing plus Project Avg. Delay (sec)	Existing plus Project LOS	Existing plus Project Incr. in Avg. Delay
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	14.5	B	14.5	B	0.0
			PM	05/23/17	12.3	12.3	B	12.3	B	0.0
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	18.8	B	18.9	B	0.1
			PM	04/24/19	15.2	15.2	B	15.3	B	0.1
3	Oak Grove Avenue & Ansel Avenue	TWSC	AM	01/11/18	11.3	11.3	B	11.3	B	0.0
			PM	01/11/18	10.9	10.9	B	10.9	B	0.0
4	Oak Grove Avenue & El Camino Real	Signalized	AM	01/11/18	13.3	13.3	B	13.3	B	0.0
			PM	01/11/18	12.8	12.8	B	12.8	B	0.0

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control
*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.
**A 1% per year growth factor was applied to escalate the counts to 2020.

Project Condition Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to background traffic volumes to obtain project condition traffic volumes. The project condition traffic volumes at the study intersections are shown on Figure 10.

Project Condition Intersection Analysis

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B during the AM and PM peak hours under project conditions (see Table 8).

The results of the analysis show that both of the unsignalized study intersections would continue to operate at LOS B or LOS C during the AM and PM peak hours under project conditions. This indicates that, with the addition of project traffic under background conditions, vehicles at the stop-controlled approaches are expected to continue to experience only minor or average delays.

Intersection level of service calculation sheets are provided in Appendix B.

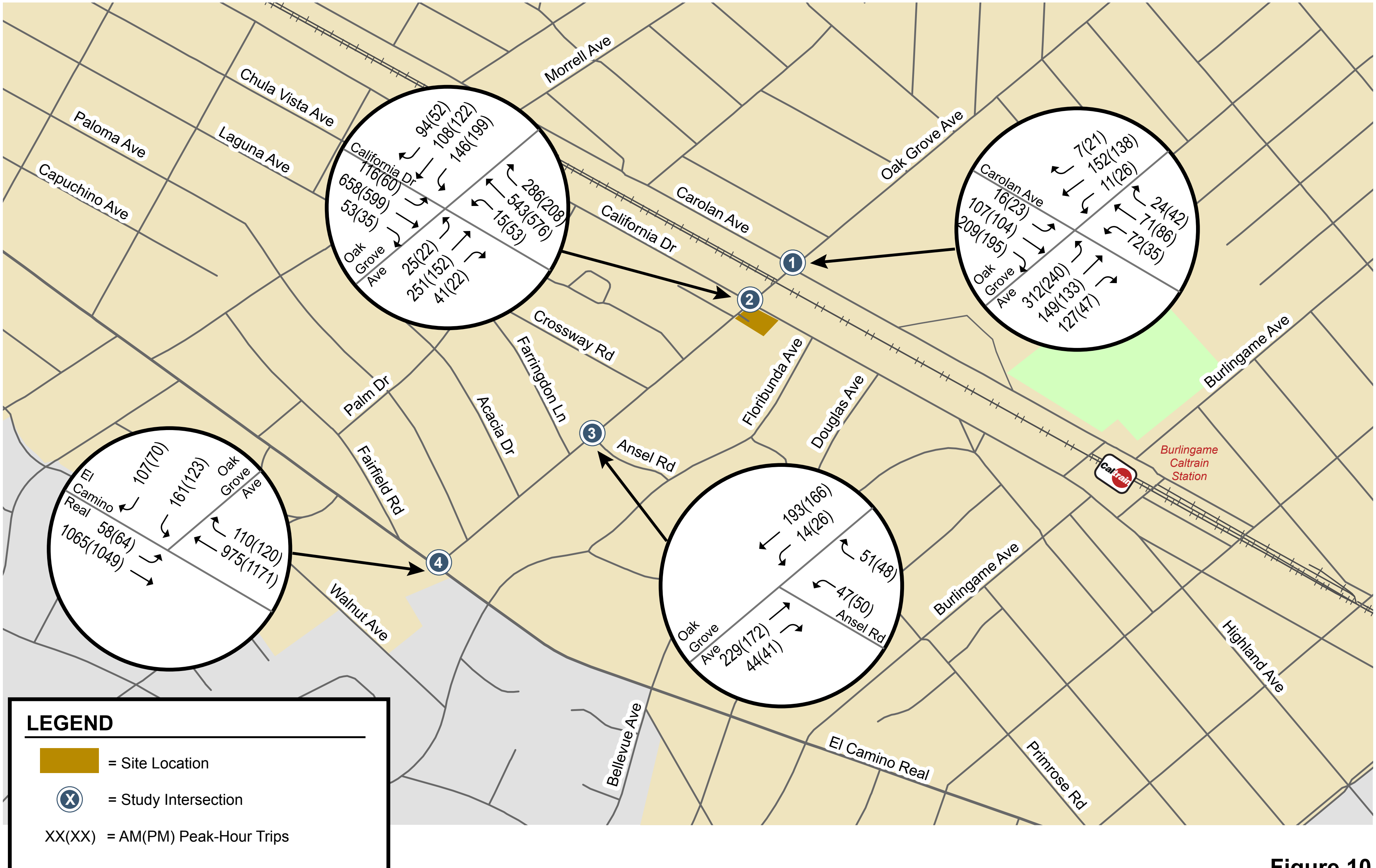

Figure 10
Background Plus Project Traffic Volumes

NORTH
Not to Scale

Table 8
Background Plus Project Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Background Avg. Delay (sec)	Background LOS	Background plus Project Avg. Delay (sec)	Background plus Project LOS	Background plus Project Incr. in Avg. Delay
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	15.2	C	15.3	C	0.1
			PM	05/23/17	12.3	12.9	B	12.9	B	0.0
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	19.6	B	19.7	B	0.1
			PM	04/24/19	15.2	15.9	B	16.0	B	0.1
3	Oak Grove Avenue & Ansel Avenue	TWSC	AM	01/11/18	11.3	11.5	B	11.5	B	0.0
			PM	01/11/18	10.9	11.0	B	11.1	B	0.1
4	Oak Grove Avenue & El Camino Real	Signalized	AM	01/11/18	13.3	13.2	B	13.2	B	0.0
			PM	01/11/18	12.8	12.7	B	12.6	B	-0.1

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control
*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.
**A 1% per year growth factor was applied to escalate the counts to 2020.

5. Background Plus 2 Project Conditions

This chapter presents a summary of the traffic conditions that would occur under project conditions with the completion of the adjacent 601 California Drive Project, which would consist of 25 live/work units.

Background Plus 2 Project Traffic Volumes

Project trips for the 601 California Drive project were added to the project traffic volumes to obtain background plus 2 project traffic volumes (See 601 California Drive TIA by Hexagon Transportation Consultants, June 2020). The project trip generation estimates were obtained from the trip generation table from the 601 California Drive traffic study, shown on Table 9 below. The background plus 2 project traffic volumes are shown on Figure 11.

Table 9
601 California Drive Trip Generation Estimates

			Daily		AM Peak Hour				PM Peak Hour			
Land Use	**Size**		**Rate**	**Trips**	**Rate**	**In**	**Out**	**Total**	**Rate**	**In**	**Out**	**Total**
Proposed Project												
Live/Work Residential [1]	25	units	5.44	136	0.36	2	7	9	0.44	7	4	11
Total Project Trips				**136**		**2**	**7**	**9**		**7**	**4**	**11**

Notes:
ksf = 1,000 square feet
[1] Multifamily Housing (Mid-Rise) (Land Use 221) average rates published in ITE's *Trip Generation Manual, 10th Edition* , 2017.

Intersection Levels of Service Analysis

The results of the analysis show that both of the signalized study intersections would continue to operate at an acceptable LOS B during the AM and PM peak hours under background plus 2 project conditions (see Table 10).

The results of the analysis show that both of the unsignalized study intersections would continue to operate at LOS B or LOS C during the AM and PM peak hours under background plus 2 project conditions. This indicates that, with the addition of project traffic from both projects under background conditions, vehicles at the stop-controlled approaches are expected to continue to experience only minor or average delays.

Level of service calculation sheets are included in Appendix B.

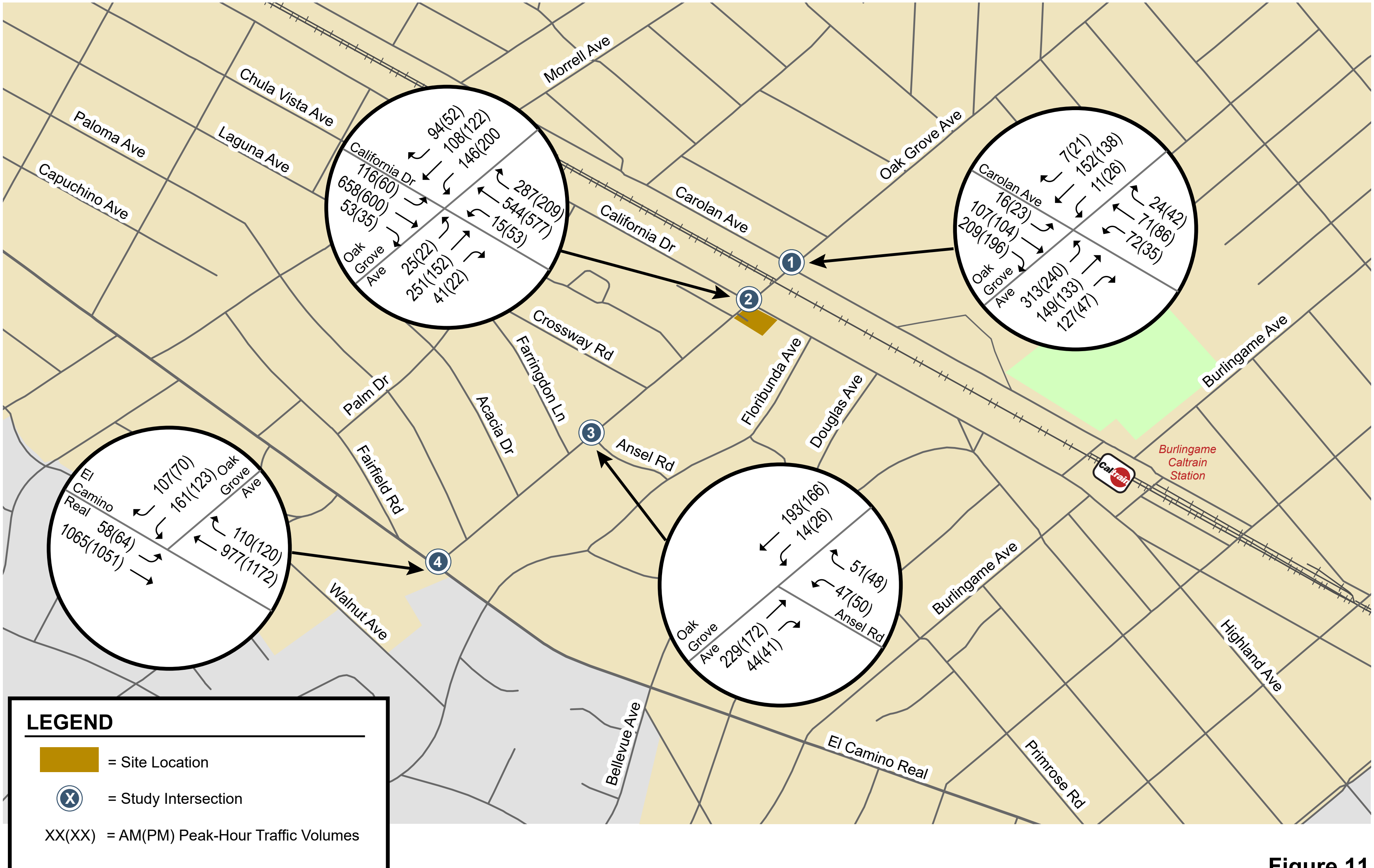

Figure 11
Background Plus 2 Projects Traffic Volumes

Table 10
Background Plus 2 Project Levels of Service Summary

					Existing		Background Plus 2 Projects	
#	Intersection	Control*	Peak Hour	Count Date**	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	Oak Grove Avenue & Carolan Avenue	AWSC	AM	05/23/17	14.5	B	15.4	C
			PM	05/23/17	12.3	B	12.9	B
2	Oak Grove Avenue & California Drive	Signalized	AM	04/24/19	18.8	B	19.7	B
			PM	04/24/19	15.2	B	16.0	B
3	Oak Grove Avenue & Ansel Avenue	TWSC	AM	01/11/18	11.3	B	11.5	B
			PM	01/11/18	10.9	B	11.1	B
4	Oak Grove Avenue & El Camino Real	Signalized	AM	01/11/18	13.3	B	13.2	B
			PM	01/11/18	12.8	B	12.6	B

Notes:
AWSC = All-Way Stop-Control; TWSC = Two-Way Stop-Control

*Due to limitations within the Synchro software, the intersection of Carolan Avenue and Oak Grove Avenue cannot be evaluated with three stop-controlled approaches and one free-flowing approach. Therefore, the study intersection was evaluated as an all-way stop control intersection to provide a conservative level of service analysis.
**A 1% per year growth factor was applied to escalate the counts to 2020.

6. Other Transportation Issues

This chapter presents other transportation issues associated with the project. These include an analysis of:

- Site Access and On-Site Circulation
- Parking Analysis
- Signal warrant analysis
- Potential impacts to pedestrian, bicycle, and transit facilities

Unlike the level of service impact methodology, most of the analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by traffic engineering professionals. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Site Access and On-Site Circulation

The evaluation of the project's site access and circulation is based on the site plan prepared by IB+A Architecture dated January 25, 2021 (see Figure 12). Site access was evaluated to determine the adequacy of the site's driveway with regard to the following: traffic volume, delays, vehicle queues, geometric design, and sight distance. On-site vehicular circulation was reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

Project Driveway Design

Site access was evaluated to determine the adequacy of the site's driveway with regard to the following: traffic volume, delays, vehicle queues, geometric design, and sight distance. Access to the project site would be provided via a single full-access driveway on Oak Grove Avenue. The project driveway is shown to be 18 feet wide and would provide access to the project's parking garage. The City of Burlingame Zoning Code requires a minimum of either two 12-foot driveways or one 18-foot driveway for parking areas of more than 30 vehicle spaces. Therefore, the project would meet the City's minimum width requirement for a two-way driveway.

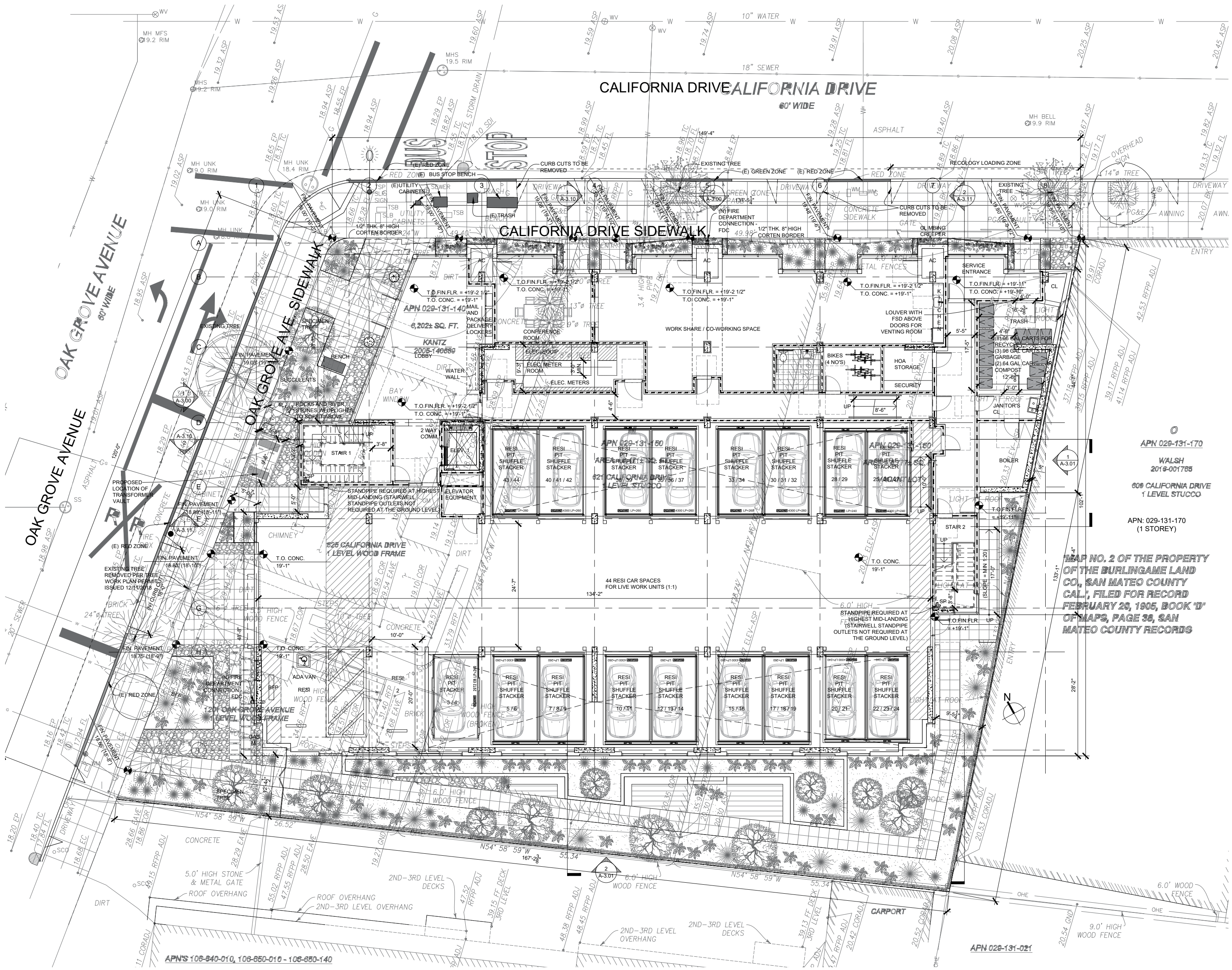

Figure 12
Site Plan

NORTH
Not to Scale

Nearby Driveways

The location of the project driveway was also reviewed with respect to other driveways in the vicinity of the project. While the project driveway would be close in proximity to the driveway west of the project, vehicles are expected to be able to make turns in and out of the project driveway without affecting similar operations at the adjacent driveway because of the small number of trips that the project would generate. San Mateo Avenue, located directly across the proposed project driveway location, is a very short street, more like an alley, that provides parking access for some businesses and residences. There are roughly 40 parking spaces that can be accessed from San Mateo Avenue. Traffic counts are not available, but a worst-case assumption is that one-half of those parking spaces would turn over during the peak hour, which equates to 40 peak-hour trips (20 in and 20 out). With such a small number of trips, there would not be any operational problems created by having the project driveway and San Mateo Avenue opposite each other.

Based on counts conducted in June 2018, the queue of the eastbound movement on Oak Grove Avenue at California Drive typically extends past San Mateo Avenue. This build up may momentarily delay left turns departing San Mateo Avenue and right turns exiting the project driveway. However, the level of service analysis shows that the eastbound movement at the California Drive/Oak Grove Avenue intersection operates at LOS B or better, therefore the queues clear with each green cycle. The addition of trips from the proposed project would be minimal and would not increase the eastbound queue length on Oak Grove Avenue at California Drive.

Sight Distance

Adequate sight distance should be provided at the project driveway in accordance with Caltrans stopping sight distance standards. Sight distance should be measured approximately 10 feet back from the traveled way. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to exit a driveway or locate sufficient gaps in traffic. The minimum acceptable sight distance is often considered the Caltrans stopping sight distance. Sight distance requirements vary depending on the roadway speeds. For the driveway on Oak Grove Avenue, which has a posted speed limit of 25 mph, the Caltrans stopping sight distance is 200 feet (based on a design speed of 30 mph). Thus, a driver must be able to see 200 feet in both directions along Oak Grove Avenue in order to stop and avoid a collision.

Based on the project site plan, the project driveway would have at least 200 feet of sight distance in both directions if on-street parking adjacent to the driveway is prohibited. Therefore, it is recommended that on-street parking between the project driveway and the western neighboring driveway and between the project driveway and the California Drive/Oak Grove Avenue intersection be prohibited.

Project Driveway Operations

The project-generated trips that are estimated to occur at the project driveway are 4 inbound trips and 12 outbound trips during the AM peak hour, and 12 inbound trips and 7 outbound trips during the PM peak hour.

The project driveway would provide full-access, allowing right and left inbound and outbound turns. Outbound left turns from the project driveway would require vehicles to wait for gaps in both the eastbound and westbound traffic, while inbound left turns would require vehicles to wait for a gap in the eastbound traffic flow only. Given that Oak Grove Avenue consists of only one lane in each direction with no left-turn pockets, left turns would be made from the through lane. Thus, there could be interruptions to the through traffic flow while left-turn vehicles wait for a gap in the on-coming traffic flow. Queuing due to left turning vehicles into the driveway is expected to be minimal due to the low volume of vehicles coming in and out of the driveway (at most one inbound vehicle every five minutes).

On-Site Circulation

On-site vehicular circulation was reviewed in accordance with the City of Burlingame Zoning Code and generally accepted traffic engineering standards. The project would provide 90-degree parking stalls throughout the parking garage. The City's standard minimum width for two-way drive aisles is 24 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the drive aisle in the parking garage would be 24 feet 7 inches wide. Thus, adequate maneuvering space would be provided in the garage.

Most of the parking spaces would consist of a mechanical-stack parking system. Comprised of two or three parking spaces, the vehicle stackers would present an open parking stall, that once occupied would automatically shift downward, presenting another open stall. This system also allows residents to retrieve vehicles without the need to move another vehicle. Therefore, vehicle queues in the parking garage are expected to be minimal and not result in backups that extend onto Oak Grove Avenue.

Parking Stall Dimensions

According to the project site plan, the project proposes standard-sized (8.5 feet wide by 18 feet long) stalls, which would meet the City's off-street parking design standard. Van accessibility would be provided at two of the ADA accessible stall locations.

The City of Burlingame Zoning Code does not include standards for mechanical-stack parking systems. However, it should also be noted that the project proposes to use the Trend Vario 4300 Klaus stacker system, which would consist of standard-size parking stall dimensions and a height of 6 feet-7 inches (per vehicle). This would allow the vehicle stackers to accommodate passenger cars, trucks, as well as SUVs and vans.

Bike and Pedestrian On-site Circulation

The project plan provides adequate pedestrian circulation on site, as well as between the site and the surrounding pedestrian facilities. The project site plan includes a publicly-accessible pedestrian plaza at the southwest corner of the California Drive/Oak Grove Avenue intersection. The plaza would be supplied with benches and landscaping, as well as easy access to the ground-floor and the residential lobby area. In addition, the project would remove four existing driveways along the project frontage on California Drive, and build additional sidewalk space connecting to the existing bus stop located on California Drive right in front of the project site. Continuous walkways would also be provided around the project building, with resident-only access gates connecting to Oak Grove Avenue and California Drive.

As shown on Figure 12, all residential bicycle parking would be located on the ground floor in the garage. This would allow bicyclists to enter and leave the project site through the garage entrance/exit and connect to the bike routes along Oak Grove Avenue and along California Drive.

Truck Access and Circulation

In accordance with the City's Zoning Code (Section 26.30.070(a)), condominium uses within a commercial district are not required to provide off-street loading/unloading spaces for delivery/service vehicles. Therefore, the proposed project is not required to provide any loading spaces.

Garbage Collection

The site plan shows one on-site trash room located at the southeast corner of the project site. Garbage collection activities for the project are not expected to occur on-site due to height and access limitations. The trash bins would be moved into the street through the service entrance to a designated Recology Loading Zone. Given that on-street parking is permitted along California Drive, signs prohibiting parking during garbage pickup hours should be placed adjacent to the trash room. The trash bins also should be removed from the public right-of-way immediately after garbage pickup as to not impact AM or PM peak hour traffic conditions.

Parking Analysis

The City of Burlingame Zoning Code (Section 25.70.032) states that residential uses within the Burlingame Downtown Specific Plan Area are to provide parking as follows: 1.0 parking space per studio and one-bedroom unit. The project as proposed would provide up to 44 live/work units consisting of a mix of studio and one-bedroom units. Based on the City's parking requirements and the current project description, the project would be required to provide 44 parking spaces.

Based on the project site plan dated January 25, 2021, the parking garage would provide a total of 44 parking spaces consisting of 1 ADA accessible van residential park space, 1 standard parking space, and 42 mechanically stacked parking spaces. Therefore, the proposed parking supply would meet the City's Parking Code

Per the California Building Code (CBC) Table 11B-6, two (2) ADA accessible spaces are required for projects with 26 to 50 parking spaces. Of the required accessible parking spaces, one van accessible space is required. The plans show only one (1) ADA accessible van parking space. Thus, the project does not provide sufficient ADA accessible parking per the CBC. Hexagon recommends converting the standard residential parking space into an additional ADA accessible parking space to meet CBC requirements.

Bicycle Parking

The City of Burlingame municipal code does not include standards for bicycle parking. However, the project site plan shows a total of 4 bicycle parking spaces on site located in the garage.

Signal Warrant Analysis

Signal warrant checks (California *MUTCD, Section 4, Warrant 3 Part B*) were performed for the unsignalized study intersections. The results of the signal warrant analysis are described and summarized below. Signal warrant worksheets and threshold tables are included in Appendix D.

A peak hour signal warrant analysis was performed for two of the unsignalized study intersections, Carolan Avenue and Oak Grove Avenue and Ansel Avenue and Oak Grove Avenue, based on the peak-hour traffic volumes. The intersection of Ansel Avenue and Oak Grove Avenue would not warrant signalization under any traffic scenario with or without the project. The intersection of Carolan Avenue and Oak Grove Avenue would not warrant signalization in any of the PM peak hour scenarios; however, the intersection would warrant signalization in all of the AM peak hour scenarios, including existing conditions. Because the intersection would operate an acceptable LOS C or better in all scenarios during the AM and PM peak hours, and due to the intersection's proximity to the railroad, it is not recommended that a traffic signal be installed at this intersection.

Pedestrian, Bicycle, and Transit Analysis

All new development projects in the City of Burlingame should encourage multi-modal travel, consistent with the goals of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve Burlingame's mobility goals. In addition, the adopted Bicycle Transportation Plan establishes goals and policies to make bicycling a daily part of life in Burlingame. The Transportation Plan includes designated bike lanes where possible, as well as designated routes for both local and regional trips, to provide a complete connection through Burlingame. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections (see Chapter 2 for details). The project is expected to increase the number of pedestrians using the sidewalks and crosswalks. Although some sidewalk and crosswalk connections are missing in the study area, the overall network of sidewalks and crosswalks in the vicinity of the project site has adequate connectivity and provides pedestrians with safe routes to transit services and other points of interest. Note that the project would not remove any pedestrian facilities, nor would it conflict with any adopted plans or policies for new pedestrian facilities.

Bicycle Facilities

There are some bike facilities in the immediate vicinity of the project site (see Chapter 2 for details). Bicycles are also allowed on Caltrain and BART. The Burlingame Station is served by Caltrain (approximately a quarter-mile south of the project site), while the Millbrae Station is served by Caltrain and BART (located about two and a half miles from the project site). There are bicycle racks and bicycle lockers available at both transit stations.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities.

Transit Services

The project study area is well-served by SamTrans, Caltrain, and the Burlingame Trolley (see Chapter 2 for details). The project would generate about 13 person-trips during the AM peak hour and 14 person-trips during the PM peak hour. Given the project site's proximity to transit services, it could be expected that a portion of residents' trips would be made by transit. Assuming up to 10% of the total trips are made by transit, that translates into a maximum of about 1 or 2 new transit riders during the peak hours. It is assumed that the transit services in the project study area have sufficient capacity to accommodate this minor increase in ridership.

The project would not remove any transit facilities, nor would it conflict with any adopted plans or policies associated with new transit facilities.

Future Transit Services

As previously mentioned, the Peninsula Corridor Electrification Project (PCEP) is expected to increase service by up to six Caltrain trains per peak hour per direction. With the proposed electrification project, it is expected that the transit ridership at the Burlingame Station will increase. Given the nearby Caltrain station, development of this residential project would result in new transit riders, thus reducing vehicle trips. The Burlingame Station is within walking distance (approximately a quarter-mile south of the project site).