Appendix A:
Previously Adopted Mitigation Measures

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Previously Adopted Mitigation Measures

Mitigation Measure	Description
Air Quality	
MM AIR-1	During construction activities, the following air pollution control measures shall be implemented: • Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site hall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All roadways, driveways, and sidewalks shall be paved as soon as possible. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. • A publicly visible sign shall be posted with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.
MM AIR-2:	The developer or project applicant shall ensure all off-road construction equipment in excess of 50 horsepower used on-site by the developer or contractors is equipped with engines meeting the EPA Tier IC off-road engine emission standards. The construction contractor shall maintain a log of equipment use at the construction site with make, model, serial number, and certification level of each piece of construction equipment that will be available for review by City building inspection staff.
Biological Resources	
MM BIO-1 Migratory Birds and Nesting Raptors	1. If construction or tree removal is proposed during the breeding/nesting season for local avian species (typically March 1 through August 31), a focused survey for active nests of raptors and migratory birds within and in the vicinity of (no less than 250 feet outside the project boundaries, where possible) the project site shall be conducted by a qualified biologist. One survey will be conducted 30 days prior to tree removal or construction activities. If no active nests are found, tree removal or construction activities may proceed. 2. If an active nest is located during pre-construction surveys, the United States Fish and Wildlife Service and/or the California Department of Fish and Wildlife (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted to avoid disturbance of the nest until it is abandoned, or the biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones or alteration of the construction schedule.
MM BIO-2: Special-status Bat Species	1. To reduce construction related impacts to special-status bat species, a bat survey shall be conducted between March 1 to July 31 by a qualified wildlife biologist within the year of proposed construction start and prior to ground disturbance. If

Mitigation Measure	Description
	no bat roosts are detected, then no further action is required. If a colony of bats is found roosting on-site, then the following mitigation will be implemented to reduce the potential disturbance: 2. If a female or maternity colony of bats are found on the project site, a wildlife biologist through coordination with CDFW shall determine what physical and timed buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside the maternity roost season (after July 31 and before March 1).
Cultural and Tribal Cultural Resources	
MM CUL-1:	In the event a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers should avoid altering the materials until an Archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology has evaluated the resource. The Applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The resource shall be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria by the qualified Archaeologist. If the resource is determined significant under CEQA, the qualified Archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant in accordance with Section 15064.5 of the CEQA Guidelines. The Archaeologist shall also perform appropriate technical analyses, prepare a comprehensive report complete with methods, results, and recommendations, and provide for the permanent curation of the recovered resources. The report shall be submitted to the City of Burlingame, the Northwest Information Center, and the California Office of Historic Preservation (OHP), as required.
MM CUL-2	In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The project contractor shall notify a qualified Paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The Paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The Paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the applicant determines that avoidance is not feasible, the Paleontologist shall prepare an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the City of Burlingame for review and approval prior to implementation, and the applicant shall adhere to the recommendations in the plan.
MM CUL-3	In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5, Health and Safety Code Section 7050.5, and Public Resources Code Sections 5097.94 and Section 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken: 1. There shall be no further excavation or disturbance within 100 feet of the remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner

Mitigation Measure	Description
	determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. 2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance: • The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission. • The descendant identified fails to make a recommendation. • The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner. Additionally, California Public Resources Code Section 15064.5 requires the following relative to Native American Remains: When an initial study identifies the existence of, or the probable likelihood of, Native American Remains within a project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop a plan for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American Burials with the appropriate Native Americans as identified by the Native American Heritage Commission.
Geology and Soils	
MM GEO-1	Prior to the issuance of a building permit and during the foundation phases of construction, the project applicant shall follow the recommendations of the Geotechnical Investigation, by retaining a qualified geotechnical consulting firm. Subsurface conditions may vary from those encountered at the locations of borings during the Geotechnical Investigation. The geotechnical firm retained by the project applicant shall review final engineer plans as well as observe and test during the earthwork and foundation phases of construction. This would ensure recommendations from the Geotechnical Investigation are properly incorporated into the project plan and development.
MM GEO-2	Prior to the issuance of a building permit, the project's plans shall reflect foundations that extend deep enough to penetrate more stable soils. The project applicant shall follow the recommendations of the Geotechnical Investigation, by ensuring the building be supported on conventional spread footing foundation system bearing on stiff native soils or properly compacted structural fill. All continuous footings shall have a width of at least 15 inches and shall extend at least 30 inches below exterior grade or at least 24 inches below the bottom of concrete slabs-on-grade, whichever is deeper. Footings located adjacent to utility lines shall bear below a 1:1 plane extending up from the bottom edge of the utility trench. Continuous foundations shall be designed with sufficient depth and reinforcing to tolerate the estimated differential settlement.

Mitigation Measure	Description
	The geotechnical consulting firm retained by the applicant shall observe all footing excavations prior to the placement of reinforcing steel to confirm that suitable material has been exposed and properly cleaned. If soft or loose soil is encountered in the foundation excavations, the geotechnical consulting firm may require overexcavation and/or compactive effort or a deeper footing depth below the reinforcing steel is placed. Alternative to the spread footing foundation described above, the building may be supported on a reinforced concrete mat foundation bearing on a properly prepared and compacted soil subgrade. The mat foundation shall have a thickened perimeter edge that extends at least eight inches into the soil subgrade below the bottom of the mat or at least four inches below the base of the capillary break rock section. This should improve edge stiffness, reduce the potential for map slab dampness, and increase resistance to lateral loads imposed on the mat. The mat foundation shall be reinforced to provide structural continuity and to permit spanning of local irregularities. It shall be designed with sufficient depth and reinforcing to be able to tolerate the estimated differential settlements. Prior to mat construction, the subgrade shall be proof-rolled to provide a smooth firm surface for mat support. Where dampness of the mat would be undesirable, a high quality membrane vapor barrier shall be installed.
MM GEO-3	Prior to the issuance of a building permit, the structural engineer shall consult with the membrane manufacturer for the coefficient of friction to be assumed for design. Lateral loads may be resisted by base friction between the vapor barrier or damp proofing membrane shown below the mat and the supporting subgrade and by passive soil pressure acting against the sides of the mat foundations. Lateral resistance may be provided by passive soil pressure acting against the sides of foundations cast neat in footing excavations or backfilled with compacted structural fill. The upper foot of passive soil shall not be neglected where soil adjacent to the footing or mat will be landscaped or subject to softening from rainfall and/or surface runoff.
MM GEO-4	Prior to the issuance of a building permit, the building foundations shall be designed as recommended by the Geotechnical Investigation. The 30-year post-construction differential settlement due to static loads is not expected to exceed 1 inch across the proposed building. Less differential movement would be expected across a structural mat foundation. Additional differential settlement may occur as a result of liquefaction and dynamic densification caused by severe ground shaking during a major earthquake.
Hydrology and Water Quality	
MM HYD-1	The project applicant shall prepare and implement a stormwater pollution prevention plan (SWPPP) for all construction activities at the project site. At a minimum, the SWPPP shall include the following: • A construction schedule that restricts use of heavy equipment for excavation and grading activities to periods where no rain is forecasted during the wet season (October 1 thru April 30) to reduce erosion associated intense rainfall and surface runoff. The construction schedule shall indicate a timeline for earthmoving activities and stabilization of disturbed soils; • Soil stabilization techniques such as covering stockpiles, hydroseeding, or short-term biodegradable erosion control blankets; • Silt fences, compost berms, wattles or some kind of sediment control measures at downstream storm drain inlets; • Good site management practices to address proper management of construction materials and activities such as but not limited to cement, petroleum products, hazardous materials, litter/rubbish, and soil stockpile; and

Mitigation Measure	Description
	• The post-construction inspection of all drainage facilities and clearing of drainage structures of debris and sediment.
MM HYD-2	Prior to project approval, the project applicant shall prepare the appropriate documents consistent with San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) and NPDES Provisions C.3 and C.6 requirements for post-construction treatment and control of stormwater runoff from the site. Post-construction treatment measures must be designed, installed, and hydraulically sized to treat a specified amount of runoff. Furthermore, the project plan submittals shall identify the owner and maintenance party responsible for the ongoing inspection and maintenance of the post-construction stormwater treatment measure in perpetuity. A maintenance agreement or other maintenance assurance must be submitted and approved by the City prior to the issuance of a final construction inspection.
Public Services	
MM PS-1	The project applicant would be responsible for paying all school impact fees at the time of building permit issuance.
Transportation/Traffic	
MM TRANS-1	In order to maintain adequate sight distance, on-street parking shall be prohibited on Oak Grove Avenue between the project driveway and the western neighboring driveway.

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Appendix B: Shadow Study

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619-625 CALIFORNIA DRIVE

SHADOW STUDY

Date of Package: February 17, 2021

Project Sponsor:

For Ownership LLC (TBD)
c/o Edward Duffy
625 California Drive
Burlingame, CA 94010

NOTE: STUDY DOES NOT ACCOUNT FOR SHADOWS CAST BY EXISTING BUILDINGS. SHADOW DEPICTED IS THE WORST POSSIBLE SHADOW CREATED BY THE PROPOSED BUILDING ONLY

For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**MARCH 21 (SPRING EQUINOX)** **8:11 AM DST (1 HOUR AFTER SUNRISE)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

NOTE: STUDY DOES NOT ACCOUNT FOR SHADOWS CAST BY EXISTING BUILDINGS. SHADOW DEPICTED IS THE WORST POSSIBLE SHADOW CREATED BY THE PROPOSED BUILDING ONLY

For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**MARCH 21 (SPRING EQUINOX)** **1:17 PM DST (SOLAR NOON)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

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For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**MARCH 21 (SPRING EQUINOX)** **6:25 PM DST (1 HOUR BEFORE SUNSET)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

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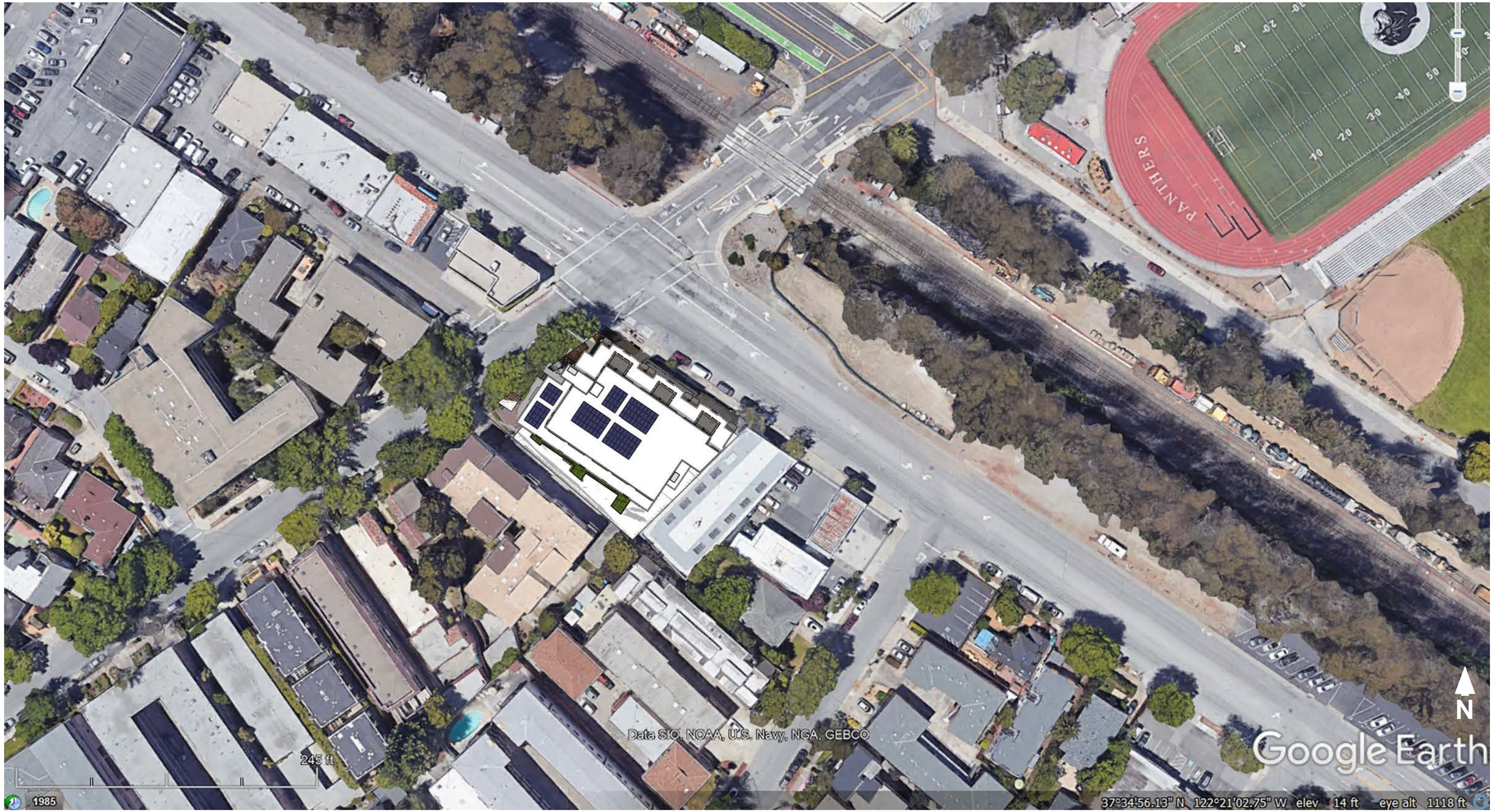
For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**JUNE 21 (SUMMER SOLSTICE)** **6:22 AM DST (1 HOUR AFTER SUNRISE)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com



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For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**JUNE 21 (SUMMER SOLSTICE)** **1:12 PM DST (SOLAR NOON)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

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For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**SEPTEMBER 21 (FALL EQUINOX)** **7:57 AM DST (1 HOUR AFTER SUNRISE)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

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For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**SEPTEMBER 21 (FALL EQUINOX)** **1:03 PM DST (SOLAR NOON)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

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For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**SEPTEMBER 21 (FALL EQUINOX)** **6:09 PM DST (1 HOUR BEFORE SUNSET)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

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For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**DECEMBER 21 (WINTER SOLSTICE)** **8:47 AM UST (1 HOUR AFTER SUNRISE)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

NOTE: STUDY DOES NOT ACCOUNT FOR SHADOWS CAST BY EXISTING BUILDINGS. SHADOW DEPICTED IS THE WORST POSSIBLE SHADOW CREATED BY THE PROPOSED BUILDING ONLY

For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**DECEMBER 21 (WINTER SOLSTICE)** **12:09 PM UST (SOLAR NOON)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

NOTE: STUDY DOES NOT ACCOUNT FOR SHADOWS CAST BY EXISTING BUILDINGS. SHADOW DEPICTED IS THE WORST POSSIBLE SHADOW CREATED BY THE PROPOSED BUILDING ONLY

For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**DECEMBER 21 (WINTER SOLSTICE)** **3:30 PM UST (1 HOUR BEFORE SUNSET)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

MARCH 21 / SEPTEMBER 21
(SPRING EQUINOX / FALL EQUINOX)

8:10 AM DST (1 HOUR AFTER SUNRISE)

619-625 California Dr.
Shadow Study
10/24/2016

MARCH 21 / SEPTEMBER 21
(SPRING EQUINOX / FALL EQUINOX)

1:16 PM DST (SOLAR NOON)

619-625 California Dr.
Shadow Study
10/24/2016

MARCH 21 / SEPTEMBER 21
(SPRING EQUINOX / FALL EQUINOX)

6:23 PM DST (1 HOUR BEFORE SUNSET)

619-625 California Dr.
Shadow Study
10/24/2016

JUNE 21
(SUMMER SOLSTICE)

6:47 AM DST (1 HOUR AFTER SUNRISE)

619-625 California Dr.
Shadow Study
10/24/2016

JUNE 21
(SUMMER SOLSTICE)

1:11 PM DST (SOLAR NOON)

619-625 California Dr.
Shadow Study
10/24/2016

JUNE 21
(SUMMER SOLSTICE)

7:35 PM DST (1 HOUR BEFORE SUNSET)

619-625 California Dr.
Shadow Study
10/24/2016

For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**ORIGINAL SHADOW STUDY** **COMPLETED FOR PREVIOUSLY APPROVED DESIGN (10/24/2016)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

DECEMBER 21
(WINTER SOLSTICE)
8:22 AM (1 HOUR AFTER SUNRISE)

619-625 California Dr.
Shadow Study
10/24/2016

DECEMBER 21
(WINTER SOLSTICE)
12:08 PM (SOLAR NOON)

619-625 California Dr.
Shadow Study
10/24/2016

DECEMBER 21
(WINTER SOLSTICE)
3:51 PM (1 HOUR BEFORE SUNSET)

619-625 California Dr.
Shadow Study
10/24/2016

For Ownership LLC (TBD) c/o Edward Duffy 625 California Drive Burlingame, CA 94010	SHADOW STUDY Date of Package: February 17, 2021	**ORIGINAL SHADOW STUDY** **COMPLETED FOR PREVIOUSLY APPROVED DESIGN (10/24/2016)**	619-625 CALIFORNIA DRIVE	ib+a architecture Ian Birchall and Associates 177 Post Street, Suite 920 San Francisco, CA 94108 p: 415.512.9660 f: 415.512.9663 www.ibadesign.com

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Appendix C:
Air Quality Supporting Information

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Appendix C: Air Quality Modeling

Table of Contents

Operational 2023 Emissions Summary

Proposed Project Operations - Summer and Winter Scenarios

619–625 CA Drive Development - Project Operations (Updated March 25, 2021) - San Mateo County, Summer

CalEEMod Run: Summer. Date: 3/25/2021 1:51 PM

Emissions Source	Pounds per Day					
	ROG	NO_x	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
Area	1.62	0.17	0.03	0.03	0.03	0.03
Energy	0.01	0.10	0.01	0.01	0.01	0.01
Mobile	0.26	0.63	0.01	0.96	0.01	0.26
Total	**1.89**	**0.90**	**0.05**	**1.00**	**0.05**	**0.30**

619–625 CA Drive Development - Project Operations (Updated March 25, 2021) - San Mateo County, Winter

CalEEMod Run: Winter. Date: 3/25/2021 1:52 PM

Emissions Source	Pounds per Day					
	ROG	NO_x	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
Area	1.62	0.17	0.03	0.03	0.03	0.03
Energy	0.01	0.10	0.01	0.01	0.01	0.01
Mobile	0.24	0.68	0.01	0.96	0.01	0.26
Total	**1.87**	**0.95**	**0.05**	**1.00**	**0.05**	**0.30**

Proposed Project Operations - Maximum Daily Emissions

619–625 CA Drive Development - 2023 Operation

Maximum between Summer and Winter Scenarios

Emissions Source	Pounds per Day					
	ROG	NO_x	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
Proposed Project	1.89	0.95	0.05	1.00	0.05	0.30
CalEEMod Run	Summer	Winter	Winter	Winter	Winter	Winter
BAAQMD Threshold	54	54	N/A	82	N/A	54
Exceed Threshold?	**No**	**No**	**N/A**	**No**	**N/A**	**No**

Annual Operational 2023 Emissions Summary

Proposed Project Operations - Annual Emissions

619–625 CA Drive Development - Project Operations (Updated March 25, 2021) - San Mateo County, Annual

CalEEMod Run: Annual. Date: 3/25/2021 1:50 PM

Emissions Source	Tons per Year						Metric Tons per Year		
	ROG	NO_x	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)	Total CO_2e	Bio-CO_2	NBio-CO_2e
Area	0.28	0.00	0.00	0.00	0.00	0.00	1.4	0.0	1.4
Energy	0.00	0.02	0.00	0.00	0.00	0.00	73.2	0.0	73.2
Mobile	0.04	0.12	0.00	0.17	0.00	0.05	157.9	0.0	157.9
Waste	0.00	0.00	0.00	0.00	0.00	0.00	10.2	4.1	6.1
Water	0.00	0.00	0.00	0.00	0.00	0.00	8.8	0.9	7.9
Annual Total	**0.33**	**0.14**	**0.00**	**0.17**	**0.00**	**0.05**	**251.4**	**5.0**	**246.3**
							Amortized Construction Emissions (30 years)		*7.0*
							Total Operational GHG Emissions ($MTCO_2e$/year)		**253.3**

Emissions Source	Tons per Year				Metric Tons CO2e per Year
	ROG	NO_x	PM_{10} (Total)	$PM_{2.5}$ (Total)	
Annual Total	0.33	0.14	0.17	0.05	253
BAAQMD Threshold	10	10	15	10	1,100
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**

619–625 CA Drive Development - Project Operations (Updated March 25, 2021)

San Mateo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	19.00	Space	0.19	8,335.00	0
Apartments Mid Rise	44.00	Dwelling Unit	0.33	59,120.00	126

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	491.65	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 619-625 California Drive Development - Project Operations + Unmitigated Construction
Adjustments made to the intensity factors based on Renewable Portfolio Standard
Land Use - Based on project description and site plan
44-unit live-work building
Off-road Equipment - Operation Only

Vehicle Trips - Hexagon Transportation Consultants, Inc. 2021. 619-625 California Drive Live/Work Development Draft Traffic Impact Analysis. March 12.

Woodstoves - No woodburning fireplaces

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblLandUse	LandUseSquareFeet	7,600.00	8,335.00
tblLandUse	LandUseSquareFeet	44,000.00	59,120.00
tblLandUse	LotAcreage	0.17	0.19
tblLandUse	LotAcreage	1.16	0.33
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblVehicleTrips	ST_TR	6.39	4.43
tblVehicleTrips	SU_TR	5.86	4.43
tblVehicleTrips	WD_TR	6.65	4.43
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3385	0.3385	1.0000e-005	0.0000	0.3387
Maximum	**1.5000e-004**	**1.0000e-004**	**1.0700e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3385**	**0.3385**	**1.0000e-005**	**0.0000**	**0.3387**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3385	0.3385	1.0000e-005	0.0000	0.3387
Maximum	**1.5000e-004**	**1.0000e-004**	**1.0700e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3385**	**0.3385**	**1.0000e-005**	**0.0000**	**0.3387**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2019**	**3-31-2019**	0.0003	0.0003
		Highest	0.0003	0.0003

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2832	4.4800e-003	0.3273	2.0000e-005		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	1.3580	1.3580	5.3000e-004	2.0000e-005	1.3757
Energy	2.0700e-003	0.0177	7.5300e-003	1.1000e-004		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	72.8193	72.8193	2.7300e-003	9.1000e-004	73.1582
Mobile	0.0430	0.1207	0.4847	1.7200e-003	0.1669	1.3800e-003	0.1683	0.0449	1.2800e-003	0.0461	0.0000	157.7118	157.7118	5.6400e-003	0.0000	157.8529
Waste						0.0000	0.0000		0.0000	0.0000	4.1085	0.0000	4.1085	0.2428	0.0000	10.1787
Water						0.0000	0.0000		0.0000	0.0000	0.9095	4.8700	5.7795	0.0936	2.2600e-003	8.7924
Total	**0.3282**	**0.1428**	**0.8195**	**1.8500e-003**	**0.1669**	**4.6800e-003**	**0.1716**	**0.0449**	**4.5800e-003**	**0.0494**	**5.0180**	**236.7591**	**241.7771**	**0.3453**	**3.1900e-003**	**251.3579**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2830	4.4600e-003	0.3249	2.0000e-005		1.8500e-003	1.8500e-003		1.8500e-003	1.8500e-003	0.0000	1.3531	1.3531	5.2000e-004	2.0000e-005	1.3707
Energy	2.0700e-003	0.0177	7.5300e-003	1.1000e-004		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	72.8193	72.8193	2.7300e-003	9.1000e-004	73.1582
Mobile	0.0430	0.1207	0.4847	1.7200e-003	0.1669	1.3800e-003	0.1683	0.0449	1.2800e-003	0.0461	0.0000	157.7118	157.7118	5.6400e-003	0.0000	157.8529
Waste						0.0000	0.0000		0.0000	0.0000	4.1085	0.0000	4.1085	0.2428	0.0000	10.1787
Water						0.0000	0.0000		0.0000	0.0000	0.9095	4.8700	5.7795	0.0936	2.2600e-003	8.7924
Total	**0.3281**	**0.1428**	**0.8172**	**1.8500e-003**	**0.1669**	**4.6600e-003**	**0.1716**	**0.0449**	**4.5600e-003**	**0.0494**	**5.0180**	**236.7543**	**241.7723**	**0.3453**	**3.1900e-003**	**251.3529**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.04**	**0.01**	**0.29**	**0.00**	**0.00**	**0.43**	**0.01**	**0.00**	**0.44**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/14/2019	5	10	8 days

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.19

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Demolition	Rubber Tired Dozers	0	1.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3385	0.3385	1.0000e-005	0.0000	0.3387
Total	**1.5000e-004**	**1.0000e-004**	**1.0700e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3385**	**0.3385**	**1.0000e-005**	**0.0000**	**0.3387**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.0000e-004	1.0700e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3385	0.3385	1.0000e-005	0.0000	0.3387
Total	**1.5000e-004**	**1.0000e-004**	**1.0700e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3385**	**0.3385**	**1.0000e-005**	**0.0000**	**0.3387**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0430	0.1207	0.4847	1.7200e-003	0.1669	1.3800e-003	0.1683	0.0449	1.2800e-003	0.0461	0.0000	157.7118	157.7118	5.6400e-003	0.0000	157.8529
Unmitigated	0.0430	0.1207	0.4847	1.7200e-003	0.1669	1.3800e-003	0.1683	0.0449	1.2800e-003	0.0461	0.0000	157.7118	157.7118	5.6400e-003	0.0000	157.8529

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	194.92	194.92	194.92	450,189	450,189
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	194.92	194.92	194.92	450,189	450,189

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Enclosed Parking with Elevator	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.3202	52.3202	2.3400e-003	5.3000e-004	52.5373
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	52.3202	52.3202	2.3400e-003	5.3000e-004	52.5373
NaturalGas Mitigated	2.0700e-003	0.0177	7.5300e-003	1.1000e-004		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	20.4991	20.4991	3.9000e-004	3.8000e-004	20.6209
NaturalGas Unmitigated	2.0700e-003	0.0177	7.5300e-003	1.1000e-004		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	20.4991	20.4991	3.9000e-004	3.8000e-004	20.6209

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	384139	2.0700e-003	0.0177	7.5300e-003	1.1000e-004		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	20.4991	20.4991	3.9000e-004	3.8000e-004	20.6209
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0700e-003**	**0.0177**	**7.5300e-003**	**1.1000e-004**		**1.4300e-003**	**1.4300e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**20.4991**	**20.4991**	**3.9000e-004**	**3.8000e-004**	**20.6209**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	384139	2.0700e-003	0.0177	7.5300e-003	1.1000e-004		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	20.4991	20.4991	3.9000e-004	3.8000e-004	20.6209
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0700e-003**	**0.0177**	**7.5300e-003**	**1.1000e-004**		**1.4300e-003**	**1.4300e-003**		**1.4300e-003**	**1.4300e-003**	**0.0000**	**20.4991**	**20.4991**	**3.9000e-004**	**3.8000e-004**	**20.6209**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	185768	41.4278	1.8500e-003	4.2000e-004	41.5997
Enclosed Parking with Elevator	48843.1	10.8924	4.9000e-004	1.1000e-004	10.9376
Total		**52.3202**	**2.3400e-003**	**5.3000e-004**	**52.5373**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	185768	41.4278	1.8500e-003	4.2000e-004	41.5997
Enclosed Parking with Elevator	48843.1	10.8924	4.9000e-004	1.1000e-004	10.9376
Total		**52.3202**	**2.3400e-003**	**5.3000e-004**	**52.5373**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2830	4.4600e-003	0.3249	2.0000e-005		1.8500e-003	1.8500e-003		1.8500e-003	1.8500e-003	0.0000	1.3531	1.3531	5.2000e-004	2.0000e-005	1.3707
Unmitigated	0.2832	4.4800e-003	0.3273	2.0000e-005		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003	0.0000	1.3580	1.3580	5.3000e-004	2.0000e-005	1.3757

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2314					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.0000e-005	7.1000e-004	3.0000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8239	0.8239	2.0000e-005	2.0000e-005	0.8288
Landscaping	9.8600e-003	3.7700e-003	0.3270	2.0000e-005		1.8100e-003	1.8100e-003		1.8100e-003	1.8100e-003	0.0000	0.5340	0.5340	5.1000e-004	0.0000	0.5469
Total	**0.2832**	**4.4800e-003**	**0.3273**	**2.0000e-005**		**1.8700e-003**	**1.8700e-003**		**1.8700e-003**	**1.8700e-003**	**0.0000**	**1.3580**	**1.3580**	**5.3000e-004**	**2.0000e-005**	**1.3757**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2314					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	8.0000e-005	7.1000e-004	3.0000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8239	0.8239	2.0000e-005	2.0000e-005	0.8288
Landscaping	9.7200e-003	3.7400e-003	0.3246	2.0000e-005		1.8000e-003	1.8000e-003		1.8000e-003	1.8000e-003	0.0000	0.5292	0.5292	5.1000e-004	0.0000	0.5419
Total	**0.2830**	**4.4500e-003**	**0.3249**	**2.0000e-005**		**1.8600e-003**	**1.8600e-003**		**1.8600e-003**	**1.8600e-003**	**0.0000**	**1.3531**	**1.3531**	**5.3000e-004**	**2.0000e-005**	**1.3707**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.7795	0.0936	2.2600e-003	8.7924
Unmitigated	5.7795	0.0936	2.2600e-003	8.7924

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.86678 / 1.80732	5.7795	0.0936	2.2600e-003	8.7924
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.7795**	**0.0936**	**2.2600e-003**	**8.7924**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	2.86678 / 1.80732	5.7795	0.0936	2.2600e-003	8.7924
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**5.7795**	**0.0936**	**2.2600e-003**	**8.7924**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.1085	0.2428	0.0000	10.1787
Unmitigated	4.1085	0.2428	0.0000	10.1787

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	20.24	4.1085	0.2428	0.0000	10.1787
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4.1085**	**0.2428**	**0.0000**	**10.1787**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	20.24	4.1085	0.2428	0.0000	10.1787
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		**4.1085**	**0.2428**	**0.0000**	**10.1787**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

619–625 CA Drive Development - Project Operations (Updated March 25, 2021)

San Mateo County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	19.00	Space	0.19	8,335.00	0
Apartments Mid Rise	44.00	Dwelling Unit	0.33	59,120.00	126

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	491.65	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 619-625 California Drive Development - Project Operations + Unmitigated Construction
Adjustments made to the intensity factors based on Renewable Portfolio Standard

Land Use - Based on project description and site plan
44-unit live-work building
19 at-grade parking and 25 additional spaces in vehicle lifts

Vehicle Trips - Hexagon Transportation Consultants, Inc. 2021. 619-625 California Drive Live/Work Development Draft Traffic Impact Analysis. March 12.

Woodstoves - No woodburning fireplaces

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblLandUse	LandUseSquareFeet	7,600.00	8,335.00
tblLandUse	LandUseSquareFeet	44,000.00	59,120.00
tblLandUse	LotAcreage	0.17	0.19
tblLandUse	LotAcreage	1.16	0.33
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblVehicleTrips	ST_TR	6.39	4.43
tblVehicleTrips	SU_TR	5.86	4.43
tblVehicleTrips	WD_TR	6.65	4.43
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0298	0.0184	0.2274	7.9000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223	0.0000	79.2318	79.2318	1.6800e-003	0.0000	79.2737
Maximum	**0.0298**	**0.0184**	**0.2274**	**7.9000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**	**0.0000**	**79.2318**	**79.2318**	**1.6800e-003**	**0.0000**	**79.2737**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0298	0.0184	0.2274	7.9000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223	0.0000	79.2318	79.2318	1.6800e-003	0.0000	79.2737
Maximum	**0.0298**	**0.0184**	**0.2274**	**7.9000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**	**0.0000**	**79.2318**	**79.2318**	**1.6800e-003**	**0.0000**	**79.2737**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6216	0.1696	3.6872	1.0100e-003		0.0304	0.0304		0.0304	0.0304	0.0000	169.5993	169.5993	9.4200e-003	2.9900e-003	170.7257
Energy	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Mobile	0.2604	0.6310	2.6983	9.9300e-003	0.9564	7.5700e-003	0.9639	0.2561	7.0500e-003	0.2632		1,002.0019	1,002.0019	0.0342		1,002.8567
Total	**1.8934**	**0.8976**	**6.4267**	**0.0116**	**0.9564**	**0.0458**	**1.0022**	**0.2561**	**0.0453**	**0.3014**	**0.0000**	**1,295.4171**	**1,295.4171**	**0.0460**	**5.2600e-003**	**1,298.1340**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6201	0.1693	3.6610	1.0100e-003		0.0303	0.0303		0.0303	0.0303	0.0000	169.5404	169.5404	9.3300e-003	2.9900e-003	170.6645
Energy	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Mobile	0.2604	0.6310	2.6983	9.9300e-003	0.9564	7.5700e-003	0.9639	0.2561	7.0500e-003	0.2632		1,002.0019	1,002.0019	0.0342		1,002.8567
Total	**1.8918**	**0.8973**	**6.4006**	**0.0116**	**0.9564**	**0.0457**	**1.0021**	**0.2561**	**0.0452**	**0.3013**	**0.0000**	**1,295.3582**	**1,295.3582**	**0.0459**	**5.2600e-003**	**1,298.0729**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.08**	**0.03**	**0.41**	**0.00**	**0.00**	**0.33**	**0.01**	**0.00**	**0.33**	**0.05**	**0.00**	**0.00**	**0.00**	**0.20**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/14/2019	5	10	8 days

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.19

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Demolition	Rubber Tired Dozers	0	1.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0298	0.0184	0.2274	7.9000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223		79.2318	79.2318	1.6800e-003		79.2737
Total	**0.0298**	**0.0184**	**0.2274**	**7.9000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**		**79.2318**	**79.2318**	**1.6800e-003**		**79.2737**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0298	0.0184	0.2274	7.9000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223		79.2318	79.2318	1.6800e-003		79.2737
Total	**0.0298**	**0.0184**	**0.2274**	**7.9000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**		**79.2318**	**79.2318**	**1.6800e-003**		**79.2737**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2604	0.6310	2.6983	9.9300e-003	0.9564	7.5700e-003	0.9639	0.2561	7.0500e-003	0.2632		1,002.0019	1,002.0019	0.0342		1,002.8567
Unmitigated	0.2604	0.6310	2.6983	9.9300e-003	0.9564	7.5700e-003	0.9639	0.2561	7.0500e-003	0.2632		1,002.0019	1,002.0019	0.0342		1,002.8567

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	194.92	194.92	194.92	450,189	450,189
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	194.92	194.92	194.92	450,189	450,189

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Enclosed Parking with Elevator	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
NaturalGas Unmitigated	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1052.44	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0114**	**0.0970**	**0.0413**	**6.2000e-004**		**7.8400e-003**	**7.8400e-003**		**7.8400e-003**	**7.8400e-003**		**123.8159**	**123.8159**	**2.3700e-003**	**2.2700e-003**	**124.5517**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.05244	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0114**	**0.0970**	**0.0413**	**6.2000e-004**		**7.8400e-003**	**7.8400e-003**		**7.8400e-003**	**7.8400e-003**		**123.8159**	**123.8159**	**2.3700e-003**	**2.2700e-003**	**124.5517**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6201	0.1693	3.6610	1.0100e-003		0.0303	0.0303		0.0303	0.0303	0.0000	169.5404	169.5404	9.3300e-003	2.9900e-003	170.6645
Unmitigated	1.6216	0.1696	3.6872	1.0100e-003		0.0304	0.0304		0.0304	0.0304	0.0000	169.5993	169.5993	9.4200e-003	2.9900e-003	170.7257

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0150	0.1277	0.0544	8.2000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	163.0588	163.0588	3.1300e-003	2.9900e-003	164.0278
Landscaping	0.1096	0.0419	3.6328	1.9000e-004		0.0201	0.0201		0.0201	0.0201		6.5405	6.5405	6.3000e-003		6.6979
Total	**1.6216**	**0.1696**	**3.6872**	**1.0100e-003**		**0.0304**	**0.0304**		**0.0304**	**0.0304**	**0.0000**	**169.5993**	**169.5993**	**9.4300e-003**	**2.9900e-003**	**170.7257**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0150	0.1277	0.0544	8.2000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	163.0588	163.0588	3.1300e-003	2.9900e-003	164.0278
Landscaping	0.1080	0.0416	3.6066	1.9000e-004		0.0200	0.0200		0.0200	0.0200		6.4815	6.4815	6.2100e-003		6.6367
Total	**1.6201**	**0.1693**	**3.6610**	**1.0100e-003**		**0.0303**	**0.0303**		**0.0303**	**0.0303**	**0.0000**	**169.5404**	**169.5404**	**9.3400e-003**	**2.9900e-003**	**170.6645**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

619–625 CA Drive Development - Project Operations (Updated March 25, 2021)

San Mateo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	19.00	Space	0.19	8,335.00	0
Apartments Mid Rise	44.00	Dwelling Unit	0.33	59,120.00	126

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	491.65	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 619-625 California Drive Development - Project Operations + Unmitigated Construction
Adjustments made to the intensity factors based on Renewable Portfolio Standard

Land Use - Based on project description and site plan
44-unit live-work building
19 at-grade parking and 25 additional spaces in vehicle lifts

Off-road Equipment - Operation Only

Vehicle Trips - Hexagon Transportation Consultants, Inc. 2021. 619-625 California Drive Live/Work Development Draft Traffic Impact Analysis. March 12.

Woodstoves - No woodburning fireplaces

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblLandUse	LandUseSquareFeet	7,600.00	8,335.00
tblLandUse	LandUseSquareFeet	44,000.00	59,120.00
tblLandUse	LotAcreage	0.17	0.19
tblLandUse	LotAcreage	1.16	0.33
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblVehicleTrips	ST_TR	6.39	4.43
tblVehicleTrips	SU_TR	5.86	4.43
tblVehicleTrips	WD_TR	6.65	4.43
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0331	0.0227	0.2213	7.5000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223	0.0000	74.3473	74.3473	1.6100e-003	0.0000	74.3875
Maximum	**0.0331**	**0.0227**	**0.2213**	**7.5000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**	**0.0000**	**74.3473**	**74.3473**	**1.6100e-003**	**0.0000**	**74.3875**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	0.0331	0.0227	0.2213	7.5000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223	0.0000	74.3473	74.3473	1.6100e-003	0.0000	74.3875
Maximum	**0.0331**	**0.0227**	**0.2213**	**7.5000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**	**0.0000**	**74.3473**	**74.3473**	**1.6100e-003**	**0.0000**	**74.3875**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6216	0.1696	3.6872	1.0100e-003		0.0304	0.0304		0.0304	0.0304	0.0000	169.5993	169.5993	9.4200e-003	2.9900e-003	170.7257
Energy	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Mobile	0.2378	0.6833	2.7885	9.4400e-003	0.9564	7.5900e-003	0.9640	0.2561	7.0700e-003	0.2632		952.7621	952.7621	0.0348		953.6331
Total	**1.8708**	**0.9499**	**6.5169**	**0.0111**	**0.9564**	**0.0459**	**1.0022**	**0.2561**	**0.0453**	**0.3015**	**0.0000**	**1,246.1773**	**1,246.1773**	**0.0466**	**5.2600e-003**	**1,248.9105**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.6201	0.1693	3.6610	1.0100e-003		0.0303	0.0303		0.0303	0.0303	0.0000	169.5404	169.5404	9.3300e-003	2.9900e-003	170.6645
Energy	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Mobile	0.2378	0.6833	2.7885	9.4400e-003	0.9564	7.5900e-003	0.9640	0.2561	7.0700e-003	0.2632		952.7621	952.7621	0.0348		953.6331
Total	**1.8693**	**0.9496**	**6.4908**	**0.0111**	**0.9564**	**0.0457**	**1.0021**	**0.2561**	**0.0452**	**0.3013**	**0.0000**	**1,246.1184**	**1,246.1184**	**0.0465**	**5.2600e-003**	**1,248.8493**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.08**	**0.03**	**0.40**	**0.00**	**0.00**	**0.33**	**0.01**	**0.00**	**0.33**	**0.05**	**0.00**	**0.00**	**0.00**	**0.19**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2019	1/14/2019	5	10	8 days

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.19

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Demolition	Rubber Tired Dozers	0	1.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0331	0.0227	0.2213	7.5000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223		74.3473	74.3473	1.6100e-003		74.3875
Total	**0.0331**	**0.0227**	**0.2213**	**7.5000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**		**74.3473**	**74.3473**	**1.6100e-003**		**74.3875**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0331	0.0227	0.2213	7.5000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.7000e-004	0.0223		74.3473	74.3473	1.6100e-003		74.3875
Total	**0.0331**	**0.0227**	**0.2213**	**7.5000e-004**	**0.0822**	**5.0000e-004**	**0.0827**	**0.0218**	**4.7000e-004**	**0.0223**		**74.3473**	**74.3473**	**1.6100e-003**		**74.3875**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2378	0.6833	2.7885	9.4400e-003	0.9564	7.5900e-003	0.9640	0.2561	7.0700e-003	0.2632		952.7621	952.7621	0.0348		953.6331
Unmitigated	0.2378	0.6833	2.7885	9.4400e-003	0.9564	7.5900e-003	0.9640	0.2561	7.0700e-003	0.2632		952.7621	952.7621	0.0348		953.6331

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	194.92	194.92	194.92	450,189	450,189
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	194.92	194.92	194.92	450,189	450,189

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793
Enclosed Parking with Elevator	0.470625	0.050338	0.265549	0.140745	0.017339	0.006996	0.024054	0.006595	0.004215	0.003104	0.009159	0.000488	0.000793

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
NaturalGas Unmitigated	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1052.44	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0114**	**0.0970**	**0.0413**	**6.2000e-004**		**7.8400e-003**	**7.8400e-003**		**7.8400e-003**	**7.8400e-003**		**123.8159**	**123.8159**	**2.3700e-003**	**2.2700e-003**	**124.5517**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	1.05244	0.0114	0.0970	0.0413	6.2000e-004		7.8400e-003	7.8400e-003		7.8400e-003	7.8400e-003		123.8159	123.8159	2.3700e-003	2.2700e-003	124.5517
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0114**	**0.0970**	**0.0413**	**6.2000e-004**		**7.8400e-003**	**7.8400e-003**		**7.8400e-003**	**7.8400e-003**		**123.8159**	**123.8159**	**2.3700e-003**	**2.2700e-003**	**124.5517**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6201	0.1693	3.6610	1.0100e-003		0.0303	0.0303		0.0303	0.0303	0.0000	169.5404	169.5404	9.3300e-003	2.9900e-003	170.6645
Unmitigated	1.6216	0.1696	3.6872	1.0100e-003		0.0304	0.0304		0.0304	0.0304	0.0000	169.5993	169.5993	9.4200e-003	2.9900e-003	170.7257

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0150	0.1277	0.0544	8.2000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	163.0588	163.0588	3.1300e-003	2.9900e-003	164.0278
Landscaping	0.1096	0.0419	3.6328	1.9000e-004		0.0201	0.0201		0.0201	0.0201		6.5405	6.5405	6.3000e-003		6.6979
Total	**1.6216**	**0.1696**	**3.6872**	**1.0100e-003**		**0.0304**	**0.0304**		**0.0304**	**0.0304**	**0.0000**	**169.5993**	**169.5993**	**9.4300e-003**	**2.9900e-003**	**170.7257**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.2681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0150	0.1277	0.0544	8.2000e-004		0.0103	0.0103		0.0103	0.0103	0.0000	163.0588	163.0588	3.1300e-003	2.9900e-003	164.0278
Landscaping	0.1080	0.0416	3.6066	1.9000e-004		0.0200	0.0200		0.0200	0.0200		6.4815	6.4815	6.2100e-003		6.6367
Total	**1.6201**	**0.1693**	**3.6610**	**1.0100e-003**		**0.0303**	**0.0303**		**0.0303**	**0.0303**	**0.0000**	**169.5404**	**169.5404**	**9.3400e-003**	**2.9900e-003**	**170.6645**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix D:
Cultural Resources

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CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA, COLUSA, CONTRA COSTA, DEL NORTE, HUMBOLDT, LAKE, MARIN, MENDOCINO, MONTEREY, NAPA, SAN BENITO, SAN FRANCISCO, SAN MATEO, SANTA CLATA, SANTA CRUZ, SOLANO, SONOMA, YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

3/19/2021 NWIC File No.: 20-1763

Dana DePietro
FirstCarbon Solutions
1350 Treat Blvd, St 380
Walnut Creek, CA 94597

Re: Addendum to the 619-625 California Drive Development Project Initial Study/Mitigated Negative Declaration

The Northwest Information Center received your record search request for the project area referenced above, located on the San Mateo USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a 0.5 mi. radius:

Resources within project area:	None listed
Resources within 0.5 mi. radius: . Informal Resources within radius:	[47] Please see attached list, page 3 . C-335
Reports within project area:	S-48738
Reports within 0.5 mi. radius:	[30] Please see attached list, Page 4 **[page count list, page 6]**

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed

Report Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Report Copies: [within Project area only] ☒ enclosed ☐ not requested ☐ nothing listed

OHP Built Environment Resources Directory: ☒ enclosed ☐ not requested ☒ nothing listed

Archaeological Determinations of Eligibility: ☐ enclosed ☐ not requested ☒ nothing listed

CA Inventory of Historic Resources (1976): ☒ enclosed ☐ not requested ☐ nothing listed

Caltrans Bridge Survey: ☒ enclosed ☐ not requested ☐ nothing listed

Historical Maps:	☒ enclosed	☐ not requested	☐ nothing listed
Local Inventories:	☒ enclosed	☐ not requested	☐ nothing listed
GLO and/or Rancho Plat Maps:	☒ enclosed	☐ not requested	☐ nothing listed
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed

*Notes:

** Current versions of these resources are available on-line:

Caltrans Bridge Survey: http://www.dot.ca.gov/hq/structur/strmaint/historic.htm

Soil Survey: http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=CA

Shipwreck Inventory: http://www.slc.ca.gov/Info/Shipwrecks.html

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Annette Neal

Researcher

Resources In 0.5 mi. Buffer

PrimCo	PrimNo
P-41	000534
41	001919
41	001920
41	001942
41	001950
41	001982
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Reports In 0.5 mi Buffer

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S-	036274
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S-	036845
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S-	038684
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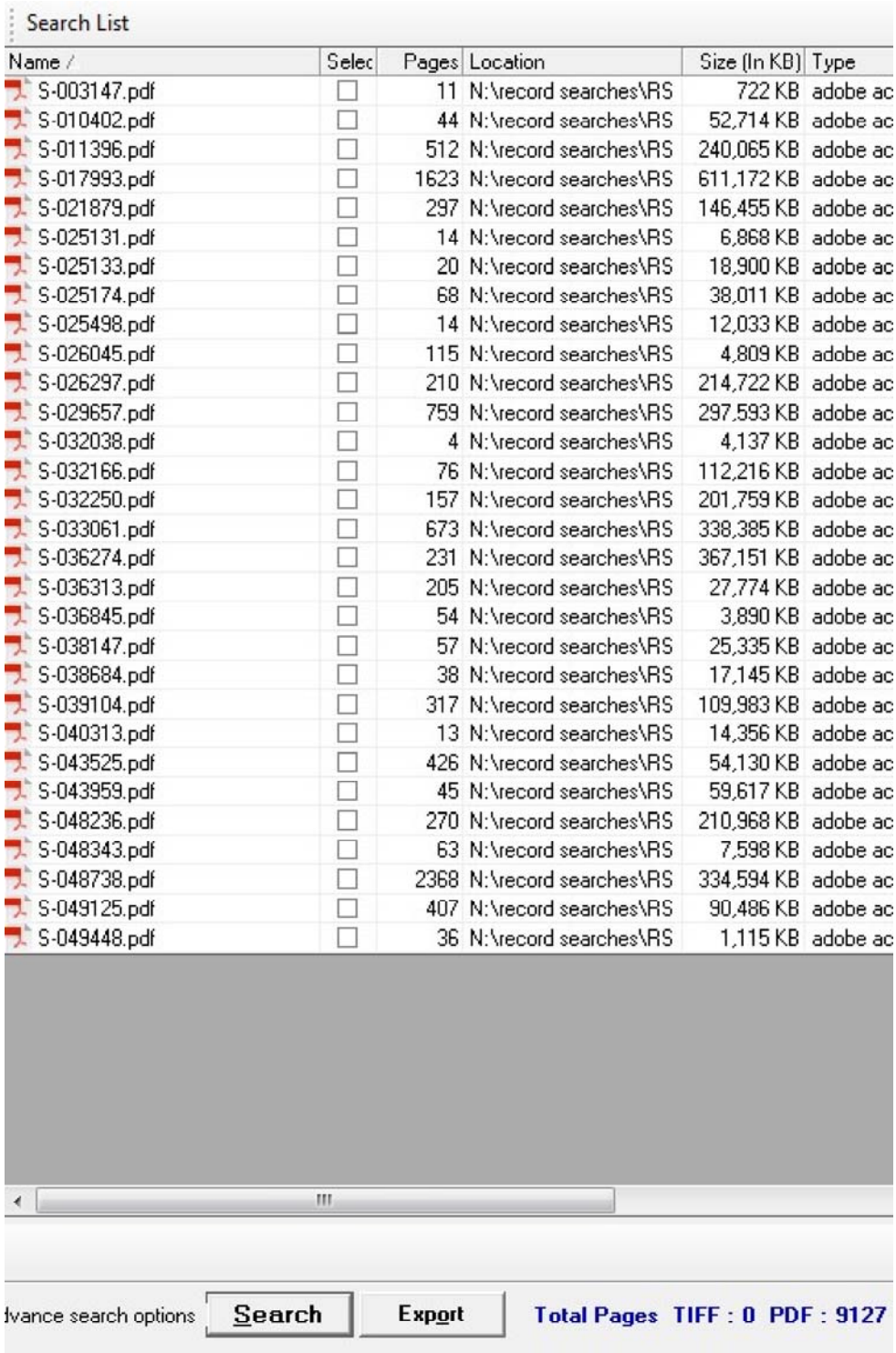
S-	049448


Search List
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Location
Size (In KB)
Type
S-003147.pdf 11 N:\record searches\RS 722 KB adobe ac
S-010402.pdf 44 N:\record searches\RS 52,714 KB adobe ac
S-011396.pdf 512 N:\record searches\RS 240,065 KB adobe ac
S-017993.pdf 1623 N:\record searches\RS 611,172 KB adobe ac
S-021879.pdf 297 N:\record searches\RS 146,455 KB adobe ac
S-025131.pdf 14 N:\record searches\RS 6,868 KB adobe ac
S-025133.pdf 20 N:\record searches\RS 18,900 KB adobe ac
S-025174.pdf 68 N:\record searches\RS 38,011 KB adobe ac
S-025498.pdf 14 N:\record searches\RS 12,033 KB adobe ac
S-026045.pdf 115 N:\record searches\RS 4,809 KB adobe ac
S-026297.pdf 210 N:\record searches\RS 214,722 KB adobe ac
S-029657.pdf 759 N:\record searches\RS 297,593 KB adobe ac
S-032038.pdf 4 N:\record searches\RS 4,137 KB adobe ac
S-032166.pdf 76 N:\record searches\RS 112,216 KB adobe ac
S-032250.pdf 157 N:\record searches\RS 201,759 KB adobe ac
S-033061.pdf 673 N:\record searches\RS 338,385 KB adobe ac
S-036274.pdf 231 N:\record searches\RS 367,151 KB adobe ac
S-036313.pdf 205 N:\record searches\RS 27,774 KB adobe ac
S-036845.pdf 54 N:\record searches\RS 3,890 KB adobe ac
S-038147.pdf 57 N:\record searches\RS 25,335 KB adobe ac
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S-043959.pdf 45 N:\record searches\RS 59,617 KB adobe ac
S-048236.pdf 270 N:\record searches\RS 210,968 KB adobe ac
S-048343.pdf 63 N:\record searches\RS 7,598 KB adobe ac
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S-049125.pdf 407 N:\record searches\RS 90,486 KB adobe ac
S-049448.pdf 36 N:\record searches\RS 1,115 KB adobe ac
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Search
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Total Pages TIFF : 0 PDF : 9127

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 23, 2021

Dana DePietro, PhD
FirstCarbon Solutions

Via Email to: ddepietro@fcs-intl.com
Cc to: mdolan@fcs-intl.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, 619-625 California Drive Development Addendum to the IS/MND Project, San Mateo County

To Dr. DePietro:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

  All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Sarah.Fonseca@nahc.ac.gov.

Sincerely,

Sarah Fonseca
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
San Mateo County
3/23/2021

Amah MutsunTribal Band of Mission San Juan Bautista
Irene Zwierlein, Chairperson
789 Canada Road — Costanoan
Woodside, CA, 94062
Phone: (650) 851 - 7489
Fax: (650) 332-1526
amahmutsuntribal@gmail.com

Costanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street — Costanoan
Pomona, CA, 91766
Phone: (909) 629 - 6081
Fax: (909) 524-8041
rumsen@aol.com

Indian Canyon Mutsun Band of Costanoan
Kanyon Sayers-Roods, MLD Contact
1615 Pearson Court — Costanoan
San Jose, CA, 95122
Phone: (408) 673 - 0626
kanyon@kanyonkonsulting.com

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28 — Costanoan
Hollister, CA, 95024
Phone: (831) 637 - 4238
ams@indiancanyon.org

Muwekma Ohlone Indian Tribe of the SF Bay Area
Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232 — Costanoan
Castro Valley, CA, 94546
Phone: (408) 464 - 2892
cnijmeh@muwekma.org

Muwekma Ohlone Indian Tribe of the SF Bay Area
Monica Arellano, Vice Chairwoman
20885 Redwood Road, Suite 232 — Costanoan
Castro Valley, CA, 94546
Phone: (408) 205 - 9714
marellano@muwekma.org

The Ohlone Indian Tribe
Andrew Galvan,
P.O. Box 3388 — Bay Miwok
Fremont, CA, 94539 — Ohlone
Phone: (510) 882 - 0527 — Patwin
Fax: (510) 687-9393 — Plains Miwok
chochenyo@AOL.com

Rumsen Am:a Tur:ataj Ohlone
Dee Dee Ybarra, Chairperson
14671 Farmington Street — Costanoan
Hesperia, CA, 92345
Phone: (760) 403 - 1756
rumsenama@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed 619-625 California Drive Development Addendum to the IS/MND Project, San Mateo County.

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Appendix E:
Traffic Supporting Information

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HEXAGON TRANSPORTATION CONSULTANTS, INC.

619-625 California Drive Live/Work Development

Draft Traffic Impact Analysis

Prepared for:

First Carbon Solutions

March 12, 2021

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

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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

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing LOS	Existing plus Project Avg. Delay (sec)	Existing plus Project LOS	Existing plus Project Incr. in Avg. Delay	Background Avg. Delay (sec)	Background LOS	Background plus Project Avg. Delay (sec)	Background plus Project LOS	Background plus Project Incr. in Avg. Delay	Background plus 2 Projects Avg. Delay (sec)	Background plus 2 Projects LOS	Background plus 2 Projects 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

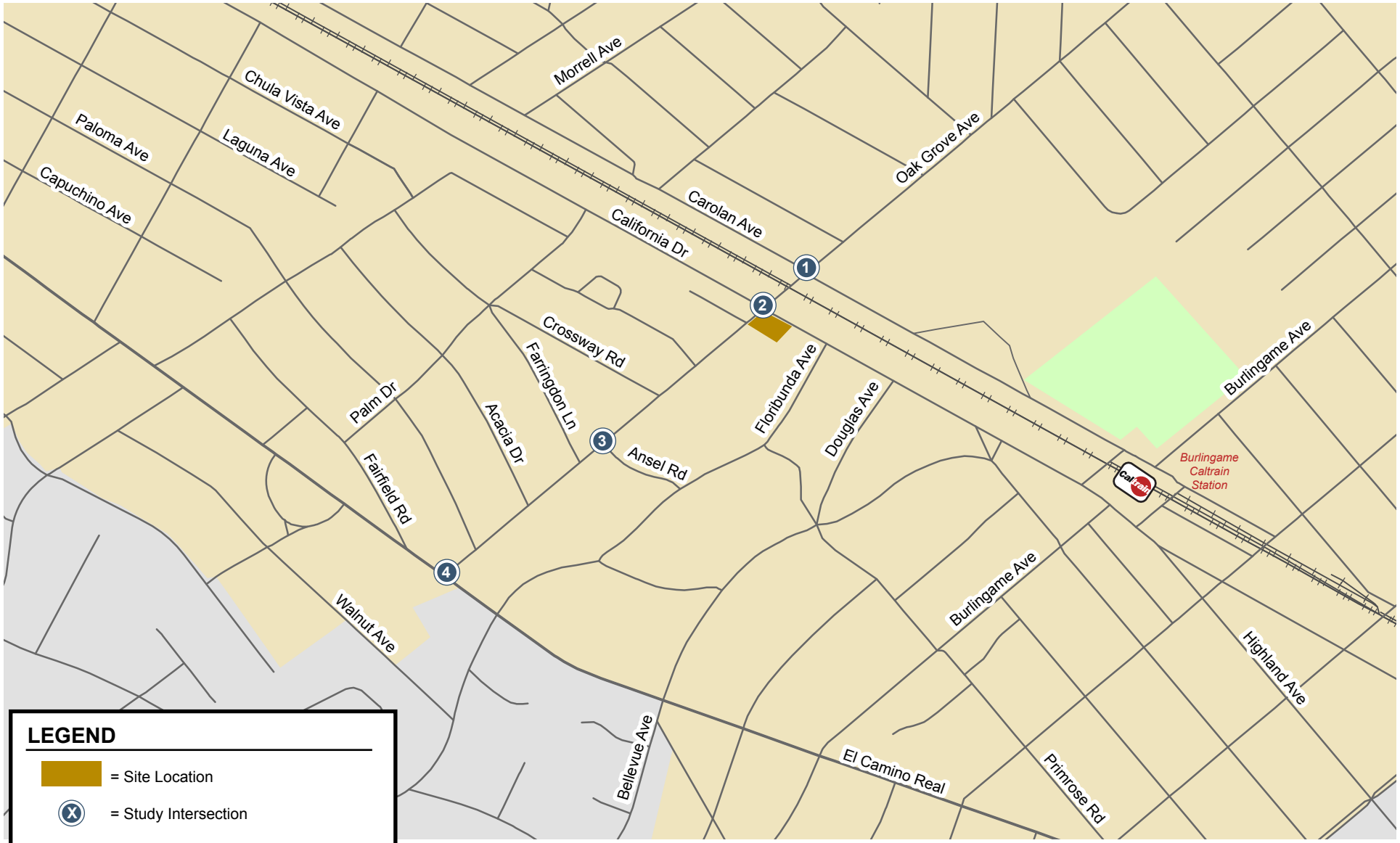


Figure 1
Site Location and Study Intersections

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.

Traffic Signal Warrant

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.

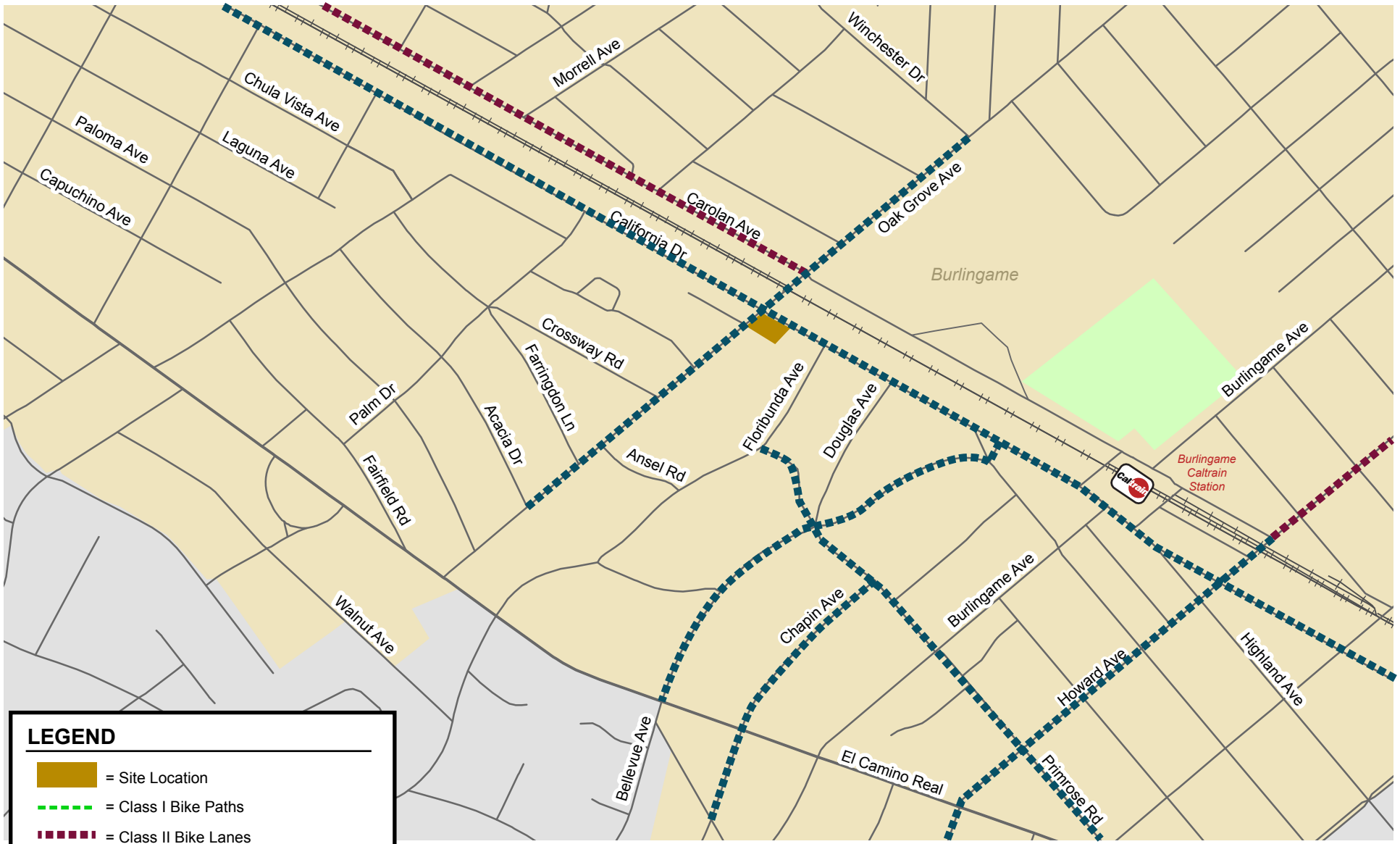


Figure 2
Existing Bicycle Facilties

NORTH
Not to Scale

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

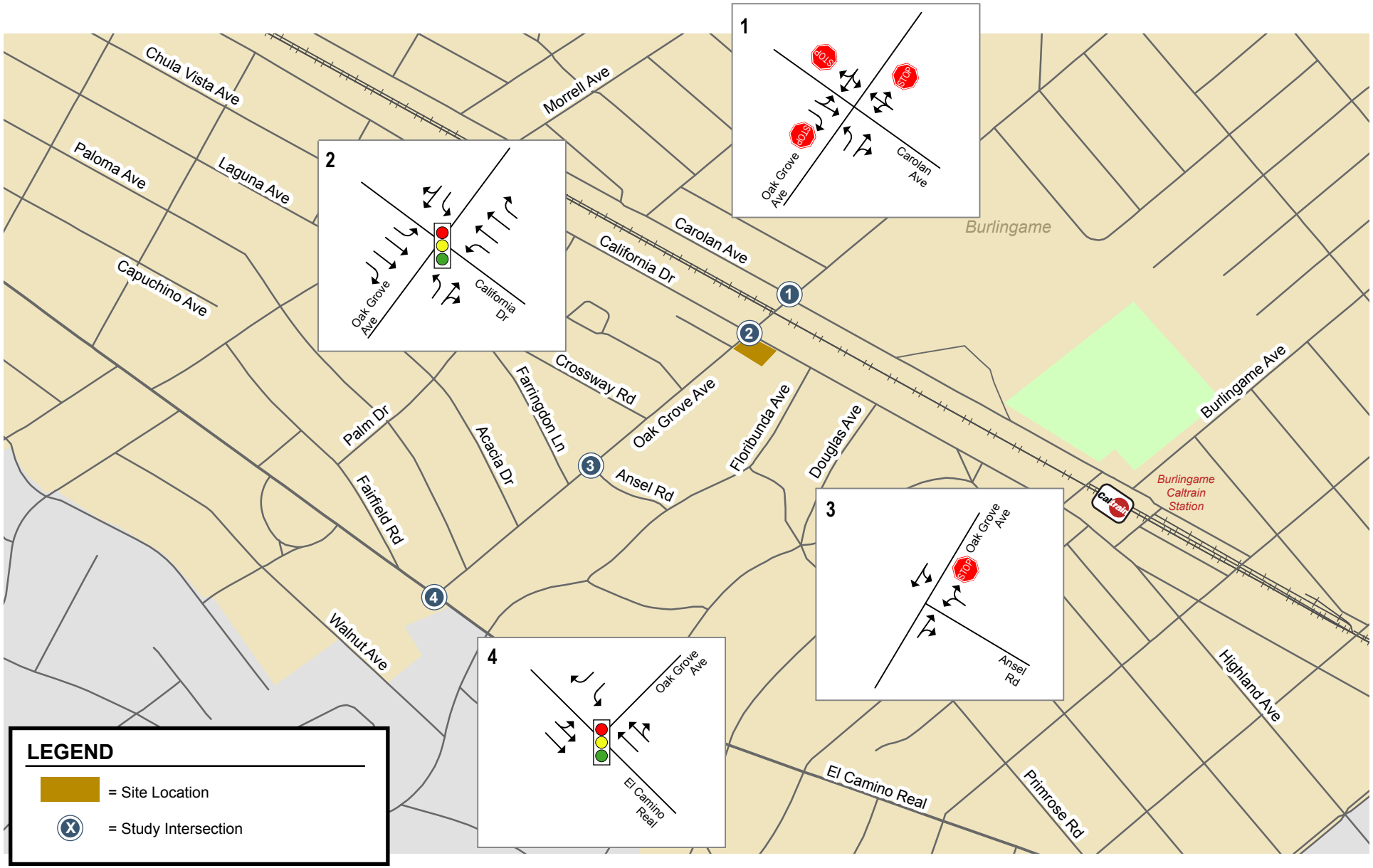


Figure 4
Existing Lane Configurations

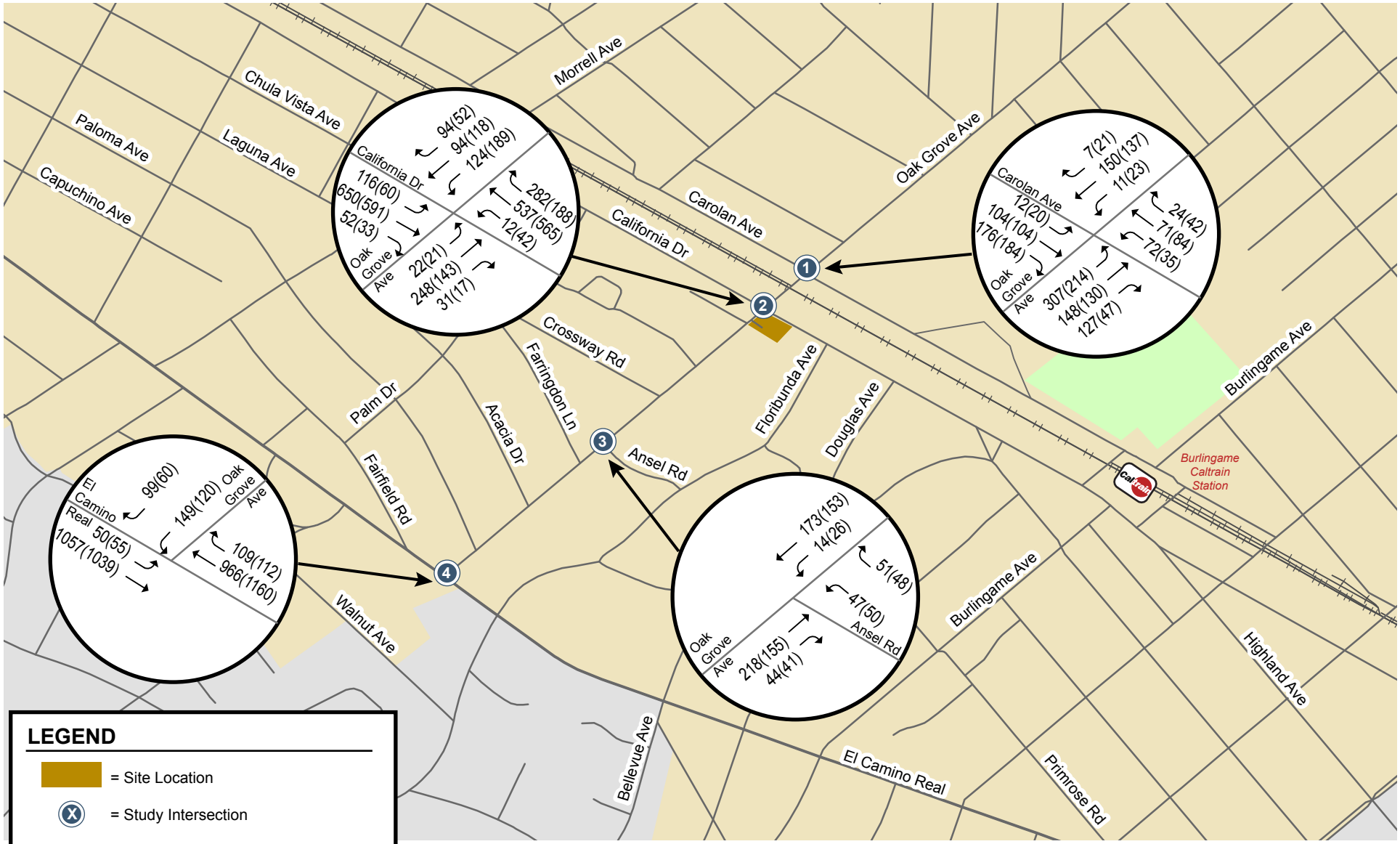


Figure 5
Existing Traffic Volumes

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)	Existing 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.

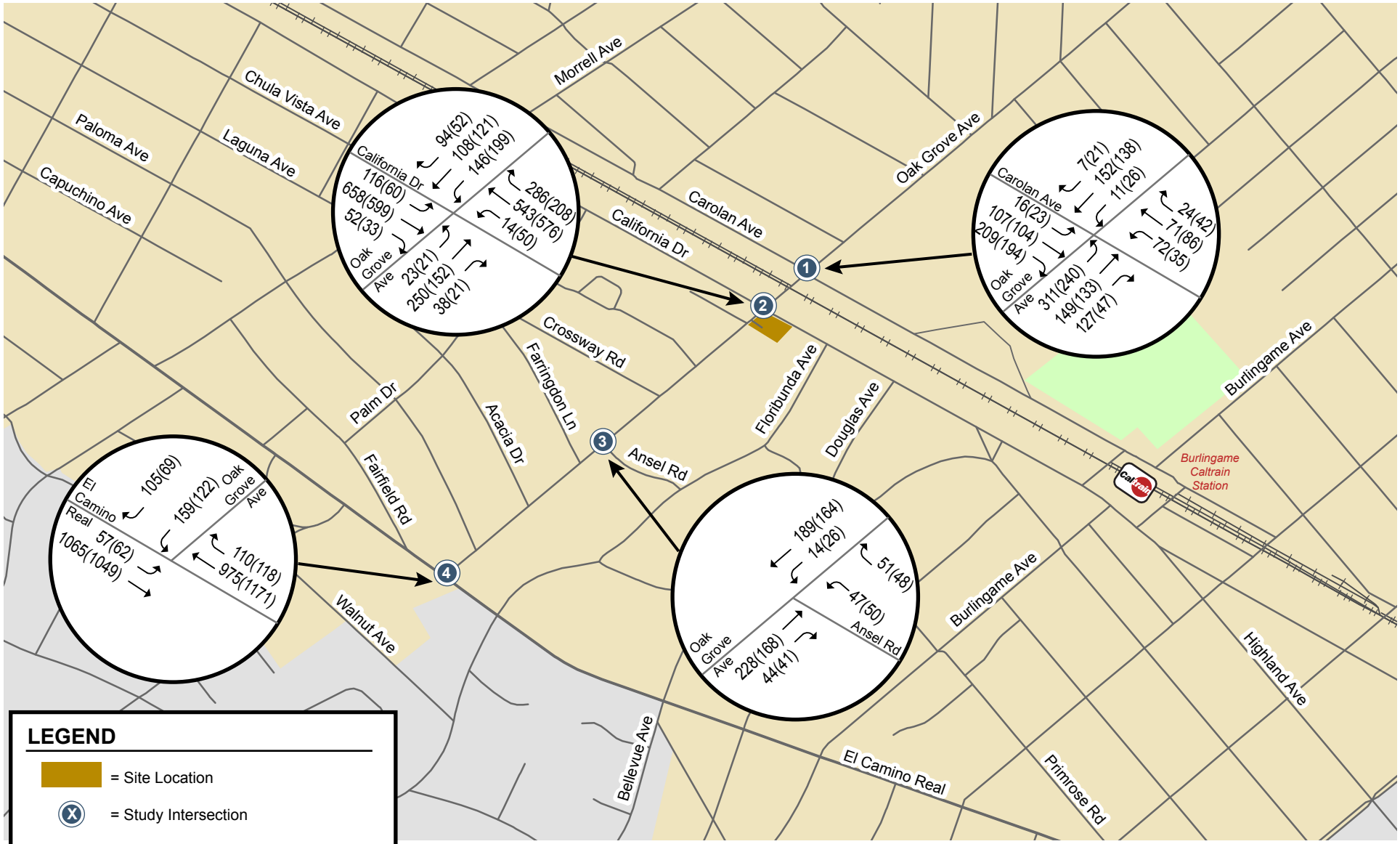


Figure 6
Background Traffic Volumes

Table 5
Background Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing 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.

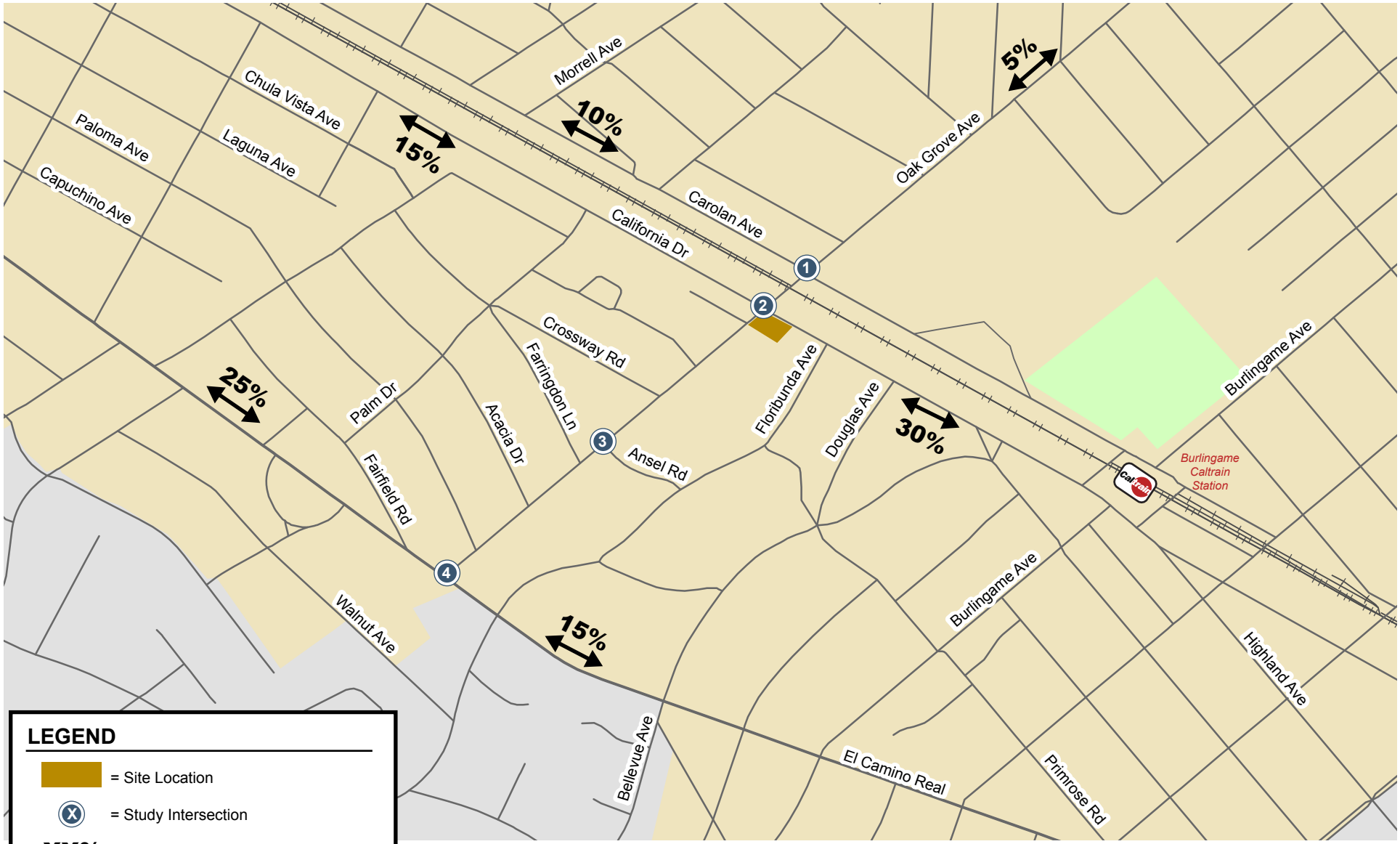


Figure 7
Project Trip Distribution

NORTH
Not to Scale

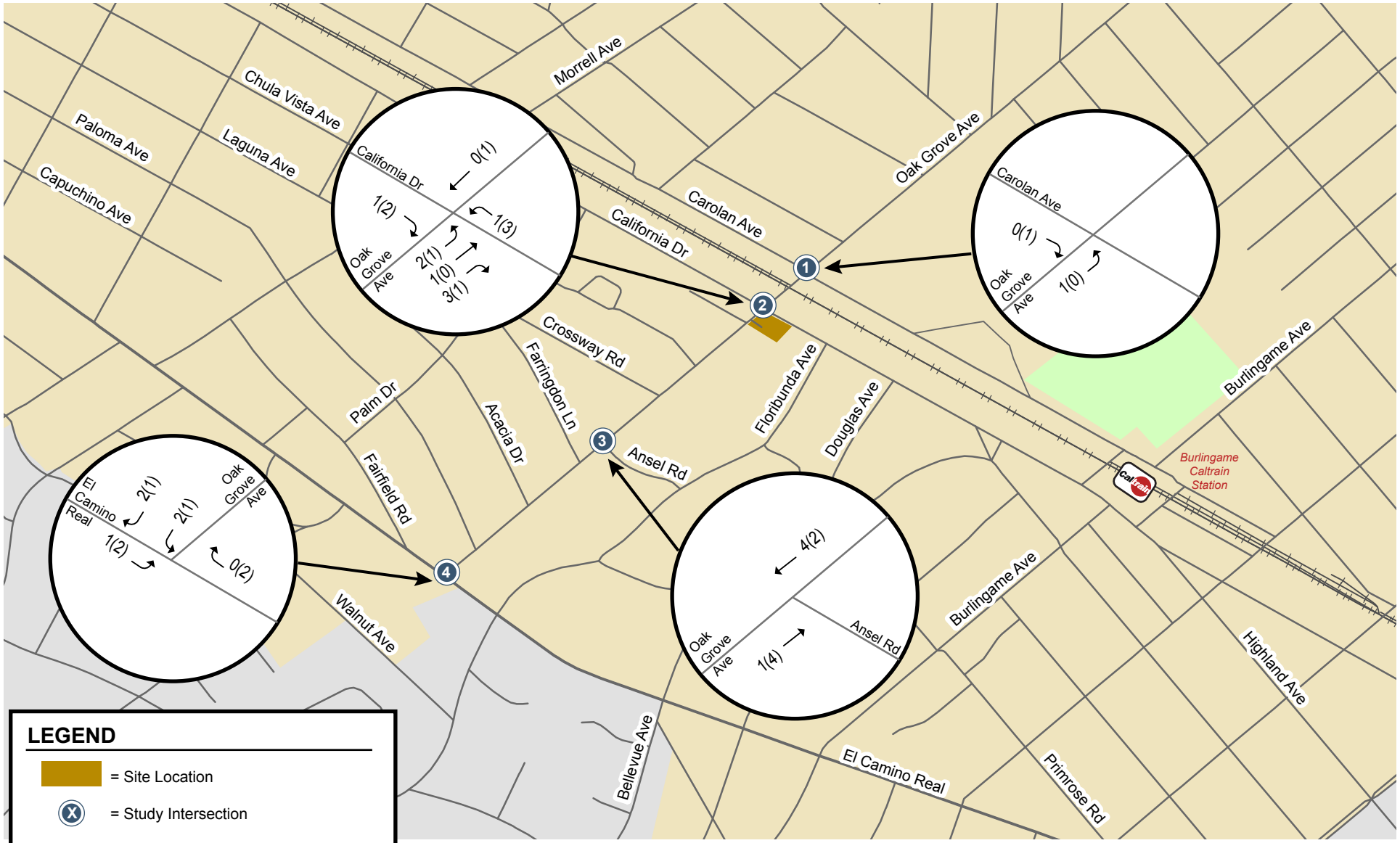


Figure 8
Project Trip Assignment

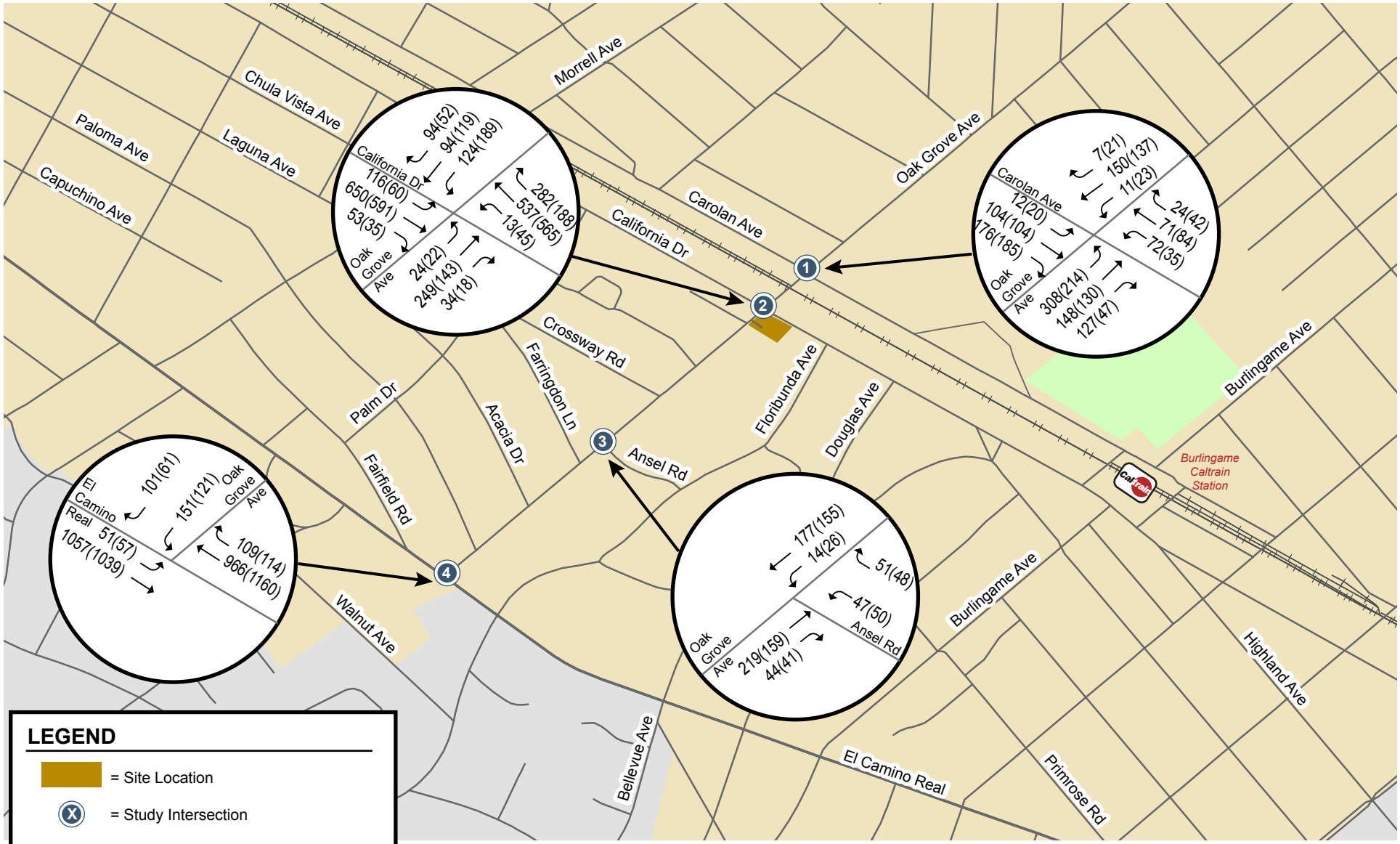


Figure 9
Existing Plus Project Traffic Volumes

Table 7
Existing Plus Project Intersection Levels of Service

#	Intersection	Control*	Peak Hour	Count Date**	Existing 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.

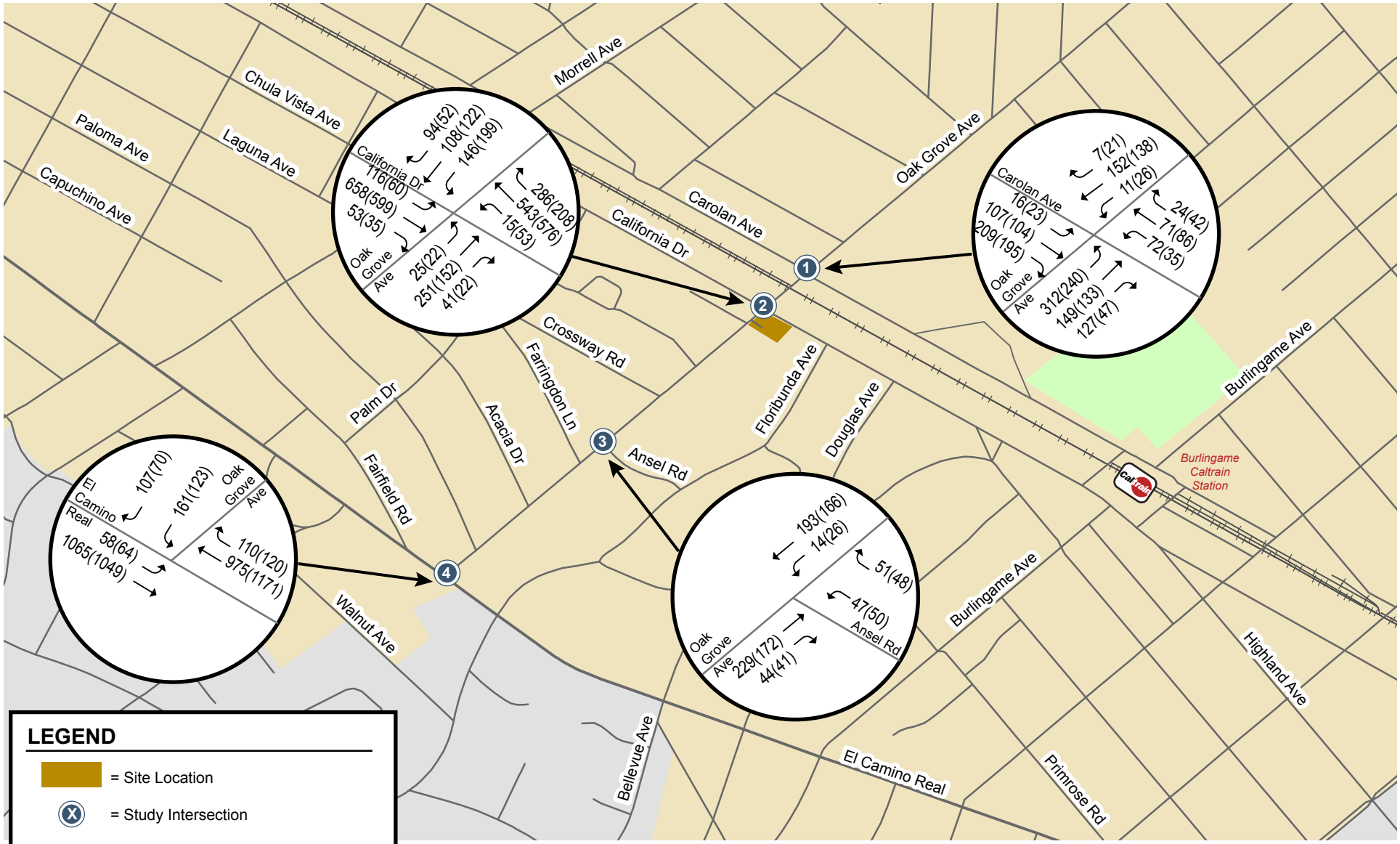


Figure 10
Background Plus Project Traffic Volumes

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.

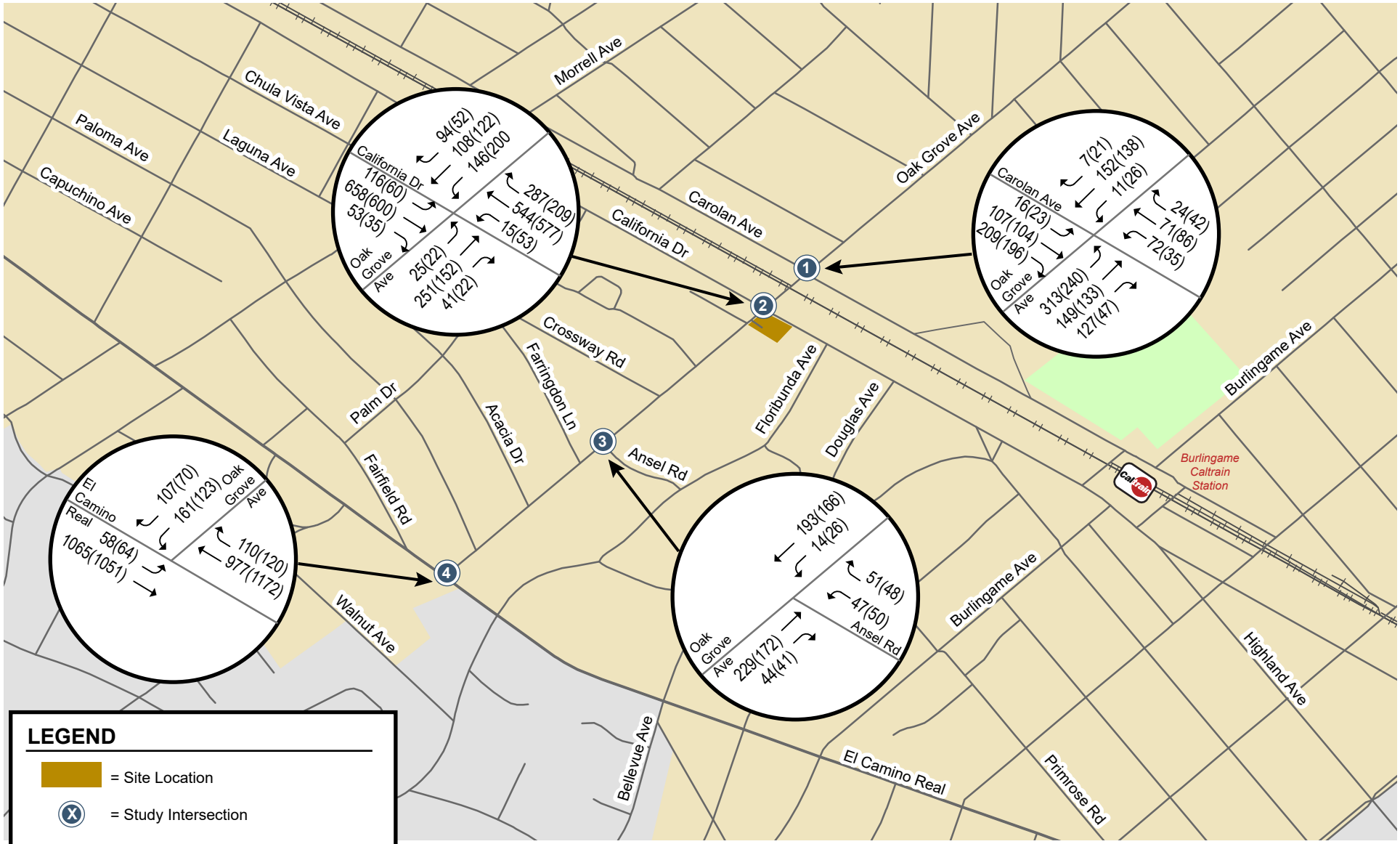


Figure 11
Background Plus 2 Projects Traffic Volumes

Table 10
Background Plus 2 Project Levels of Service Summary

#	Intersection	Control*	Peak Hour	Count Date**	Existing Avg. Delay (sec)	Existing LOS	Background Plus 2 Projects Avg. Delay (sec)	Background Plus 2 Projects 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.

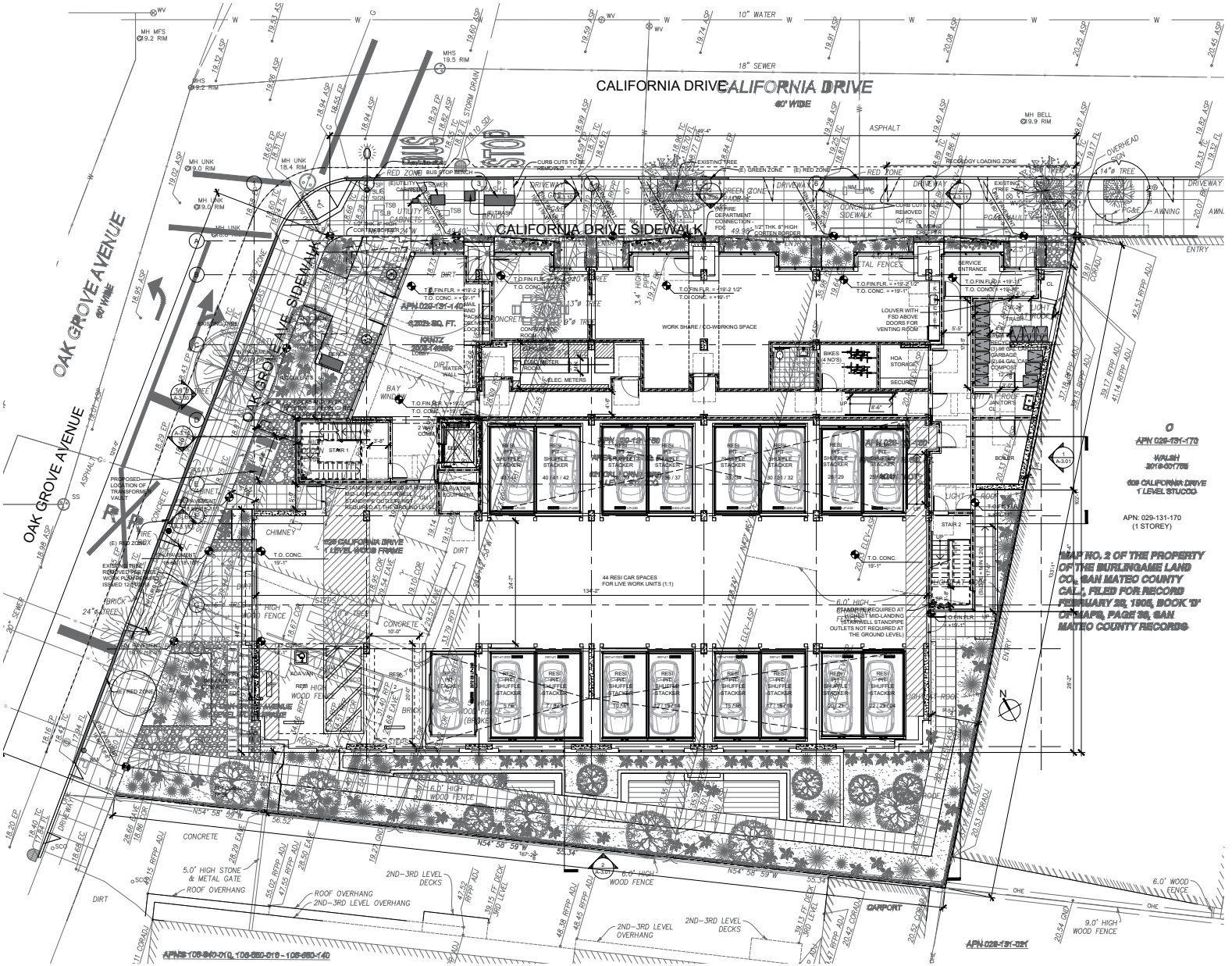


Figure 12
Site Plan

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).

619-625 California Drive Live/Work Development TIA

Technical Appendices

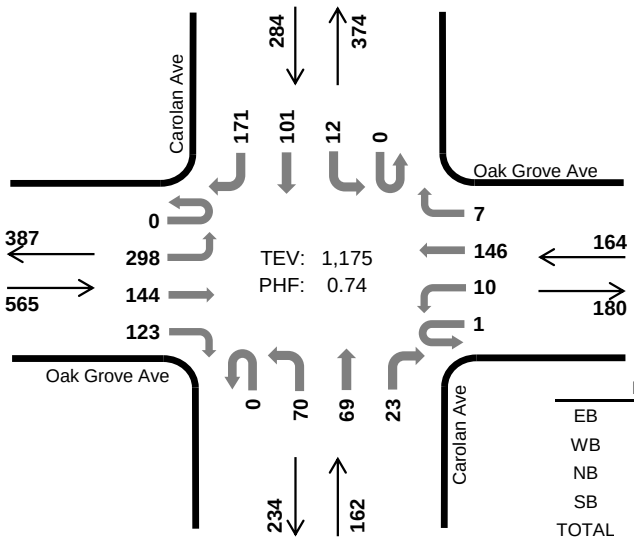
March 12, 2021

Appendix A
Traffic Counts

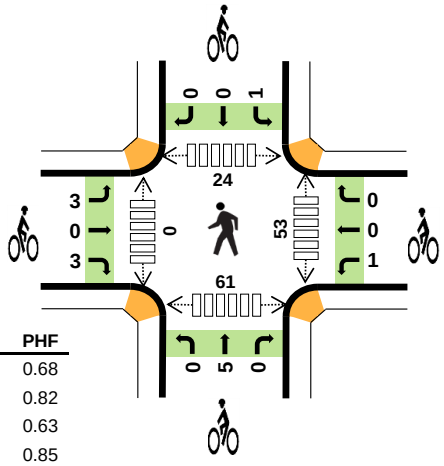
Carolan Ave
Oak Grove Ave

Date: 05/23/2017
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour



	HV %:	PHF
EB	1.2%	0.68
WB	0.6%	0.82
NB	1.2%	0.63
SB	0.4%	0.85
TOTAL	0.9%	0.74



Two-Hour Count Summaries

Interval Start	Oak Grove Ave Eastbound				Oak Grove Ave Westbound				Carolan Ave Northbound				Carolan Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	47	5	3	0	3	11	0	0	2	7	4	0	1	13	13	109	0
7:15 AM	0	64	6	5	0	4	15	3	0	3	7	1	0	0	16	26	150	0
7:30 AM	0	61	22	31	0	1	19	6	0	8	25	6	0	2	30	22	233	0
7:45 AM	**0**	**67**	**62**	**78**	**0**	**2**	**39**	**3**	**0**	**22**	**34**	**8**	**0**	**4**	**39**	**41**	**399**	891
8:00 AM	**0**	**76**	**28**	**28**	**1**	**4**	**42**	**3**	**0**	**24**	**17**	**10**	**0**	**3**	**21**	**48**	**305**	1,087
8:15 AM	**0**	**79**	**20**	**9**	**0**	**1**	**31**	**0**	**0**	**15**	**8**	**1**	**0**	**1**	**22**	**42**	**229**	1,166
8:30 AM	**0**	**76**	**34**	**8**	**0**	**3**	**34**	**1**	**0**	**9**	**10**	**4**	**0**	**4**	**19**	**40**	**242**	**1,175**
8:45 AM	0	91	42	22	0	3	24	3	0	12	11	4	0	4	29	32	277	1,053
Count Total	0	561	219	184	1	21	215	19	0	95	119	38	0	19	189	264	1,944	0
Peak Hour All	**0**	**298**	**144**	**123**	**1**	**10**	**146**	**7**	**0**	**70**	**69**	**23**	**0**	**12**	**101**	**171**	**1,175**	**0**
Peak Hour HV	**0**	**5**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**11**	**0**
Peak Hour HV%	**-**	**2%**	**1%**	**0%**	**0%**	**0%**	**1%**	**0%**	**-**	**0%**	**3%**	**0%**	**-**	**0%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	1	0	1	0	*2*	5	0	0	4	*9*
7:15 AM	0	0	0	2	*2*	2	1	0	0	*3*	3	0	0	2	*5*
7:30 AM	2	0	1	0	*3*	2	2	2	0	*6*	16	0	5	14	*35*
7:45 AM	**3**	**1**	**1**	**1**	***6***	**2**	**0**	**1**	**0**	***3***	**22**	**0**	**13**	**39**	*74*
8:00 AM	**3**	**0**	**0**	**0**	***3***	**2**	**0**	**0**	**1**	***3***	**11**	**0**	**4**	**7**	*22*
8:15 AM	**0**	**0**	**1**	**0**	***1***	**2**	**1**	**2**	**0**	***5***	**8**	**0**	**5**	**7**	*20*
8:30 AM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**2**	**0**	***2***	**12**	**0**	**2**	**8**	***22***
8:45 AM	2	1	0	5	*8*	0	0	1	0	*1*	3	1	5	5	*14*
Count Total	11	2	3	8	*24*	11	4	9	1	*25*	80	1	34	86	*201*
Peak Hour	**7**	**1**	**2**	**1**	***11***	**6**	**1**	**5**	**1**	***13***	**53**	**0**	**24**	**61**	***138***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oak Grove Ave				Oak Grove Ave				Carolan Ave				Carolan Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0
7:30 AM	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0
7:45 AM	**0**	**2**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**6**	11
8:00 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	14
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	13
8:30 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**11**
8:45 AM	0	1	1	0	0	0	1	0	0	0	0	0	0	0	4	1	8	13
Count Total	0	7	4	0	0	0	2	0	0	0	3	0	0	0	6	2	24	0
Peak Hour	**0**	**5**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**11**	**0**

Two-Hour Count Summaries - Bikes

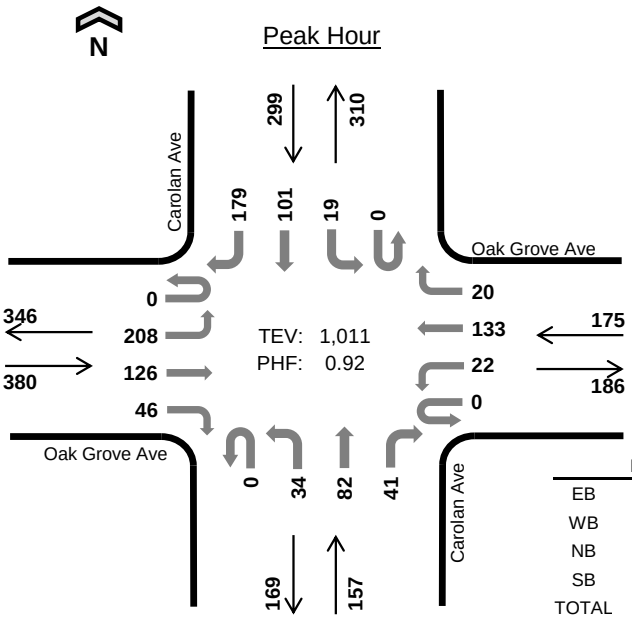
Interval Start	Oak Grove Ave			Oak Grove Ave			Carolan Ave			Carolan Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	2	0
7:15 AM	2	0	0	1	0	0	0	0	0	0	0	0	3	0
7:30 AM	2	0	0	1	1	0	0	2	0	0	0	0	6	0
7:45 AM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	14
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	15
8:15 AM	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	17
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**13**
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	11
Count Total	7	0	4	3	1	0	0	9	0	1	0	0	25	0
Peak Hour	**3**	**0**	**3**	**1**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**13**	**0**

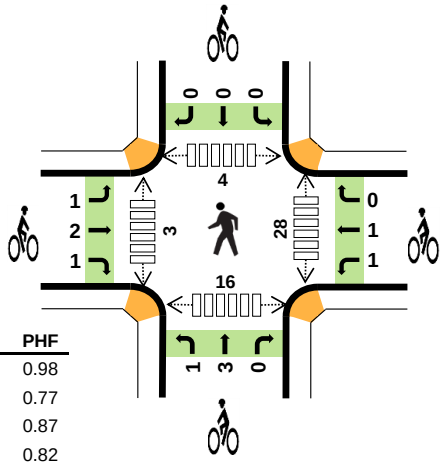
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Carolan Ave
Oak Grove Ave

Date: 05/23/2017
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	0.3%	0.98
WB	2.3%	0.77
NB	0.0%	0.87
SB	0.0%	0.82
TOTAL	0.5%	0.92

Two-Hour Count Summaries

Interval Start		Oak Grove Ave Eastbound				Oak Grove Ave Westbound				Carolan Ave Northbound				Carolan Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	57	23	6	0	3	24	2	0	6	18	4	1	5	20	47	216	0
4:15 PM		0	43	33	9	0	2	25	1	0	7	21	6	0	4	24	42	217	0
4:30 PM		0	61	20	8	0	6	31	4	0	12	21	9	0	1	18	45	236	0
4:45 PM		0	35	41	13	0	8	32	3	0	4	21	10	0	13	31	42	253	922
5:00 PM		**0**	**55**	**33**	**7**	**0**	**5**	**31**	**3**	**0**	**7**	**26**	**12**	**0**	**4**	**23**	**35**	**241**	947
5:15 PM		**0**	**42**	**39**	**16**	**0**	**3**	**29**	**4**	**0**	**2**	**17**	**11**	**0**	**5**	**14**	**47**	**229**	959
5:30 PM		**0**	**53**	**29**	**9**	**0**	**6**	**43**	**8**	**0**	**10**	**19**	**8**	**0**	**7**	**30**	**54**	**276**	999
5:45 PM		**0**	**58**	**25**	**14**	**0**	**8**	**30**	**5**	**0**	**15**	**20**	**10**	**0**	**3**	**34**	**43**	**265**	**1,011**
Count Total		0	404	243	82	0	41	245	30	0	63	163	70	1	42	194	355	1,933	0
Peak Hour	**All**	**0**	**208**	**126**	**46**	**0**	**22**	**133**	**20**	**0**	**34**	**82**	**41**	**0**	**19**	**101**	**179**	**1,011**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**2%**	**5%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	0	0	0	*3*	0	0	2	0	*2*	6	0	2	2	*10*
4:15 PM	0	0	0	0	*0*	0	0	0	1	*1*	9	2	0	2	*13*
4:30 PM	0	0	0	0	*0*	0	0	1	1	*2*	4	0	1	0	*5*
4:45 PM	0	0	0	2	*2*	0	0	1	1	*2*	5	0	0	2	*7*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	***2***	**10**	**0**	**0**	**4**	*14*
5:15 PM	**0**	**3**	**0**	**0**	***3***	**1**	**0**	**0**	**0**	***1***	**9**	**1**	**1**	**5**	*16*
5:30 PM	**1**	**1**	**0**	**0**	***2***	**0**	**1**	**1**	**0**	***2***	**7**	**2**	**2**	**5**	*16*
5:45 PM	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**2**	**0**	***5***	**2**	**0**	**1**	**2**	***5***
Count Total	4	4	0	2	*10*	4	2	8	3	*17*	52	5	7	22	*86*
Peak Hour	**1**	**4**	**0**	**0**	***5***	**4**	**2**	**4**	**0**	***10***	**28**	**3**	**4**	**16**	***51***

Deon Fouche: 415 - 757 - 7714 deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oak Grove Ave				Oak Grove Ave				Carolan Ave				Carolan Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	5
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	5
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	7
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
Count Total	0	2	2	0	0	0	3	1	0	0	0	0	0	0	1	1	10	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Oak Grove Ave			Oak Grove Ave			Carolan Ave			Carolan Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	7
5:00 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	7
5:15 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	7
5:30 PM	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	7
5:45 PM	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	**10**
Count Total	1	2	1	1	1	0	1	7	0	0	3	0	17	0
Peak Hour	**1**	**2**	**1**	**1**	**1**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**10**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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Traffic Data Service

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File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
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Groups Printed- Vehicles

	CALIFORNIA DR Southbound					OAK GROVE AVE Westbound					CALIFORNIA DR Northbound					OAK GROVE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
05:00 AM	1	13	2	1	17	1	0	0	0	1	5	16	0	1	22	3	5	0	0	8	48
05:15 AM	3	9	1	0	13	1	2	0	0	3	7	6	0	1	14	0	5	2	0	7	37
05:30 AM	0	11	1	0	12	0	2	1	0	3	5	11	1	0	17	3	6	2	0	11	43
05:45 AM	2	25	3	3	33	5	4	4	0	13	9	17	0	5	31	2	3	0	0	5	82
Total	6	58	7	4	75	7	8	5	0	20	26	50	1	7	84	8	19	4	0	31	210
06:00 AM	3	29	0	1	33	0	1	8	0	9	15	23	0	5	43	5	7	1	0	13	98
06:15 AM	2	31	1	1	35	3	5	8	1	17	25	35	0	3	63	1	7	3	1	12	127
06:30 AM	2	34	3	0	39	5	3	11	1	20	30	51	1	1	83	6	22	6	3	37	179
06:45 AM	2	55	7	1	65	3	4	10	1	18	32	51	1	0	84	5	22	9	0	36	203
Total	9	149	11	3	172	11	13	37	3	64	102	160	2	9	273	17	58	19	4	98	607
07:00 AM	6	72	1	0	79	7	6	16	0	29	44	73	4	3	124	2	27	6	1	36	268
07:15 AM	8	76	7	2	93	6	12	16	0	34	33	84	3	6	126	3	29	3	9	44	297
07:30 AM	6	93	7	4	110	7	12	24	2	45	55	98	2	7	162	4	28	8	11	51	368
07:45 AM	9	93	7	2	111	8	18	35	0	61	49	91	5	5	150	5	35	6	3	49	371
Total	29	334	22	8	393	28	48	91	2	169	181	346	14	21	562	14	119	23	24	180	1304
08:00 AM	7	129	14	8	158	21	23	17	0	61	51	115	1	4	171	4	41	4	4	53	443
08:15 AM	10	129	28	9	176	29	35	22	0	86	63	135	1	6	205	10	49	4	9	72	539
08:30 AM	18	173	19	15	225	17	15	21	0	53	51	125	1	10	187	9	62	6	4	81	546
08:45 AM	15	193	53	19	280	24	18	46	0	88	100	154	5	32	291	4	73	4	3	84	743
Total	50	624	114	51	839	91	91	106	0	288	265	529	8	52	854	27	225	18	20	290	2271
09:00 AM	8	149	15	4	176	23	25	34	0	82	65	118	5	7	195	8	62	8	5	83	536
09:15 AM	4	121	7	3	135	9	15	29	0	53	41	106	4	0	151	6	25	6	2	39	378
09:30 AM	4	122	13	3	142	7	9	27	1	44	37	91	2	3	133	6	25	9	5	45	364
09:45 AM	5	125	9	3	142	10	16	29	0	55	39	72	8	0	119	9	27	7	3	46	362
Total	21	517	44	13	595	49	65	119	1	234	182	387	19	10	598	29	139	30	15	213	1640
10:00 AM	12	104	6	6	128	10	13	21	1	45	18	95	3	1	117	3	26	7	6	42	332
10:15 AM	9	120	16	3	148	15	7	24	0	46	34	110	5	4	153	0	22	4	12	38	385
10:30 AM	8	112	7	3	130	9	11	42	0	62	35	102	4	0	141	5	24	3	9	41	374
10:45 AM	3	138	12	1	154	11	11	27	0	49	21	106	4	1	132	6	28	2	3	39	374
Total	32	474	41	13	560	45	42	114	1	202	108	413	16	6	543	14	100	16	30	160	1465
11:00 AM	13	114	7	6	140	3	8	40	1	52	41	98	6	1	146	6	26	2	3	37	375
11:15 AM	7	136	8	1	152	12	16	32	0	60	29	109	6	1	145	7	14	7	5	33	390
11:30 AM	10	128	4	3	145	7	16	32	0	55	27	128	7	3	165	4	12	4	9	29	394
11:45 AM	5	145	9	0	159	8	16	41	0	65	33	99	3	3	138	2	14	4	5	25	387
Total	35	523	28	10	596	30	56	145	1	232	130	434	22	8	594	19	66	17	22	124	1546
12:00 PM	9	118	19	1	147	12	5	33	0	50	35	132	5	1	173	2	21	3	2	28	398
12:15 PM	5	121	11	3	140	12	23	35	0	70	32	98	7	5	142	4	8	4	7	23	375
12:30 PM	10	144	7	0	161	16	12	29	0	57	37	113	4	5	159	5	16	7	4	32	409
12:45 PM	7	114	7	0	128	14	22	35	1	72	41	104	5	1	151	7	16	3	0	26	377
Total	31	497	44	4	576	54	62	132	1	249	145	447	21	12	625	18	61	17	13	109	1559
01:00 PM	9	114	11	5	139	13	12	25	0	50	44	130	9	4	187	3	26	7	3	39	415
01:15 PM	12	122	8	4	146	4	15	28	0	47	37	112	4	1	154	7	22	6	2	37	384
01:30 PM	9	113	9	1	132	7	13	29	0	49	41	141	2	1	185	3	15	6	4	28	394
01:45 PM	4	128	13	0	145	12	11	29	0	52	38	120	8	1	167	5	17	5	2	29	393
Total	34	477	41	10	562	36	51	111	0	198	160	503	23	7	693	18	80	24	11	133	1586
02:00 PM	6	116	8	0	130	13	20	26	0	59	37	138	2	0	177	4	32	8	3	47	413
02:15 PM	13	139	21	1	174	9	11	29	0	49	36	117	6	1	160	6	29	7	2	44	427

Traffic Data Service

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File Name : 27 FINAL
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Groups Printed- Vehicles

	CALIFORNIA DR Southbound					OAK GROVE AVE Westbound					CALIFORNIA DR Northbound					OAK GROVE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
02:30 PM	15	111	24	2	152	33	33	33	1	100	40	138	13	22	213	1	26	4	3	34	499
02:45 PM	12	136	7	11	166	28	40	35	0	103	37	133	15	7	192	3	24	8	3	38	499
Total	46	502	60	14	622	83	104	123	1	311	150	526	36	30	742	14	111	27	11	163	1838
03:00 PM	10	119	27	7	163	18	21	27	3	69	46	135	5	7	193	3	30	8	8	49	474
03:15 PM	13	135	26	15	189	24	24	27	0	75	39	155	4	5	203	9	33	3	5	50	517
03:30 PM	13	137	21	3	174	19	18	34	1	72	39	125	3	19	186	8	32	5	5	50	482
03:45 PM	14	124	24	5	167	15	18	37	0	70	31	123	4	7	165	4	33	4	6	47	449
Total	50	515	98	30	693	76	81	125	4	286	155	538	16	38	747	24	128	20	24	196	1922
04:00 PM	7	151	15	4	177	12	15	35	2	64	38	124	8	3	173	8	26	8	4	46	460
04:15 PM	12	155	16	3	186	13	29	37	0	79	42	144	5	1	192	11	34	4	3	52	509
04:30 PM	8	114	16	7	145	11	30	41	2	84	46	125	9	3	183	12	27	3	4	46	458
04:45 PM	7	154	19	3	183	13	19	48	0	80	48	141	6	10	205	2	26	9	4	41	509
Total	34	574	66	17	691	49	93	161	4	307	174	534	28	17	753	33	113	24	15	185	1936
05:00 PM	6	131	8	1	146	16	22	45	0	83	46	165	7	3	221	10	27	11	4	52	502
05:15 PM	4	172	12	5	193	9	24	35	1	69	50	157	9	3	219	3	36	7	9	55	536
05:30 PM	15	138	15	0	168	12	26	51	0	89	46	133	8	3	190	1	44	2	7	54	501
05:45 PM	8	136	11	5	160	14	32	60	2	108	49	130	8	0	187	8	29	6	8	51	506
Total	33	577	46	11	667	51	104	191	3	349	191	585	32	9	817	22	136	26	28	212	2045
06:00 PM	6	139	21	4	170	16	35	41	1	93	41	139	17	11	208	5	33	6	5	49	520
06:15 PM	7	154	16	5	182	10	43	39	3	95	38	122	7	11	178	6	33	3	5	47	502
06:30 PM	5	122	11	2	140	8	50	48	0	106	33	104	5	3	145	4	23	7	5	39	430
06:45 PM	5	124	10	1	140	10	25	41	1	77	32	116	5	6	159	12	24	4	3	43	419
Total	23	539	58	12	632	44	153	169	5	371	144	481	34	31	690	27	113	20	18	178	1871
07:00 PM	4	93	13	0	110	10	22	28	0	60	36	141	3	4	184	6	21	3	1	31	385
07:15 PM	8	113	9	4	134	6	20	27	1	54	38	104	8	4	154	3	28	1	4	36	378
07:30 PM	4	76	7	4	91	6	23	40	0	69	28	128	10	3	169	6	16	1	6	29	358
07:45 PM	6	80	3	1	90	9	16	29	0	54	18	90	5	4	117	2	18	3	6	29	290
Total	22	362	32	9	425	31	81	124	1	237	120	463	26	15	624	17	83	8	17	125	1411
Grand Total	455	6722	712	209	8098	685	1052	1753	27	3517	2233	6396	298	272	9199	301	1551	293	252	2397	23211
Apprch %	5.6	83	8.8	2.6		19.5	29.9	49.8	0.8		24.3	69.5	3.2	3		12.6	64.7	12.2	10.5		
Total %	2	29	3.1	0.9	34.9	3	4.5	7.6	0.1	15.2	9.6	27.6	1.3	1.2	39.6	1.3	6.7	1.3	1.1	10.3	

	CALIFORNIA DR Southbound				OAK GROVE AVE Westbound				CALIFORNIA DR Northbound				OAK GROVE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 05:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:15 AM																	
08:15 AM	10	129	28	167	**29**	**35**	22	86	63	135	1	199	**10**	49	4	63	515
08:30 AM	**18**	173	19	210	17	15	21	53	51	125	1	177	9	62	6	77	517
08:45 AM	15	**193**	**53**	**261**	24	18	**46**	**88**	**100**	**154**	**5**	**259**	4	**73**	4	**81**	**689**
09:00 AM	8	149	15	172	23	25	34	82	65	118	5	188	8	62	**8**	78	520
Total Volume	51	644	115	810	93	93	123	309	279	532	12	823	31	246	22	299	2241
% App. Total	6.3	79.5	14.2		30.1	30.1	39.8		33.9	64.6	1.5		10.4	82.3	7.4		
PHF	.708	.834	.542	.776	.802	.664	.668	.878	.698	.864	.600	.794	.775	.842	.688	.923	.813

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File Name : 27 FINAL
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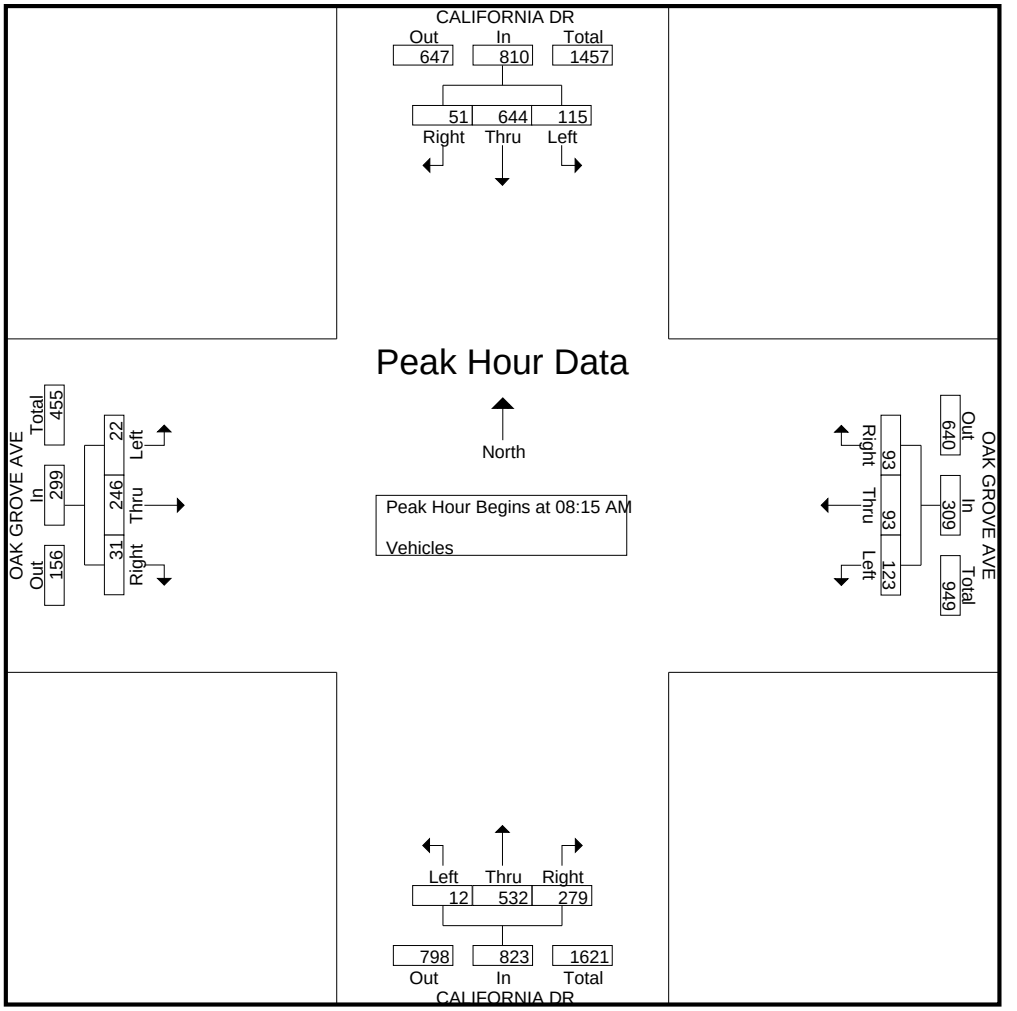


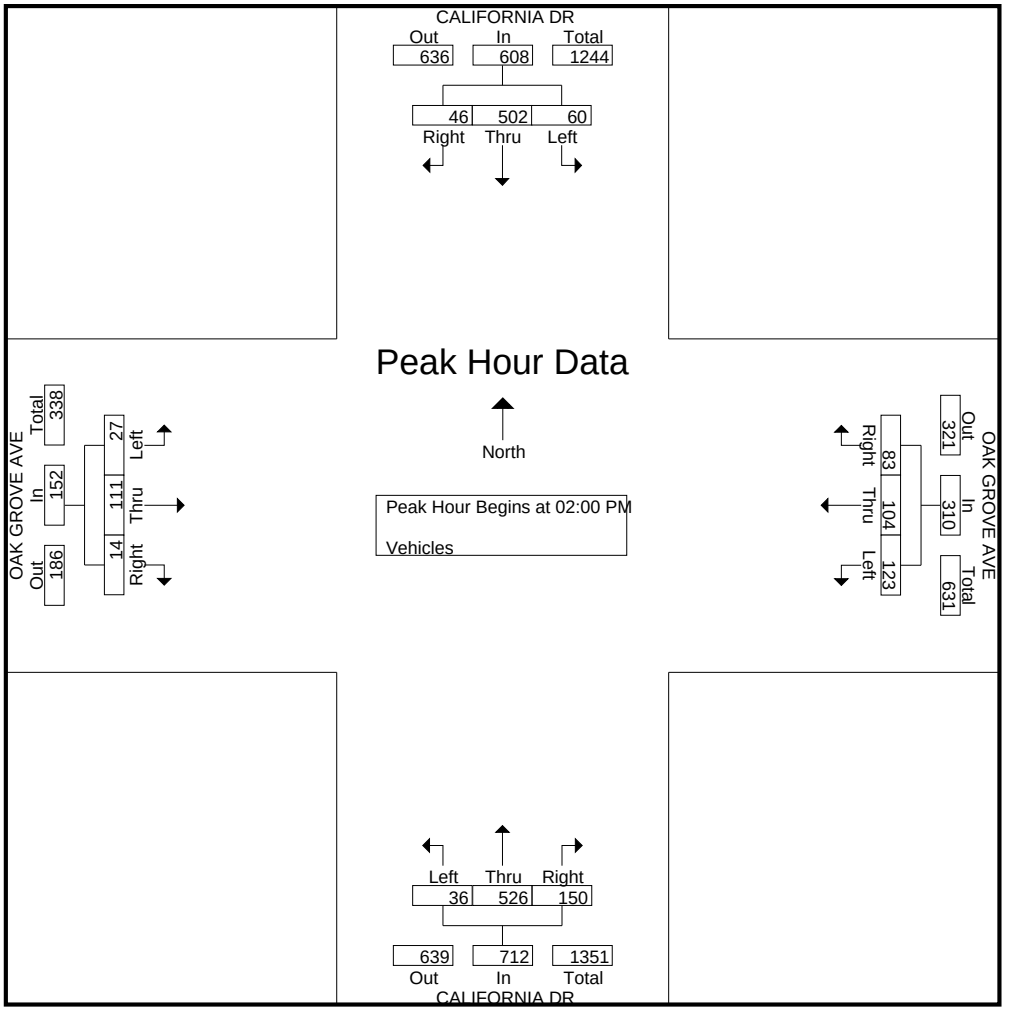
Peak Hour Analysis From 10:00 AM to 02:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 02:00 PM

02:00 PM	6	116	8	130	13	20	26	59	37	**138**	2	177	4	**32**	**8**	**44**	410
02:15 PM	13	**139**	21	**173**	9	11	29	49	36	117	6	159	**6**	29	7	42	423
02:30 PM	**15**	111	**24**	150	**33**	33	33	99	**40**	138	13	**191**	1	26	4	31	471
02:45 PM	12	136	7	155	28	**40**	**35**	**103**	37	133	**15**	185	3	24	8	35	**478**
Total Volume	46	502	60	608	83	104	123	310	150	526	36	712	14	111	27	152	1782
% App. Total	7.6	82.6	9.9		26.8	33.5	39.7		21.1	73.9	5.1		9.2	73	17.8		
PHF	.767	.903	.625	.879	.629	.650	.879	.752	.938	.953	.600	.932	.583	.867	.844	.864	.932

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 4



Peak Hour Analysis From 03:00 PM to 07:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 05:15 PM

05:15 PM	4	**172**	12	**188**	9	24	35	68	**50**	**157**	9	**216**	3	36	**7**	46	**518**
05:30 PM	**15**	138	15	168	12	26	51	89	46	133	8	187	1	**44**	2	**47**	491
05:45 PM	8	136	11	155	14	32	**60**	**106**	49	130	8	187	**8**	29	6	43	491
06:00 PM	6	139	**21**	166	**16**	**35**	41	92	41	139	**17**	197	5	33	6	44	499
Total Volume	33	585	59	677	51	117	187	355	186	559	42	787	17	142	21	180	1999
% App. Total	4.9	86.4	8.7		14.4	33	52.7		23.6	71	5.3		9.4	78.9	11.7		
PHF	.550	.850	.702	.900	.797	.836	.779	.837	.930	.890	.618	.911	.531	.807	.750	.957	.965

Traffic Data Service

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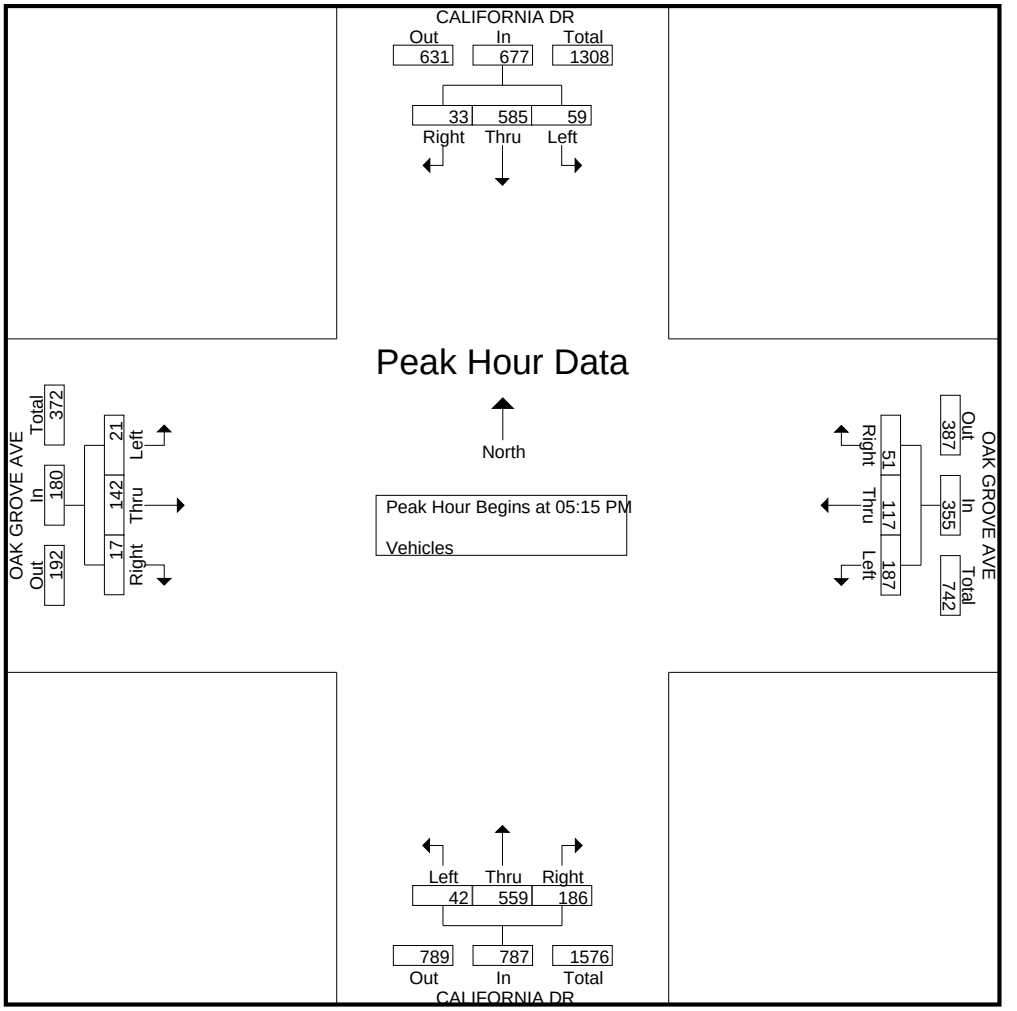
File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 5



Peak Hour Analysis From 05:00 AM to 07:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:15 AM

08:15 AM	10	129	28	167	**29**	**35**	22	86	63	135	1	199	**10**	49	4	63	515
08:30 AM	**18**	173	19	210	17	15	21	53	51	125	1	177	9	62	6	77	517
08:45 AM	15	**193**	**53**	**261**	24	18	**46**	**88**	**100**	**154**	**5**	**259**	4	**73**	4	**81**	**689**
09:00 AM	8	149	15	172	23	25	34	82	65	118	5	188	8	62	**8**	78	520
Total Volume	51	644	115	810	93	93	123	309	279	532	12	823	31	246	22	299	2241
% App. Total	6.3	79.5	14.2		30.1	30.1	39.8		33.9	64.6	1.5		10.4	82.3	7.4		
PHF	.708	.834	.542	.776	.802	.664	.668	.878	.698	.864	.600	.794	.775	.842	.688	.923	.813

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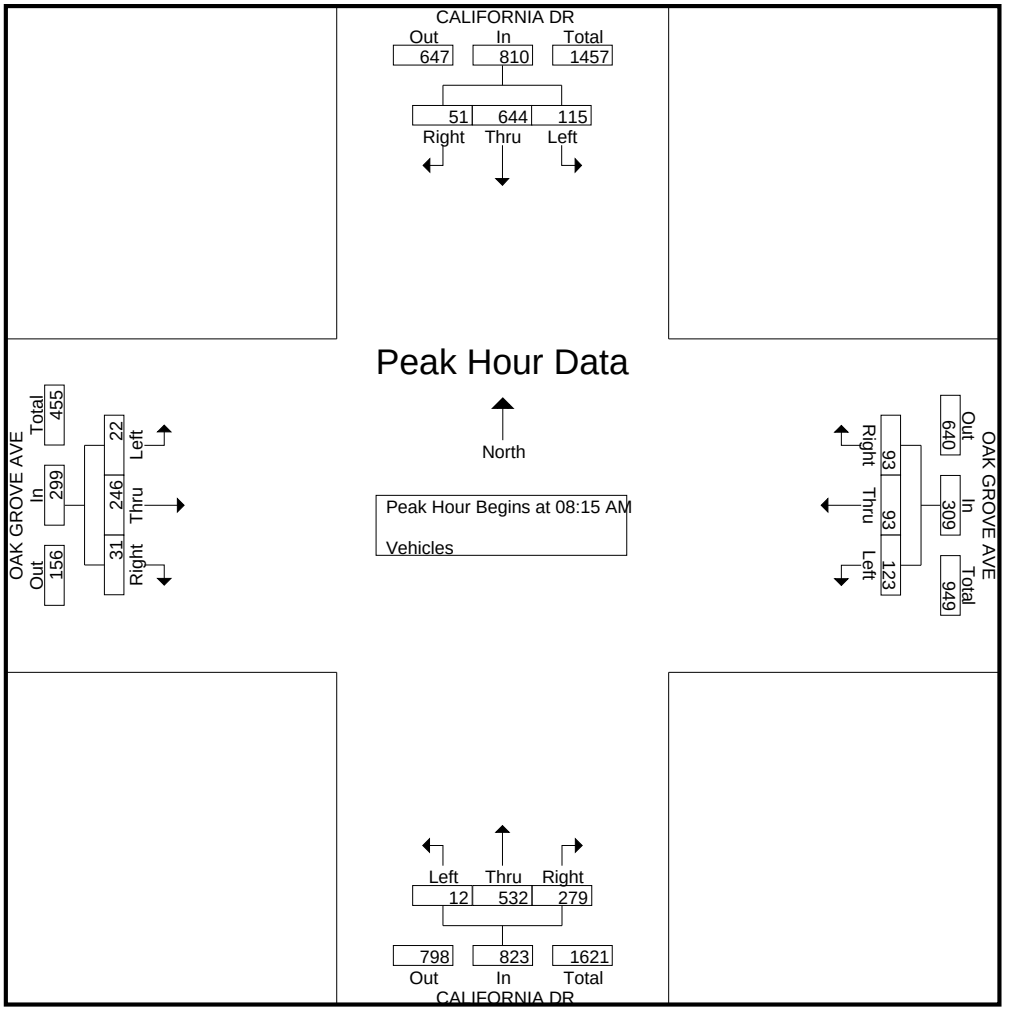
File Name : 27 FINAL
Site Code : 00000027
Start Date : 4/24/2019
Page No : 6

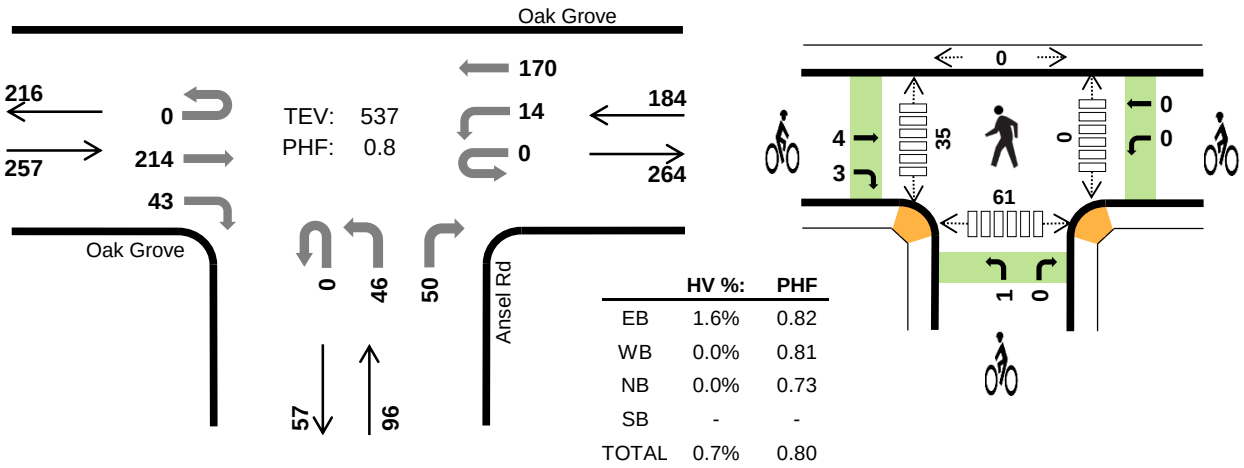


Ansel Rd
Oak Grove

N

Peak Hour

Date: 01-11-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



Two-Hour Count Summaries

Interval Start		Oak Grove Eastbound				Oak Grove Westbound				Ansel Rd Northbound				0 Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		1	0	20	6	0	3	8	0	0	3	0	13	0	0	0	0	54	0
7:15 AM		0	0	21	2	0	2	14	0	0	7	0	7	0	0	0	0	53	0
7:30 AM		0	0	60	6	0	3	29	0	0	10	0	13	0	0	0	0	121	0
7:45 AM		**0**	**0**	**50**	**14**	**0**	**6**	**39**	**0**	**0**	**5**	**0**	**8**	**0**	**0**	**0**	**0**	**122**	350
8:00 AM		**0**	**0**	**35**	**8**	**0**	**1**	**44**	**0**	**0**	**9**	**0**	**17**	**0**	**0**	**0**	**0**	**114**	410
8:15 AM		**0**	**0**	**68**	**10**	**0**	**5**	**52**	**0**	**0**	**23**	**0**	**10**	**0**	**0**	**0**	**0**	**168**	525
8:30 AM		**0**	**0**	**61**	**11**	**0**	**2**	**35**	**0**	**0**	**9**	**0**	**15**	**0**	**0**	**0**	**0**	**133**	**537**
8:45 AM		0	0	55	8	0	3	30	0	0	0	0	7	0	0	0	0	103	518
Count Total		1	0	370	65	0	25	251	0	0	66	0	90	0	0	0	0	868	0
Peak Hour	**All**	**0**	**0**	**214**	**43**	**0**	**14**	**170**	**0**	**0**	**46**	**0**	**50**	**0**	**0**	**0**	**0**	**537**	**0**
	HV	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
	HV%	**-**	**-**	**2%**	**0%**	**-**	**0%**	**0%**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	0	0	*1*	1	0	2	0	*3*	0	1	0	3	*4*
7:15 AM	0	1	0	0	*1*	3	0	0	0	*3*	0	1	0	1	*2*
7:30 AM	2	0	0	0	*2*	5	0	0	0	*5*	0	5	0	4	*9*
7:45 AM	**2**	**0**	**0**	**0**	***2***	**1**	**0**	**0**	**0**	***1***	**0**	**9**	**0**	**6**	*15*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**4**	**0**	**0**	**0**	***4***	**0**	**3**	**0**	**4**	*7*
8:15 AM	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**1**	**0**	***2***	**0**	**12**	**0**	**29**	*41*
8:30 AM	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**0**	**0**	***1***	**0**	**11**	**0**	**22**	***33***
8:45 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	6	0	4	*10*
Count Total	7	2	0	0	*9*	16	0	3	0	*19*	0	48	0	73	*121*
Peak Hr	**4**	**0**	**0**	**0**	***4***	**7**	**0**	**1**	**0**	***8***	**0**	**35**	**0**	**61**	***96***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oak Grove				Oak Grove				Ansel Rd				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:45 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	6
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
8:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
8:30 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	0	0	7	0	0	0	2	0	0	0	0	0	0	0	0	0	9	0
Peak Hour	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Oak Grove			Oak Grove			Ansel Rd			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	1	0	1	0	0	0	3	0
7:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	3	0
7:30 AM	0	5	0	0	0	0	0	0	0	0	0	0	5	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	12
8:00 AM	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	13
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	12
8:30 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Count Total	0	10	6	0	0	0	2	0	1	0	0	0	19	0
Peak Hour	**0**	**4**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**8**	**0**

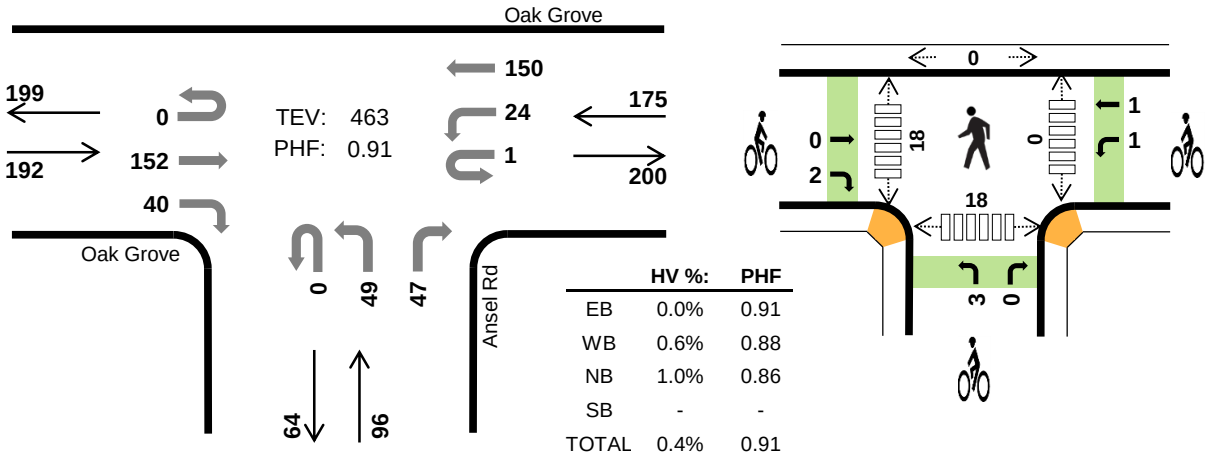
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Ansel Rd
Oak Grove

N

Peak Hour

Date: 01-11-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



Two-Hour Count Summaries

Interval Start	Oak Grove Eastbound				Oak Grove Westbound				Ansel Rd Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	37	9	0	3	24	0	0	6	0	13	0	0	0	0	92	0
4:15 PM	0	0	40	5	0	3	27	0	0	11	0	11	0	0	0	0	97	0
4:30 PM	0	0	39	12	0	5	25	0	0	6	0	8	0	0	0	0	95	0
4:45 PM	**0**	**0**	**34**	**12**	**1**	**7**	**32**	**0**	**0**	**10**	**0**	**12**	**0**	**0**	**0**	**0**	**108**	392
5:00 PM	**0**	**0**	**42**	**7**	**0**	**3**	**47**	**0**	**0**	**11**	**0**	**17**	**0**	**0**	**0**	**0**	**127**	427
5:15 PM	**0**	**0**	**42**	**11**	**0**	**5**	**40**	**0**	**0**	**15**	**0**	**10**	**0**	**0**	**0**	**0**	**123**	453
5:30 PM	**0**	**0**	**34**	**10**	**0**	**9**	**31**	**0**	**0**	**13**	**0**	**8**	**0**	**0**	**0**	**0**	**105**	**463**
5:45 PM	0	0	22	11	0	7	36	0	0	11	0	12	0	0	0	0	99	454
Count Total	0	0	290	77	1	42	262	0	0	83	0	91	0	0	0	0	846	0
Peak Hour All	**0**	**0**	**152**	**40**	**1**	**24**	**150**	**0**	**0**	**49**	**0**	**47**	**0**	**0**	**0**	**0**	**463**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**
Peak Hour HV%	**-**	**-**	**0%**	**0%**	**0%**	**0%**	**1%**	**-**	**-**	**0%**	**-**	**2%**	**-**	**-**	**-**	**-**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	2	2	0	*4*	0	5	0	15	*20*
4:15 PM	0	0	0	0	*0*	1	0	0	0	*1*	0	3	0	3	*6*
4:30 PM	0	1	0	0	*1*	0	1	1	0	*2*	0	15	0	22	*37*
4:45 PM	**0**	**0**	**1**	**0**	***1***	**1**	**0**	**2**	**0**	***3***	**0**	**6**	**0**	**5**	*11*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**1**	**0**	***3***	**0**	**7**	**0**	**4**	*11*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***	**0**	**2**	**0**	**6**	*8*
5:30 PM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**3**	***6***
5:45 PM	0	1	0	0	*1*	0	0	0	0	*0*	1	3	0	8	*12*
Count Total	0	3	1	0	*4*	3	5	6	0	*14*	1	44	0	66	*111*
Peak Hr	**0**	**1**	**1**	**0**	***2***	**2**	**2**	**3**	**0**	***7***	**0**	**18**	**0**	**18**	***36***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Oak Grove				Oak Grove				Ansel Rd				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
Count Total	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**

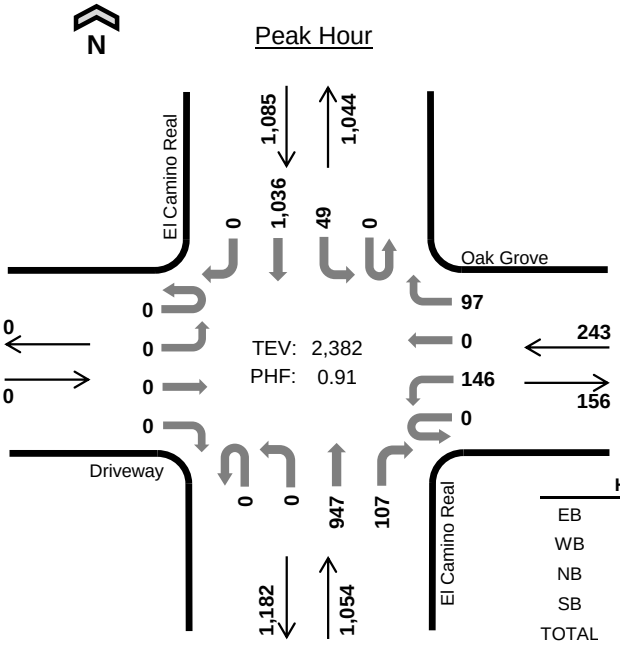
Two-Hour Count Summaries - Bikes

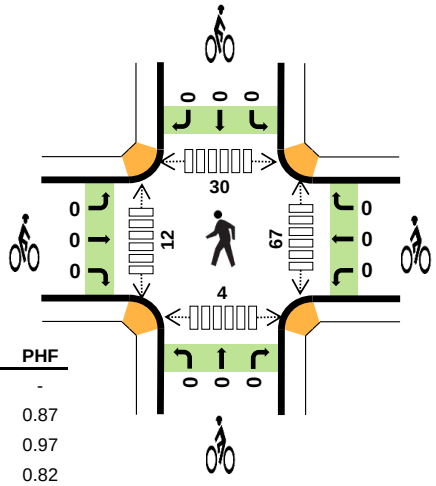
Interval Start	Oak Grove			Oak Grove			Ansel Rd			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	1	1	0	1	0	1	0	0	0	4	0
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	1	0	0	1	0	0	0	0	0	2	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	10
5:00 PM	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	9
5:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	9
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	3	3	2	0	5	0	1	0	0	0	14	0
Peak Hour	**0**	**0**	**2**	**1**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Oak Grove

Date: 01-11-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	-	-
WB	0.0%	0.87
NB	2.5%	0.97
SB	1.5%	0.82
TOTAL	1.8%	0.91

Two-Hour Count Summaries

Interval Start	Driveway Eastbound				Oak Grove Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	7	0	1	0	0	107	15	0	7	101	0	238	0
7:15 AM	0	0	0	0	0	16	0	6	0	0	139	17	0	4	138	0	320	0
7:30 AM	0	0	0	0	0	23	0	16	0	0	209	28	0	28	178	0	482	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**32**	**0**	**22**	**0**	**0**	**249**	**22**	**0**	**25**	**304**	**0**	**654**	1,694
8:00 AM	**0**	**0**	**0**	**0**	**0**	**33**	**0**	**20**	**0**	**0**	**238**	**27**	**0**	**6**	**216**	**0**	**540**	1,996
8:15 AM	**0**	**0**	**0**	**0**	**0**	**41**	**0**	**25**	**0**	**0**	**240**	**32**	**0**	**6**	**229**	**0**	**573**	2,249
8:30 AM	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**30**	**0**	**0**	**220**	**26**	**0**	**12**	**287**	**0**	**615**	**2,382**
8:45 AM	0	0	0	0	0	29	0	15	0	0	194	25	0	18	230	0	511	2,239
Count Total	0	0	0	0	0	221	0	135	0	0	1,596	192	0	106	1,683	0	3,933	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**146**	**0**	**97**	**0**	**0**	**947**	**107**	**0**	**49**	**1,036**	**0**	**2,382**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**1**	**0**	**2**	**14**	**0**	**42**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**0%**	**-**	**-**	**3%**	**1%**	**-**	**4%**	**1%**	**-**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	1	2	5	*8*	0	0	0	2	*2*	5	0	2	2	*9*
7:15 AM	0	1	4	3	*8*	0	0	0	0	*0*	4	2	1	2	*9*
7:30 AM	0	0	4	7	*11*	0	0	0	0	*0*	4	4	4	1	*13*
7:45 AM	**0**	**0**	**5**	**3**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**6**	**1**	**1**	*9*
8:00 AM	**0**	**0**	**6**	**7**	***13***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**5**	**0**	*7*
8:15 AM	**0**	**0**	**9**	**2**	***11***	**0**	**0**	**0**	**0**	***0***	**44**	**2**	**11**	**0**	*57*
8:30 AM	**0**	**0**	**6**	**4**	***10***	**0**	**0**	**0**	**0**	***0***	**20**	**4**	**13**	**3**	***40***
8:45 AM	0	0	8	3	*11*	0	0	0	0	*0*	10	1	3	0	*14*
Count Total	0	2	44	34	*80*	0	0	0	2	*2*	90	19	40	9	*158*
Peak Hour	**0**	**0**	**26**	**16**	***42***	**0**	**0**	**0**	**0**	***0***	**67**	**12**	**30**	**4**	***113***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Oak Grove				El Camino Real				El Camino Real				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	5	0	8	0
7:15 AM	0	0	0	0	0	1	0	0	0	0	4	0	0	0	3	0	8	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	3	1	0	1	6	0	11	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**1**	**2**	**0**	**8**	35
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**0**	**13**	40
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**2**	**0**	**11**	43
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**3**	**0**	**10**	**42**
8:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	1	2	0	11	45
Count Total	0	0	0	0	0	2	0	0	0	0	42	2	0	4	30	0	80	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**1**	**0**	**2**	**14**	**0**	**42**	**0**

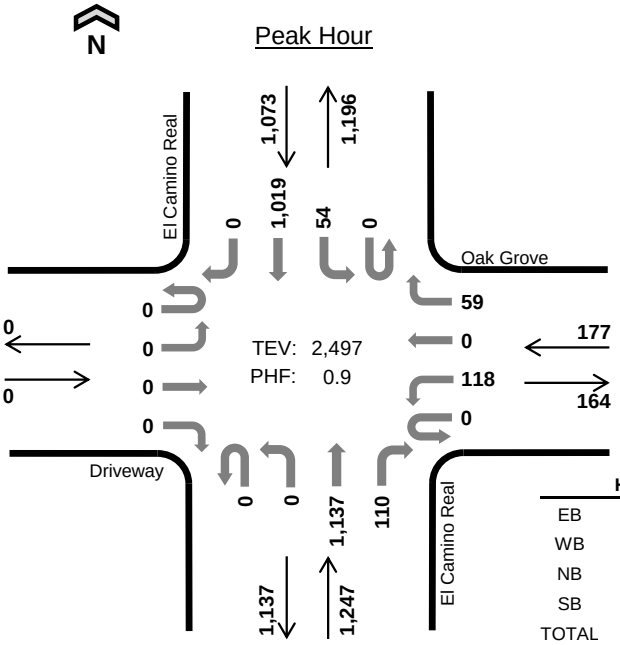
Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Oak Grove			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	2	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

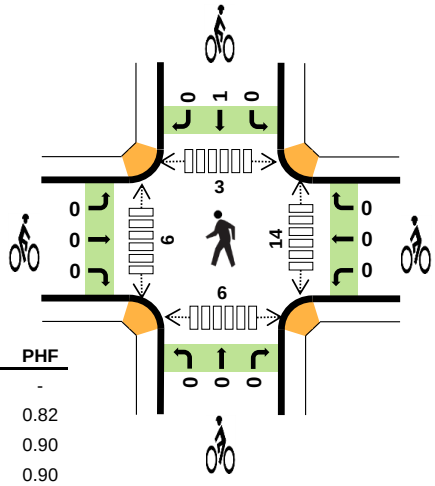
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Oak Grove

Date: 01-11-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	-	-
WB	0.6%	0.82
NB	0.6%	0.90
SB	0.7%	0.90
TOTAL	0.6%	0.90



Two-Hour Count Summaries

Interval Start	Driveway Eastbound				Oak Grove Westbound				El Camino Real Northbound				El Camino Real Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	25	0	5	0	0	276	22	0	15	230	0	573	0
4:15 PM	0	0	0	0	0	14	0	14	0	0	233	26	0	14	229	0	530	0
4:30 PM	0	0	0	0	0	18	0	9	0	0	266	31	0	17	193	0	534	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**29**	**0**	**10**	**0**	**0**	**275**	**27**	**0**	**12**	**247**	**0**	**600**	2,237
5:00 PM	**0**	**0**	**0**	**0**	**0**	**31**	**0**	**23**	**0**	**0**	**263**	**34**	**0**	**16**	**245**	**0**	**612**	2,276
5:15 PM	**0**	**0**	**0**	**0**	**0**	**29**	**0**	**19**	**0**	**0**	**320**	**25**	**0**	**15**	**282**	**0**	**690**	2,436
5:30 PM	**0**	**0**	**0**	**0**	**0**	**29**	**0**	**7**	**0**	**0**	**279**	**24**	**0**	**11**	**245**	**0**	**595**	**2,497**
5:45 PM	0	0	0	0	0	25	1	14	0	0	290	18	0	15	235	0	598	2,495
Count Total	0	0	0	0	0	200	1	101	0	0	2,202	207	0	115	1,906	0	4,732	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**118**	**0**	**59**	**0**	**0**	**1,137**	**110**	**0**	**54**	**1,019**	**0**	**2,497**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**7**	**0**	**16**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**1%**	**-**	**0%**	**-**	**-**	**1%**	**0%**	**-**	**0%**	**1%**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	2	3	*5*	0	0	0	0	*0*	6	1	0	1	*8*
4:15 PM	0	0	4	1	*5*	0	0	0	0	*0*	5	1	0	0	*6*
4:30 PM	0	1	1	5	*7*	0	0	0	0	*0*	6	3	5	2	*16*
4:45 PM	**0**	**0**	**2**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**7**	**3**	**0**	**1**	*11*
5:00 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**2**	**1**	*6*
5:15 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**0**	**2**	*6*
5:30 PM	**0**	**1**	**4**	**1**	***6***	**0**	**0**	**0**	**1**	***1***	**2**	**1**	**1**	**2**	***6***
5:45 PM	0	0	2	3	*5*	0	0	0	0	*0*	0	5	1	5	*11*
Count Total	0	2	17	19	*38*	0	0	0	1	*1*	31	16	9	14	*70*
Peak Hour	**0**	**1**	**8**	**7**	***16***	**0**	**0**	**0**	**1**	***1***	**14**	**6**	**3**	**6**	***29***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Oak Grove				El Camino Real				El Camino Real				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	7	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**5**	22
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	19
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	17
5:30 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**6**	**16**
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	16
Count Total	0	0	0	0	0	1	0	1	0	0	17	0	0	0	19	0	38	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**7**	**0**	**16**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Oak Grove			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix B
Level of Service Calculations

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	307	148	127	11	150	7	72	71	24	12	104	176
Future Vol, veh/h	307	148	127	11	150	7	72	71	24	12	104	176
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	307	148	127	11	150	7	72	71	24	12	104	176
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	16.4	13.3	13.8	11.9
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	7%	10%	0%
Vol Thru, %	43%	0%	54%	89%	90%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	307	275	168	116	176
LT Vol	72	307	0	11	12	0
Through Vol	71	0	148	150	104	0
RT Vol	24	0	127	7	0	176
Lane Flow Rate	167	307	275	168	116	176
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.332	0.582	0.458	0.323	0.227	0.307
Departure Headway (Hd)	7.155	6.826	5.99	6.927	7.056	6.289
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	525	597	516	506	567
Service Time	5.248	4.598	3.762	5.019	4.844	4.076
HCM Lane V/C Ratio	0.335	0.585	0.461	0.326	0.229	0.31
HCM Control Delay	13.8	18.8	13.8	13.3	11.9	11.9
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.4	3.7	2.4	1.4	0.9	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	248	31	124	94	94	12	537	282	116	650	52
Future Volume (veh/h)	22	248	31	124	94	94	12	537	282	116	650	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	248	31	124	94	94	12	537	0	116	650	25
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	378	47	341	164	164	63	871	390	184	1112	498
Arrive On Green	0.23	0.23	0.20	0.19	0.19	0.16	0.04	0.25	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1624	203	1774	856	856	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	279	124	0	188	12	537	0	116	650	25
Grp Sat Flow(s),veh/h/ln	1774	0	1827	1774	0	1712	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	7.4	3.2	0.0	5.3	0.3	7.2	0.0	3.3	8.2	0.6
Cycle Q Clear(g_c), s	0.5	0.0	7.4	3.2	0.0	5.3	0.3	7.2	0.0	3.3	8.2	0.6
Prop In Lane	1.00		0.11	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	413	0	425	341	0	329	63	871	390	184	1112	498
V/C Ratio(X)	0.05	0.00	0.66	0.36	0.00	0.57	0.19	0.62	0.00	0.63	0.58	0.05
Avail Cap(c_a), veh/h	951	0	979	951	0	918	117	1365	611	184	1498	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	18.6	18.7	0.0	19.9	24.9	17.8	0.0	22.9	15.3	12.7
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.7	0.0	1.6	1.5	0.7	0.0	6.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.9	1.6	0.0	2.7	0.2	3.6	0.0	2.0	4.0	0.3
LnGrp Delay(d),s/veh	15.9	0.0	20.3	19.3	0.0	21.4	26.4	18.5	0.0	29.7	15.8	12.7
LnGrp LOS	B		C	B		C	C	B		C	B	B
Approach Vol, veh/h		301			312			549			791	
Approach Delay, s/veh		20.0			20.6			18.7			17.7	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.1		15.4	4.9	19.7		13.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.3	9.2		9.4	2.3	10.2		7.3
Green Ext Time (p_c), s	0.0	2.4		1.6	0.0	3.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	218	44	14	173	47	51
Future Vol, veh/h	218	44	14	173	47	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	218	44	14	173	47	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	262	0	441	240
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	201	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1302	-	574	799
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	833	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1302	-	567	799
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	668	-	-	1302	-
HCM Lane V/C Ratio	0.147	-	-	0.011	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	149	99	966	109	50	1057
Future Volume (veh/h)	149	99	966	109	50	1057
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	149	99	966	109	50	1057
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	661	590	1555	175	98	1489
Arrive On Green	0.37	0.37	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1774	1583	3300	362	73	3157
Grp Volume(v), veh/h	149	99	533	542	562	545
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1799	1535	1610
Q Serve(g_s), s	3.6	2.6	14.0	14.0	4.5	16.6
Cycle Q Clear(g_c), s	3.6	2.6	14.0	14.0	18.6	16.6
Prop In Lane	1.00	1.00		0.20	0.09	
Lane Grp Cap(c), veh/h	661	590	858	872	806	781
V/C Ratio(X)	0.23	0.17	0.62	0.62	0.70	0.70
Avail Cap(c_a), veh/h	661	590	1613	1640	1454	1468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	13.2	12.0	12.0	12.4	12.7
Incr Delay (d2), s/veh	0.8	0.6	0.7	0.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.3	7.0	7.1	8.1	7.5
LnGrp Delay(d),s/veh	14.3	13.9	12.7	12.7	13.5	13.8
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	248		1075			1107
Approach Delay, s/veh	14.2		12.7			13.7
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				35.1		28.0		35.1
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				57.5		23.5		57.5
Max Q Clear Time (g_c+I1), s				20.6		5.6		16.0
Green Ext Time (p_c), s				10.0		0.7		9.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	184
Future Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	184
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	214	130	47	23	137	21	35	84	42	20	104	184
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	12.8	12.9	12.6	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	22%	100%	0%	13%	16%	0%
Vol Thru, %	52%	0%	73%	76%	84%	0%
Vol Right, %	26%	0%	27%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	161	214	177	181	124	184
LT Vol	35	214	0	23	20	0
Through Vol	84	0	130	137	104	0
RT Vol	42	0	47	21	0	184
Lane Flow Rate	161	214	177	181	124	184
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.298	0.402	0.298	0.33	0.228	0.298
Departure Headway (Hd)	6.655	6.765	6.069	6.565	6.624	5.83
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	531	589	545	539	613
Service Time	4.731	4.529	3.832	4.638	4.392	3.597
HCM Lane V/C Ratio	0.299	0.403	0.301	0.332	0.23	0.3
HCM Control Delay	12.6	14	11.4	12.9	11.4	11.1
HCM Lane LOS	B	B	B	B	B	B
HCM 95th-tile Q	1.2	1.9	1.2	1.4	0.9	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	143	17	189	118	52	42	565	188	60	591	33
Future Volume (veh/h)	21	143	17	189	118	52	42	565	188	60	591	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	143	17	189	118	52	42	565	19	60	591	6
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	269	32	367	254	112	109	995	445	132	1041	466
Arrive On Green	0.16	0.16	0.13	0.21	0.21	0.17	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1634	194	1774	1227	541	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	0	160	189	0	170	42	565	19	60	591	6
Grp Sat Flow(s),veh/h/ln	1774	0	1828	1774	0	1767	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.0	3.5	4.2	0.0	3.7	1.0	6.0	0.4	1.4	6.2	0.1
Cycle Q Clear(g_c), s	0.4	0.0	3.5	4.2	0.0	3.7	1.0	6.0	0.4	1.4	6.2	0.1
Prop In Lane	1.00		0.11	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	0	301	367	0	366	109	995	445	132	1041	466
V/C Ratio(X)	0.07	0.00	0.53	0.51	0.00	0.46	0.39	0.57	0.04	0.45	0.57	0.01
Avail Cap(c_a), veh/h	1149	0	1184	1149	0	1145	141	1689	756	202	1809	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	16.9	15.5	0.0	15.5	19.9	13.5	11.5	19.5	13.2	11.0
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.1	0.0	0.9	2.2	0.5	0.0	2.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.9	2.2	0.0	1.9	0.6	3.0	0.2	0.8	3.1	0.1
LnGrp Delay(d),s/veh	15.6	0.0	18.4	16.6	0.0	16.4	22.1	14.0	11.5	21.9	13.6	11.0
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		181			359			626			657	
Approach Delay, s/veh		18.0			16.5			14.5			14.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	15.4		10.2	5.7	15.9		12.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.4	8.0		5.5	3.0	8.2		6.2
Green Ext Time (p_c), s	0.0	2.9		0.9	0.0	3.1		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	155	41	26	153	50	48
Future Vol, veh/h	155	41	26	153	50	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	155	41	26	153	50	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	196	0	381	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1377	-	621	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1377	-	608	867
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	812	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	712	-	-	1377	-
HCM Lane V/C Ratio	0.138	-	-	0.019	-
HCM Control Delay (s)	10.9	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	120	60	1160	112	55	1039
Future Volume (veh/h)	120	60	1160	112	55	1039
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	120	60	1160	112	55	1039
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	609	543	1695	163	97	1498
Arrive On Green	0.34	0.34	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	1583	3355	315	69	2968
Grp Volume(v), veh/h	120	60	628	644	541	553
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1807	1342	1610
Q Serve(g_s), s	3.1	1.7	17.3	17.4	4.6	16.5
Cycle Q Clear(g_c), s	3.1	1.7	17.3	17.4	22.0	16.5
Prop In Lane	1.00	1.00		0.17	0.10	
Lane Grp Cap(c), veh/h	609	543	919	939	758	837
V/C Ratio(X)	0.20	0.11	0.68	0.69	0.71	0.66
Avail Cap(c_a), veh/h	609	543	1579	1612	1278	1437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	14.7	11.7	11.8	11.3	11.5
Incr Delay (d2), s/veh	0.7	0.4	0.9	0.9	1.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	8.6	8.8	8.2	7.4
LnGrp Delay(d),s/veh	15.9	15.1	12.6	12.6	12.5	12.4
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	180		1272			1094
Approach Delay, s/veh	15.6		12.6			12.5
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.6		27.0		38.6
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				58.5		22.5		58.5
Max Q Clear Time (g_c+I1), s				24.0		5.1		19.4
Green Ext Time (p_c), s				10.0		0.4		11.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	15.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	311	149	127	11	152	7	72	71	24	16	107	209
Future Vol, veh/h	311	149	127	11	152	7	72	71	24	16	107	209
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	311	149	127	11	152	7	72	71	24	16	107	209
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.3	13.9	14.2	12.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	6%	13%	0%
Vol Thru, %	43%	0%	54%	89%	87%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	311	276	170	123	209
LT Vol	72	311	0	11	16	0
Through Vol	71	0	149	152	107	0
RT Vol	24	0	127	7	0	209
Lane Flow Rate	167	311	276	170	123	209
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.343	0.602	0.47	0.34	0.247	0.375
Departure Headway (Hd)	7.397	7.079	6.243	7.19	7.238	6.456
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	513	580	501	499	560
Service Time	5.419	4.779	3.943	5.22	4.938	4.156
HCM Lane V/C Ratio	0.342	0.606	0.476	0.339	0.246	0.373
HCM Control Delay	14.2	19.9	14.4	13.9	12.3	13
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.5	3.9	2.5	1.5	1	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	250	38	146	108	94	14	543	286	116	658	52
Future Volume (veh/h)	23	250	38	146	108	94	14	543	286	116	658	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	23	250	38	146	108	94	14	543	0	116	658	25
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	420	374	57	354	184	160	64	866	387	178	1094	490
Arrive On Green	0.24	0.24	0.21	0.20	0.20	0.17	0.04	0.24	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1580	240	1774	920	801	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	23	0	288	146	0	202	14	543	0	116	658	25
Grp Sat Flow(s),veh/h/ln	1774	0	1820	1774	0	1721	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	7.9	3.9	0.0	5.9	0.4	7.5	0.0	3.4	8.6	0.6
Cycle Q Clear(g_c), s	0.5	0.0	7.9	3.9	0.0	5.9	0.4	7.5	0.0	3.4	8.6	0.6
Prop In Lane	1.00		0.13	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	420	0	430	354	0	343	64	866	387	178	1094	490
V/C Ratio(X)	0.05	0.00	0.67	0.41	0.00	0.59	0.22	0.63	0.00	0.65	0.60	0.05
Avail Cap(c_a), veh/h	923	0	947	923	0	896	113	1325	593	178	1454	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.1	19.1	0.0	20.2	25.7	18.5	0.0	23.7	16.1	13.3
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.8	0.0	1.6	1.7	0.8	0.0	8.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.1	2.0	0.0	2.9	0.2	3.7	0.0	2.1	4.3	0.3
LnGrp Delay(d),s/veh	16.2	0.0	20.9	19.9	0.0	21.8	27.4	19.2	0.0	31.8	16.6	13.3
LnGrp LOS	B		C	B		C	C	B		C	B	B
Approach Vol, veh/h		311			348			557			799	
Approach Delay, s/veh		20.5			21.0			19.4			18.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.4		16.0	5.0	19.9		13.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.4	9.5		9.9	2.4	10.6		7.9
Green Ext Time (p_c), s	0.0	2.4		1.7	0.0	3.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	228	44	14	189	47	51
Future Vol, veh/h	228	44	14	189	47	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	228	44	14	189	47	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	272	0	467	250
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	217	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1291	-	554	789
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	819	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1291	-	547	789
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	809	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	651	-	-	1291	-
HCM Lane V/C Ratio	0.151	-	-	0.011	-
HCM Control Delay (s)	11.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	159	105	975	110	57	1065
Future Volume (veh/h)	159	105	975	110	57	1065
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	159	105	975	110	57	1065
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	642	573	1601	181	103	1497
Arrive On Green	0.36	0.36	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1774	1583	3300	362	84	3083
Grp Volume(v), veh/h	159	105	538	547	563	559
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1799	1471	1610
Q Serve(g_s), s	4.1	2.9	14.2	14.2	6.0	17.3
Cycle Q Clear(g_c), s	4.1	2.9	14.2	14.2	20.2	17.3
Prop In Lane	1.00	1.00		0.20	0.10	
Lane Grp Cap(c), veh/h	642	573	884	898	796	804
V/C Ratio(X)	0.25	0.18	0.61	0.61	0.71	0.69
Avail Cap(c_a), veh/h	642	573	1567	1593	1366	1426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	14.2	11.7	11.7	12.3	12.5
Incr Delay (d2), s/veh	0.9	0.7	0.7	0.7	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.4	7.0	7.2	8.4	7.9
LnGrp Delay(d),s/veh	15.4	14.9	12.4	12.4	13.5	13.6
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	264		1085			1122
Approach Delay, s/veh	15.2		12.4			13.5
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				36.9		28.0		36.9
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				57.5		23.5		57.5
Max Q Clear Time (g_c+I1), s				22.2		6.1		16.2
Green Ext Time (p_c), s				10.2		0.7		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	194
Future Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	194
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	240	133	47	26	138	21	35	86	42	23	104	194
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.8	13.3	12.9	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	100%	0%	14%	18%	0%
Vol Thru, %	53%	0%	74%	75%	82%	0%
Vol Right, %	26%	0%	26%	11%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	240	180	185	127	194
LT Vol	35	240	0	26	23	0
Through Vol	86	0	133	138	104	0
RT Vol	42	0	47	21	0	194
Lane Flow Rate	163	240	180	185	127	194
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.308	0.456	0.308	0.344	0.238	0.321
Departure Headway (Hd)	6.8	6.845	6.151	6.693	6.756	5.951
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	523	581	535	528	599
Service Time	4.888	4.617	3.923	4.776	4.534	3.728
HCM Lane V/C Ratio	0.31	0.459	0.31	0.346	0.241	0.324
HCM Control Delay	12.9	15.3	11.7	13.3	11.7	11.6
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.3	2.4	1.3	1.5	0.9	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	152	21	199	121	52	50	576	208	60	599	33
Future Volume (veh/h)	21	152	21	199	121	52	50	576	208	60	599	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	152	21	199	121	52	50	576	39	60	599	6
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	276	38	372	259	111	117	1000	447	130	1026	459
Arrive On Green	0.17	0.17	0.14	0.21	0.21	0.18	0.07	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1602	221	1774	1237	532	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	21	0	173	199	0	173	50	576	39	60	599	6
Grp Sat Flow(s),veh/h/ln	1774	0	1824	1774	0	1769	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	4.0	4.6	0.0	3.9	1.2	6.4	0.8	1.5	6.6	0.1
Cycle Q Clear(g_c), s	0.5	0.0	4.0	4.6	0.0	3.9	1.2	6.4	0.8	1.5	6.6	0.1
Prop In Lane	1.00		0.12	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	314	372	0	371	117	1000	447	130	1026	459
V/C Ratio(X)	0.07	0.00	0.55	0.54	0.00	0.47	0.43	0.58	0.09	0.46	0.58	0.01
Avail Cap(c_a), veh/h	1105	0	1136	1105	0	1102	136	1624	727	194	1740	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	17.4	16.1	0.0	16.1	20.5	14.1	12.1	20.3	13.9	11.6
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.2	0.0	0.9	2.4	0.5	0.1	2.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.1	2.3	0.0	2.0	0.7	3.2	0.4	0.8	3.2	0.1
LnGrp Delay(d),s/veh	16.0	0.0	18.9	17.3	0.0	17.0	23.0	14.6	12.2	22.9	14.4	11.6
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		194			372			665			665	
Approach Delay, s/veh		18.6			17.1			15.1			15.2	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	15.9		10.9	6.0	16.3		12.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.5	8.4		6.0	3.2	8.6		6.6
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	3.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	168	41	26	164	50	48
Future Vol, veh/h	168	41	26	164	50	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	168	41	26	164	50	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	209	0	405	189
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1362	-	602	853
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	820	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1362	-	589	853
Mov Cap-2 Maneuver	-	-	-	-	589	-
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	803	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	694	-	-	1362	-
HCM Lane V/C Ratio	0.141	-	-	0.019	-
HCM Control Delay (s)	11	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	122	69	1171	118	62	1049
Future Volume (veh/h)	122	69	1171	118	62	1049
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	122	69	1171	118	62	1049
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	588	525	1740	175	101	1505
Arrive On Green	0.33	0.33	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1774	1583	3341	327	79	2894
Grp Volume(v), veh/h	122	69	637	652	540	571
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1805	1278	1610
Q Serve(g_s), s	3.4	2.1	17.7	17.8	6.3	17.3
Cycle Q Clear(g_c), s	3.4	2.1	17.7	17.8	24.1	17.3
Prop In Lane	1.00	1.00		0.18	0.11	
Lane Grp Cap(c), veh/h	588	525	948	967	744	863
V/C Ratio(X)	0.21	0.13	0.67	0.67	0.73	0.66
Avail Cap(c_a), veh/h	588	525	1525	1556	1182	1388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	15.9	11.4	11.4	11.3	11.3
Incr Delay (d2), s/veh	0.8	0.5	0.8	0.8	1.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.0	8.7	8.9	8.5	7.8
LnGrp Delay(d),s/veh	17.1	16.4	12.3	12.3	12.6	12.2
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	191		1289			1111
Approach Delay, s/veh	16.8		12.3			12.4
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				40.9		27.0		40.9
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				58.5		22.5		58.5
Max Q Clear Time (g_c+I1), s				26.1		5.4		19.8
Green Ext Time (p_c), s				10.2		0.5		12.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.7
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	308	148	127	11	150	7	72	71	24	12	104	176
Future Vol, veh/h	308	148	127	11	150	7	72	71	24	12	104	176
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	308	148	127	11	150	7	72	71	24	12	104	176
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	16.4	13.3	13.8	11.9
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	7%	10%	0%
Vol Thru, %	43%	0%	54%	89%	90%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	308	275	168	116	176
LT Vol	72	308	0	11	12	0
Through Vol	71	0	148	150	104	0
RT Vol	24	0	127	7	0	176
Lane Flow Rate	167	308	275	168	116	176
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.332	0.584	0.458	0.323	0.227	0.308
Departure Headway (Hd)	7.157	6.826	5.99	6.929	7.059	6.292
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	527	597	516	506	567
Service Time	5.251	4.6	3.763	5.022	4.847	4.079
HCM Lane V/C Ratio	0.335	0.584	0.461	0.326	0.229	0.31
HCM Control Delay	13.8	18.8	13.8	13.3	11.9	11.9
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.4	3.7	2.4	1.4	0.9	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	249	34	124	94	94	13	537	282	116	650	53
Future Volume (veh/h)	24	249	34	124	94	94	13	537	282	116	650	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	24	249	34	124	94	94	13	537	0	116	650	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	377	52	340	164	164	64	870	389	183	1107	495
Arrive On Green	0.24	0.24	0.21	0.19	0.19	0.16	0.04	0.25	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1605	219	1774	856	856	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	24	0	283	124	0	188	13	537	0	116	650	26
Grp Sat Flow(s),veh/h/ln	1774	0	1824	1774	0	1712	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.0	7.5	3.2	0.0	5.4	0.4	7.2	0.0	3.4	8.3	0.6
Cycle Q Clear(g_c), s	0.6	0.0	7.5	3.2	0.0	5.4	0.4	7.2	0.0	3.4	8.3	0.6
Prop In Lane	1.00		0.12	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	429	340	0	328	64	870	389	183	1107	495
V/C Ratio(X)	0.06	0.00	0.66	0.36	0.00	0.57	0.20	0.62	0.00	0.64	0.59	0.05
Avail Cap(c_a), veh/h	947	0	973	947	0	913	116	1358	608	183	1491	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	18.6	18.8	0.0	20.0	25.0	17.9	0.0	23.0	15.5	12.8
Incr Delay (d2), s/veh	0.1	0.0	1.7	0.7	0.0	1.6	1.6	0.7	0.0	7.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.0	1.6	0.0	2.7	0.2	3.6	0.0	2.0	4.0	0.3
LnGrp Delay(d),s/veh	15.9	0.0	20.3	19.4	0.0	21.5	26.6	18.6	0.0	30.0	16.0	12.9
LnGrp LOS	B		C	B		C	C	B		C	B	B
Approach Vol, veh/h		307			312			550			792	
Approach Delay, s/veh		20.0			20.7			18.8			17.9	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.1		15.6	4.9	19.7		13.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.4	9.2		9.5	2.4	10.3		7.4
Green Ext Time (p_c), s	0.0	2.4		1.7	0.0	3.2		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	219	44	14	177	47	51
Future Vol, veh/h	219	44	14	177	47	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	219	44	14	177	47	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	263	0	446	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1301	-	570	798
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1301	-	563	798
Mov Cap-2 Maneuver	-	-	-	-	563	-
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	819	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	665	-	-	1301	-
HCM Lane V/C Ratio	0.147	-	-	0.011	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	151	101	966	109	51	1057
Future Volume (veh/h)	151	101	966	109	51	1057
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	151	101	966	109	51	1057
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	659	588	1560	176	98	1489
Arrive On Green	0.37	0.37	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1774	1583	3300	362	75	3147
Grp Volume(v), veh/h	151	101	533	542	562	546
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1799	1526	1610
Q Serve(g_s), s	3.7	2.7	14.0	14.0	4.7	16.7
Cycle Q Clear(g_c), s	3.7	2.7	14.0	14.0	18.7	16.7
Prop In Lane	1.00	1.00		0.20	0.09	
Lane Grp Cap(c), veh/h	659	588	861	875	804	783
V/C Ratio(X)	0.23	0.17	0.62	0.62	0.70	0.70
Avail Cap(c_a), veh/h	659	588	1608	1635	1442	1463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	13.4	11.9	11.9	12.4	12.6
Incr Delay (d2), s/veh	0.8	0.6	0.7	0.7	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	1.3	7.0	7.1	8.1	7.5
LnGrp Delay(d),s/veh	14.5	14.0	12.7	12.7	13.5	13.8
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	252		1075			1108
Approach Delay, s/veh	14.3		12.7			13.6
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				35.3		28.0		35.3
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				57.5		23.5		57.5
Max Q Clear Time (g_c+I1), s				20.7		5.7		16.0
Green Ext Time (p_c), s				10.0		0.7		9.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	185
Future Vol, veh/h	214	130	47	23	137	21	35	84	42	20	104	185
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	214	130	47	23	137	21	35	84	42	20	104	185
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	12.8	12.9	12.6	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	22%	100%	0%	13%	16%	0%
Vol Thru, %	52%	0%	73%	76%	84%	0%
Vol Right, %	26%	0%	27%	12%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	161	214	177	181	124	185
LT Vol	35	214	0	23	20	0
Through Vol	84	0	130	137	104	0
RT Vol	42	0	47	21	0	185
Lane Flow Rate	161	214	177	181	124	185
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.298	0.402	0.299	0.33	0.228	0.3
Departure Headway (Hd)	6.657	6.768	6.072	6.569	6.624	5.83
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	531	589	545	539	612
Service Time	4.734	4.532	3.835	4.643	4.393	3.599
HCM Lane V/C Ratio	0.299	0.403	0.301	0.332	0.23	0.302
HCM Control Delay	12.6	14	11.4	12.9	11.4	11.1
HCM Lane LOS	B	B	B	B	B	B
HCM 95th-tile Q	1.2	1.9	1.2	1.4	0.9	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	143	18	189	119	52	45	565	188	60	591	35
Future Volume (veh/h)	22	143	18	189	119	52	45	565	188	60	591	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	143	18	189	119	52	45	565	19	60	591	8
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	269	34	367	254	111	113	996	446	132	1035	463
Arrive On Green	0.17	0.17	0.13	0.21	0.21	0.17	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1622	204	1774	1230	538	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	161	189	0	171	45	565	19	60	591	8
Grp Sat Flow(s),veh/h/ln	1774	0	1827	1774	0	1768	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	3.6	4.2	0.0	3.8	1.1	6.0	0.4	1.4	6.3	0.2
Cycle Q Clear(g_c), s	0.5	0.0	3.6	4.2	0.0	3.8	1.1	6.0	0.4	1.4	6.3	0.2
Prop In Lane	1.00		0.11	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	0	302	367	0	366	113	996	446	132	1035	463
V/C Ratio(X)	0.07	0.00	0.53	0.52	0.00	0.47	0.40	0.57	0.04	0.45	0.57	0.02
Avail Cap(c_a), veh/h	1145	0	1179	1145	0	1141	141	1683	753	201	1803	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	0.0	16.9	15.5	0.0	15.6	19.9	13.6	11.5	19.6	13.3	11.1
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.1	0.0	0.9	2.3	0.5	0.0	2.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.9	2.2	0.0	1.9	0.6	3.0	0.2	0.8	3.1	0.1
LnGrp Delay(d),s/veh	15.7	0.0	18.4	16.7	0.0	16.5	22.1	14.1	11.6	22.0	13.8	11.1
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		183			360			629			659	
Approach Delay, s/veh		18.1			16.6			14.6			14.5	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	15.4		10.3	5.8	15.9		12.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.4	8.0		5.6	3.1	8.3		6.2
Green Ext Time (p_c), s	0.0	2.9		0.9	0.0	3.1		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	159	41	26	155	50	48
Future Vol, veh/h	159	41	26	155	50	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	159	41	26	155	50	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	200	0	387	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1372	-	616	863
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1372	-	603	863
Mov Cap-2 Maneuver	-	-	-	-	603	-
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	811	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	707	-	-	1372	-
HCM Lane V/C Ratio	0.139	-	-	0.019	-
HCM Control Delay (s)	10.9	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	121	61	1160	114	57	1039
Future Volume (veh/h)	121	61	1160	114	57	1039
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	121	61	1160	114	57	1039
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	604	539	1704	167	98	1498
Arrive On Green	0.34	0.34	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	1583	3350	320	72	2947
Grp Volume(v), veh/h	121	61	630	644	539	557
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1806	1324	1610
Q Serve(g_s), s	3.2	1.7	17.4	17.5	5.0	16.7
Cycle Q Clear(g_c), s	3.2	1.7	17.4	17.5	22.5	16.7
Prop In Lane	1.00	1.00		0.18	0.11	
Lane Grp Cap(c), veh/h	604	539	926	945	753	843
V/C Ratio(X)	0.20	0.11	0.68	0.68	0.72	0.66
Avail Cap(c_a), veh/h	604	539	1567	1599	1253	1426
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.4	14.9	11.7	11.7	11.3	11.5
Incr Delay (d2), s/veh	0.7	0.4	0.9	0.9	1.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.8	8.6	8.8	8.2	7.5
LnGrp Delay(d),s/veh	16.2	15.4	12.5	12.6	12.6	12.4
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	182		1274			1096
Approach Delay, s/veh	15.9		12.5			12.5
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				39.1		27.0		39.1
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				58.5		22.5		58.5
Max Q Clear Time (g_c+I1), s				24.5		5.2		19.5
Green Ext Time (p_c), s				10.1		0.5		11.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	312	149	127	11	152	7	72	71	24	16	107	209
Future Vol, veh/h	312	149	127	11	152	7	72	71	24	16	107	209
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	312	149	127	11	152	7	72	71	24	16	107	209
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.4	13.9	14.2	12.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	6%	13%	0%
Vol Thru, %	43%	0%	54%	89%	87%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	312	276	170	123	209
LT Vol	72	312	0	11	16	0
Through Vol	71	0	149	152	107	0
RT Vol	24	0	127	7	0	209
Lane Flow Rate	167	312	276	170	123	209
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.343	0.604	0.47	0.34	0.247	0.375
Departure Headway (Hd)	7.4	7.079	6.243	7.192	7.24	6.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	488	512	580	501	499	560
Service Time	5.422	4.779	3.943	5.221	4.94	4.158
HCM Lane V/C Ratio	0.342	0.609	0.476	0.339	0.246	0.373
HCM Control Delay	14.2	20	14.4	13.9	12.3	13
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.5	4	2.5	1.5	1	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	251	41	146	108	94	15	543	286	116	658	53
Future Volume (veh/h)	25	251	41	146	108	94	15	543	286	116	658	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	25	251	41	146	108	94	15	543	0	116	658	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	373	61	353	183	159	65	864	387	177	1089	487
Arrive On Green	0.24	0.24	0.21	0.20	0.20	0.17	0.04	0.24	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1562	255	1774	920	801	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	25	0	292	146	0	202	15	543	0	116	658	26
Grp Sat Flow(s),veh/h/ln	1774	0	1818	1774	0	1721	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.0	8.0	4.0	0.0	5.9	0.5	7.5	0.0	3.5	8.7	0.6
Cycle Q Clear(g_c), s	0.6	0.0	8.0	4.0	0.0	5.9	0.5	7.5	0.0	3.5	8.7	0.6
Prop In Lane	1.00		0.14	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	0	434	353	0	343	65	864	387	177	1089	487
V/C Ratio(X)	0.06	0.00	0.67	0.41	0.00	0.59	0.23	0.63	0.00	0.65	0.60	0.05
Avail Cap(c_a), veh/h	919	0	941	919	0	891	113	1318	590	177	1447	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.1	19.2	0.0	20.3	25.8	18.6	0.0	23.9	16.2	13.4
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.8	0.0	1.6	1.8	0.8	0.0	8.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.2	2.0	0.0	2.9	0.3	3.8	0.0	2.1	4.3	0.3
LnGrp Delay(d),s/veh	16.2	0.0	20.9	20.0	0.0	22.0	27.6	19.3	0.0	32.2	16.7	13.5
LnGrp LOS	B		C	C		C	C	B		C	B	B
Approach Vol, veh/h		317			348			558			800	
Approach Delay, s/veh		20.5			21.1			19.6			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.4		16.1	5.0	19.9		14.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.5	9.5		10.0	2.5	10.7		7.9
Green Ext Time (p_c), s	0.0	2.4		1.7	0.0	3.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	229	44	14	193	47	51
Future Vol, veh/h	229	44	14	193	47	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	229	44	14	193	47	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	273	0	472	251
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	221	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1290	-	551	788
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1290	-	544	788
Mov Cap-2 Maneuver	-	-	-	-	544	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	806	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	649	-	-	1290	-
HCM Lane V/C Ratio	0.151	-	-	0.011	-
HCM Control Delay (s)	11.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	161	107	975	110	58	1065
Future Volume (veh/h)	161	107	975	110	58	1065
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	161	107	975	110	58	1065
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	640	571	1607	181	104	1497
Arrive On Green	0.36	0.36	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1774	1583	3300	362	86	3073
Grp Volume(v), veh/h	161	107	538	547	563	560
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1799	1463	1610
Q Serve(g_s), s	4.2	3.0	14.2	14.2	6.2	17.3
Cycle Q Clear(g_c), s	4.2	3.0	14.2	14.2	20.4	17.3
Prop In Lane	1.00	1.00		0.20	0.10	
Lane Grp Cap(c), veh/h	640	571	887	901	794	807
V/C Ratio(X)	0.25	0.19	0.61	0.61	0.71	0.69
Avail Cap(c_a), veh/h	640	571	1562	1588	1355	1422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	14.3	11.7	11.7	12.3	12.4
Incr Delay (d2), s/veh	0.9	0.7	0.7	0.7	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.4	7.0	7.2	8.4	7.9
LnGrp Delay(d),s/veh	15.6	15.0	12.3	12.3	13.5	13.5
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	268		1085			1123
Approach Delay, s/veh	15.3		12.3			13.5
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.1		28.0		37.1
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				57.5		23.5		57.5
Max Q Clear Time (g_c+I1), s				22.4		6.2		16.2
Green Ext Time (p_c), s				10.2		0.7		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	195
Future Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	195
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	240	133	47	26	138	21	35	86	42	23	104	195
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.8	13.3	12.9	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	100%	0%	14%	18%	0%
Vol Thru, %	53%	0%	74%	75%	82%	0%
Vol Right, %	26%	0%	26%	11%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	240	180	185	127	195
LT Vol	35	240	0	26	23	0
Through Vol	86	0	133	138	104	0
RT Vol	42	0	47	21	0	195
Lane Flow Rate	163	240	180	185	127	195
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.308	0.457	0.308	0.344	0.238	0.322
Departure Headway (Hd)	6.803	6.848	6.154	6.696	6.756	5.951
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	523	581	535	528	601
Service Time	4.89	4.619	3.924	4.779	4.535	3.73
HCM Lane V/C Ratio	0.31	0.459	0.31	0.346	0.241	0.324
HCM Control Delay	12.9	15.3	11.7	13.3	11.7	11.6
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.3	2.4	1.3	1.5	0.9	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	152	22	199	122	52	53	576	208	60	599	35
Future Volume (veh/h)	22	152	22	199	122	52	53	576	208	60	599	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	152	22	199	122	52	53	576	39	60	599	8
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	275	40	371	259	111	121	1005	450	130	1023	458
Arrive On Green	0.17	0.17	0.14	0.21	0.21	0.18	0.07	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1592	230	1774	1241	529	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	174	199	0	174	53	576	39	60	599	8
Grp Sat Flow(s),veh/h/ln	1774	0	1822	1774	0	1769	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	4.0	4.6	0.0	4.0	1.3	6.4	0.8	1.5	6.7	0.2
Cycle Q Clear(g_c), s	0.5	0.0	4.0	4.6	0.0	4.0	1.3	6.4	0.8	1.5	6.7	0.2
Prop In Lane	1.00		0.13	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	0	315	371	0	370	121	1005	450	130	1023	458
V/C Ratio(X)	0.07	0.00	0.55	0.54	0.00	0.47	0.44	0.57	0.09	0.46	0.59	0.02
Avail Cap(c_a), veh/h	1098	0	1128	1098	0	1096	135	1615	722	193	1730	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	17.5	16.2	0.0	16.2	20.6	14.1	12.1	20.5	14.0	11.7
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.2	0.0	0.9	2.5	0.5	0.1	2.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.2	2.3	0.0	2.0	0.7	3.2	0.4	0.8	3.3	0.1
LnGrp Delay(d),s/veh	16.0	0.0	19.0	17.4	0.0	17.1	23.1	14.6	12.2	23.0	14.5	11.7
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		196			373			668			667	
Approach Delay, s/veh		18.7			17.3			15.1			15.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	16.1		11.0	6.1	16.3		12.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.5	8.4		6.0	3.3	8.7		6.6
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	3.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	172	41	26	166	50	48
Future Vol, veh/h	172	41	26	166	50	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	172	41	26	166	50	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	213	0	411	193
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	218	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1357	-	597	849
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1357	-	584	849
Mov Cap-2 Maneuver	-	-	-	-	584	-
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	801	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	689	-	-	1357	-
HCM Lane V/C Ratio	0.142	-	-	0.019	-
HCM Control Delay (s)	11.1	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	70	1171	120	64	1049
Future Volume (veh/h)	123	70	1171	120	64	1049
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	123	70	1171	120	64	1049
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	584	521	1749	179	103	1505
Arrive On Green	0.33	0.33	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1774	1583	3335	332	82	2874
Grp Volume(v), veh/h	123	70	638	653	538	575
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1804	1260	1610
Q Serve(g_s), s	3.4	2.1	17.8	17.9	6.8	17.5
Cycle Q Clear(g_c), s	3.4	2.1	17.8	17.9	24.6	17.5
Prop In Lane	1.00	1.00		0.18	0.12	
Lane Grp Cap(c), veh/h	584	521	955	973	739	869
V/C Ratio(X)	0.21	0.13	0.67	0.67	0.73	0.66
Avail Cap(c_a), veh/h	584	521	1513	1543	1158	1377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	16.1	11.3	11.4	11.3	11.3
Incr Delay (d2), s/veh	0.8	0.5	0.8	0.8	1.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.0	8.7	8.9	8.5	7.9
LnGrp Delay(d),s/veh	17.4	16.7	12.2	12.2	12.7	12.2
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	193		1291			1113
Approach Delay, s/veh	17.1		12.2			12.4
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				41.4		27.0		41.4
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				58.5		22.5		58.5
Max Q Clear Time (g_c+I1), s				26.6		5.4		19.9
Green Ext Time (p_c), s				10.3		0.5		12.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	313	149	127	11	152	7	72	71	24	16	107	209
Future Vol, veh/h	313	149	127	11	152	7	72	71	24	16	107	209
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	313	149	127	11	152	7	72	71	24	16	107	209
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	17.6	13.9	14.3	12.7
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	43%	100%	0%	6%	13%	0%
Vol Thru, %	43%	0%	54%	89%	87%	0%
Vol Right, %	14%	0%	46%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	313	276	170	123	209
LT Vol	72	313	0	11	16	0
Through Vol	71	0	149	152	107	0
RT Vol	24	0	127	7	0	209
Lane Flow Rate	167	313	276	170	123	209
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.343	0.614	0.478	0.34	0.247	0.375
Departure Headway (Hd)	7.403	7.065	6.229	7.196	7.243	6.461
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	486	513	580	500	498	558
Service Time	5.44	4.779	3.943	5.233	4.961	4.179
HCM Lane V/C Ratio	0.344	0.61	0.476	0.34	0.247	0.375
HCM Control Delay	14.3	20.4	14.5	13.9	12.3	13
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.5	4.1	2.6	1.5	1	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	251	41	146	108	94	15	544	287	116	658	53
Future Volume (veh/h)	25	251	41	146	108	94	15	544	287	116	658	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	25	251	41	146	108	94	15	544	0	116	658	26
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	373	61	353	183	159	65	865	387	177	1090	487
Arrive On Green	0.24	0.24	0.21	0.20	0.20	0.17	0.04	0.24	0.00	0.10	0.31	0.31
Sat Flow, veh/h	1774	1562	255	1774	920	801	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	25	0	292	146	0	202	15	544	0	116	658	26
Grp Sat Flow(s),veh/h/ln	1774	0	1818	1774	0	1721	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.0	8.0	4.0	0.0	5.9	0.5	7.6	0.0	3.5	8.7	0.6
Cycle Q Clear(g_c), s	0.6	0.0	8.0	4.0	0.0	5.9	0.5	7.6	0.0	3.5	8.7	0.6
Prop In Lane	1.00		0.14	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	424	0	434	353	0	343	65	865	387	177	1090	487
V/C Ratio(X)	0.06	0.00	0.67	0.41	0.00	0.59	0.23	0.63	0.00	0.65	0.60	0.05
Avail Cap(c_a), veh/h	918	0	941	918	0	891	113	1318	589	177	1446	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.1	19.3	0.0	20.3	25.8	18.6	0.0	23.9	16.2	13.4
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.8	0.0	1.6	1.8	0.8	0.0	8.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.2	2.0	0.0	2.9	0.3	3.8	0.0	2.1	4.3	0.3
LnGrp Delay(d),s/veh	16.2	0.0	20.9	20.0	0.0	22.0	27.6	19.3	0.0	32.2	16.7	13.5
LnGrp LOS	B		C	C		C	C	B		C	B	B
Approach Vol, veh/h		317			348			559			800	
Approach Delay, s/veh		20.6			21.2			19.6			18.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.5	16.5		16.2	5.0	20.0		14.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	4.0	19.0		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	5.5	9.6		10.0	2.5	10.7		7.9
Green Ext Time (p_c), s	0.0	2.4		1.7	0.0	3.2		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	229	44	14	193	47	51
Future Vol, veh/h	229	44	14	193	47	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	229	44	14	193	47	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	273	0	472	251
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	221	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1290	-	551	788
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1290	-	544	788
Mov Cap-2 Maneuver	-	-	-	-	544	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	806	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	649	-	-	1290	-
HCM Lane V/C Ratio	0.151	-	-	0.011	-
HCM Control Delay (s)	11.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	161	107	977	110	58	1065
Future Volume (veh/h)	161	107	977	110	58	1065
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	161	107	977	110	58	1065
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	640	571	1608	181	104	1497
Arrive On Green	0.36	0.36	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1774	1583	3301	361	85	3071
Grp Volume(v), veh/h	161	107	539	548	563	560
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1799	1462	1610
Q Serve(g_s), s	4.2	3.0	14.2	14.2	6.2	17.3
Cycle Q Clear(g_c), s	4.2	3.0	14.2	14.2	20.4	17.3
Prop In Lane	1.00	1.00		0.20	0.10	
Lane Grp Cap(c), veh/h	640	571	887	902	794	807
V/C Ratio(X)	0.25	0.19	0.61	0.61	0.71	0.69
Avail Cap(c_a), veh/h	640	571	1561	1587	1353	1421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	14.3	11.7	11.7	12.3	12.4
Incr Delay (d2), s/veh	0.9	0.7	0.7	0.7	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.4	7.1	7.2	8.4	7.9
LnGrp Delay(d),s/veh	15.6	15.0	12.3	12.3	13.5	13.5
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	268		1087			1123
Approach Delay, s/veh	15.4		12.3			13.5
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.2		28.0		37.2
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				57.5		23.5		57.5
Max Q Clear Time (g_c+I1), s				22.4		6.2		16.2
Green Ext Time (p_c), s				10.2		0.7		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	196
Future Vol, veh/h	240	133	47	26	138	21	35	86	42	23	104	196
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	240	133	47	26	138	21	35	86	42	23	104	196
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.8	13.3	12.9	11.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	21%	100%	0%	14%	18%	0%
Vol Thru, %	53%	0%	74%	75%	82%	0%
Vol Right, %	26%	0%	26%	11%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	163	240	180	185	127	196
LT Vol	35	240	0	26	23	0
Through Vol	86	0	133	138	104	0
RT Vol	42	0	47	21	0	196
Lane Flow Rate	163	240	180	185	127	196
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.308	0.457	0.308	0.344	0.238	0.324
Departure Headway (Hd)	6.807	6.852	6.159	6.7	6.758	5.953
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	523	581	533	528	600
Service Time	4.893	4.622	3.928	4.782	4.535	3.73
HCM Lane V/C Ratio	0.31	0.459	0.31	0.347	0.241	0.327
HCM Control Delay	12.9	15.3	11.7	13.3	11.7	11.6
HCM Lane LOS	B	C	B	B	B	B
HCM 95th-tile Q	1.3	2.4	1.3	1.5	0.9	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	152	22	200	122	52	53	577	209	60	600	35
Future Volume (veh/h)	22	152	22	200	122	52	53	577	209	60	600	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	152	22	200	122	52	53	577	40	60	600	8
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	275	40	372	260	111	121	1005	450	130	1023	458
Arrive On Green	0.17	0.17	0.14	0.21	0.21	0.18	0.07	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1774	1592	230	1774	1241	529	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	174	200	0	174	53	577	40	60	600	8
Grp Sat Flow(s),veh/h/ln	1774	0	1822	1774	0	1769	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	4.0	4.6	0.0	4.0	1.3	6.4	0.9	1.5	6.7	0.2
Cycle Q Clear(g_c), s	0.5	0.0	4.0	4.6	0.0	4.0	1.3	6.4	0.9	1.5	6.7	0.2
Prop In Lane	1.00		0.13	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	0	315	372	0	371	121	1005	450	130	1023	458
V/C Ratio(X)	0.07	0.00	0.55	0.54	0.00	0.47	0.44	0.57	0.09	0.46	0.59	0.02
Avail Cap(c_a), veh/h	1097	0	1126	1097	0	1094	135	1612	721	192	1727	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	17.5	16.2	0.0	16.2	20.6	14.1	12.1	20.5	14.0	11.7
Incr Delay (d2), s/veh	0.1	0.0	1.5	1.2	0.0	0.9	2.5	0.5	0.1	2.5	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.2	2.4	0.0	2.0	0.7	3.2	0.4	0.8	3.3	0.1
LnGrp Delay(d),s/veh	16.1	0.0	19.0	17.4	0.0	17.1	23.1	14.6	12.2	23.0	14.6	11.7
LnGrp LOS	B		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		196			374			670			668	
Approach Delay, s/veh		18.7			17.3			15.2			15.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	16.1		11.0	6.1	16.3		12.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	3.5	19.5		27.0	2.0	21.0		27.0
Max Q Clear Time (g_c+I1), s	3.5	8.4		6.0	3.3	8.7		6.6
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	3.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	172	41	26	166	50	48
Future Vol, veh/h	172	41	26	166	50	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	172	41	26	166	50	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	213	0	411	193
Stage 1	-	-	-	-	193	-
Stage 2	-	-	-	-	218	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1357	-	597	849
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1357	-	584	849
Mov Cap-2 Maneuver	-	-	-	-	584	-
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	801	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	689	-	-	1357	-
HCM Lane V/C Ratio	0.142	-	-	0.019	-
HCM Control Delay (s)	11.1	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	70	1172	120	64	1051
Future Volume (veh/h)	123	70	1172	120	64	1051
Number	1	16	8	18	7	4
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	123	70	1172	120	64	1051
Adj No. of Lanes	1	1	2	0	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	583	520	1751	179	103	1506
Arrive On Green	0.33	0.33	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1774	1583	3336	331	82	2874
Grp Volume(v), veh/h	123	70	639	653	539	576
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1804	1260	1610
Q Serve(g_s), s	3.4	2.1	17.8	17.9	6.8	17.5
Cycle Q Clear(g_c), s	3.4	2.1	17.8	17.9	24.7	17.5
Prop In Lane	1.00	1.00		0.18	0.12	
Lane Grp Cap(c), veh/h	583	520	956	974	740	870
V/C Ratio(X)	0.21	0.13	0.67	0.67	0.73	0.66
Avail Cap(c_a), veh/h	583	520	1512	1541	1157	1376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	16.2	11.3	11.4	11.3	11.3
Incr Delay (d2), s/veh	0.8	0.5	0.8	0.8	1.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.0	8.7	8.9	8.5	7.9
LnGrp Delay(d),s/veh	17.4	16.7	12.2	12.2	12.7	12.1
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	193		1292			1115
Approach Delay, s/veh	17.2		12.2			12.4
Approach LOS	B		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				41.5		27.0		41.5
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				58.5		22.5		58.5
Max Q Clear Time (g_c+I1), s				26.7		5.4		19.9
Green Ext Time (p_c), s				10.3		0.5		12.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Appendix C
List of Background Projects

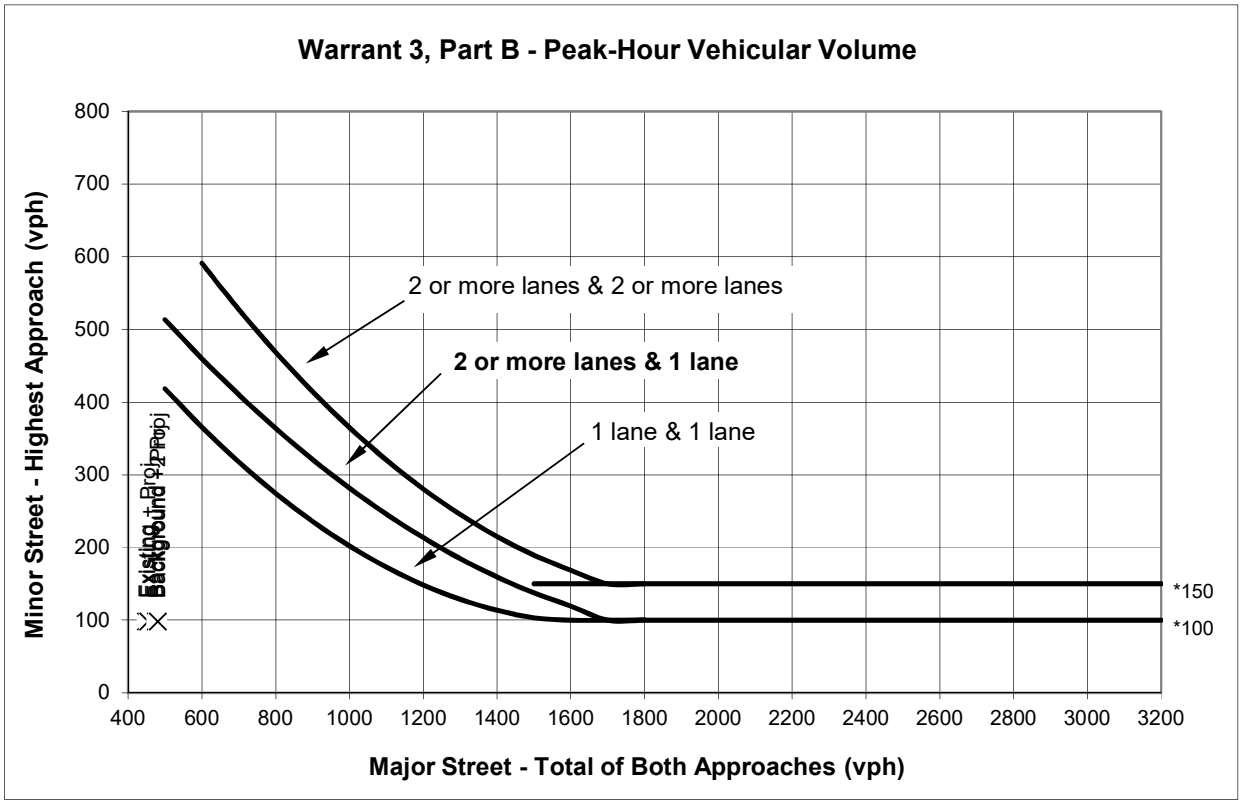
List of Background Projects

Project Name
Adrian Court
1499 Bayshore Highway
920 Bayswater Avenue
Burlingame Point
225 California Drive
250 California Drive
Carolan Avenue/Rollins Road Multi-Family Residential Development
1128-1132 Douglas Avenue
1431 El Camino Real
1457 El Camino Real
1509 El Camino Real
1433 Floribunda Avenue
988 Howard Avenue
240 Lorton Avenue
1491-1493 Oak Grove Avenue
21 Park Road
1095 Rollins Road
1600 Trousdale Drive
Village at Burlingame

Appendix D
Signal Warrant Analysis

Ansel Road and Oak Grove Avenue

Ansel Road and Oak Grove Avenue **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

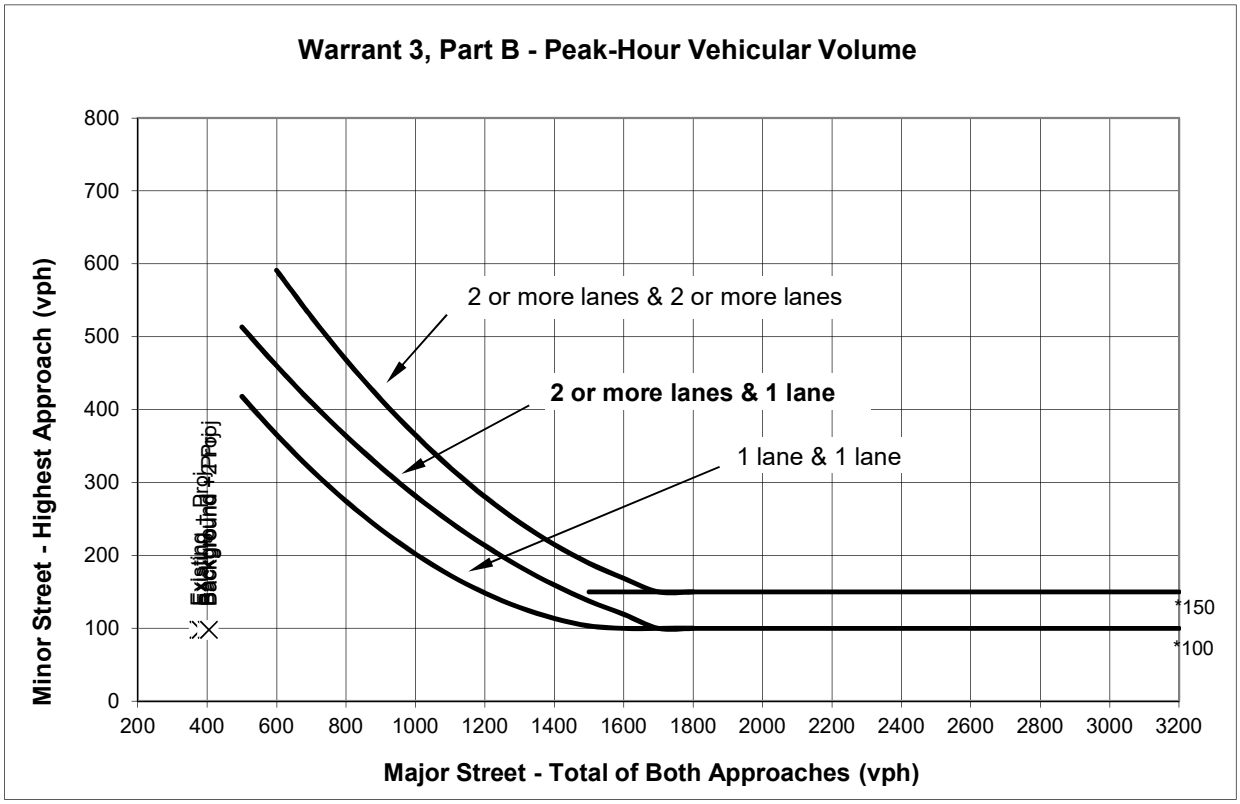
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Background +2 Proj			
Major Street - Both Approaches	Oak Grove Avenue	X		449	454	475	480	480			
Minor Street - Highest Approach	Ansel Road	X		98	98	98	98	98			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.

Ansel Road and Oak Grove Avenue

Ansel Road and Oak Grove Avenue **PM PEAK HOUR**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

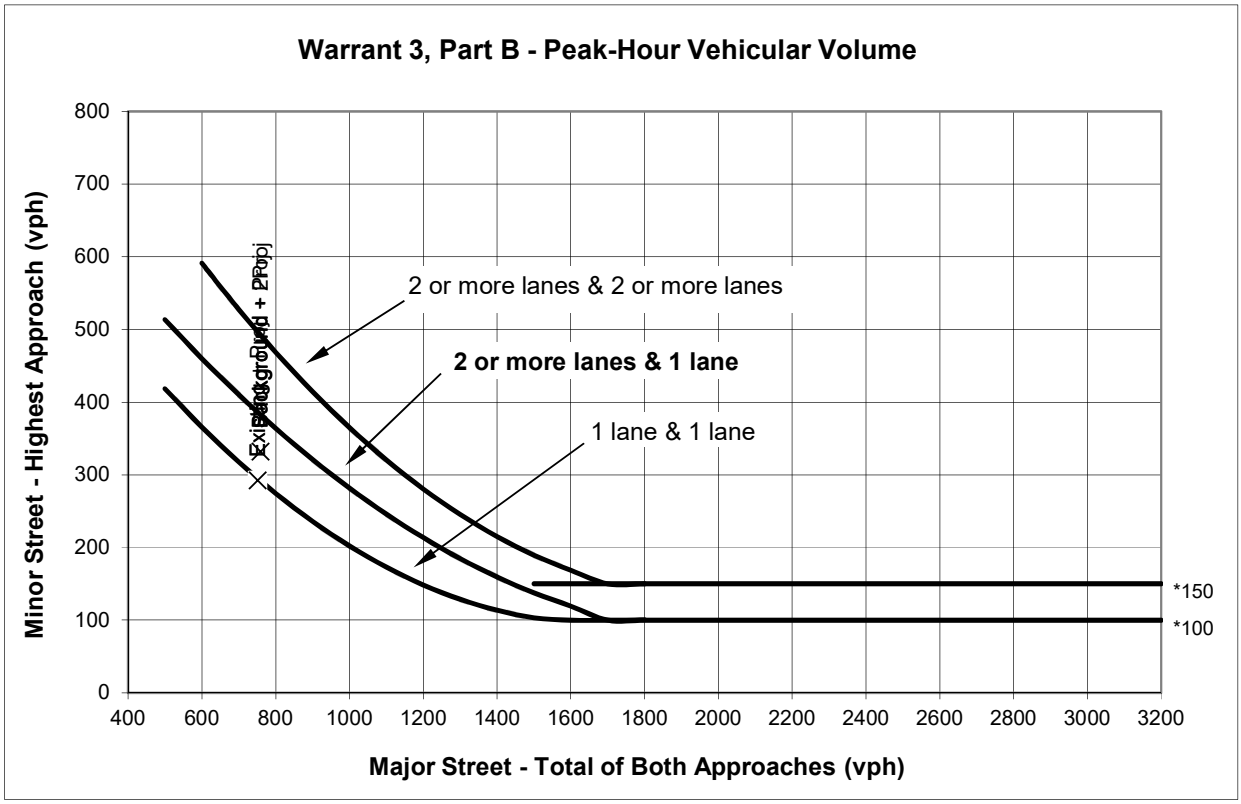
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Background +2 Proj			
Major Street - Both Approaches	Oak Grove Avenue	X		375	381	399	405	405			
Minor Street - Highest Approach	Ansel Road	X		98	98	98	98	98			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.

Carolan Avenue and Oak Grove Avenue

Carolan Avenue and Oak Grove Avenue **AM PEAK PERIOD**



Source: Figure 4C-3 *California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2010 Edition, as amended for use in California)* .

* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

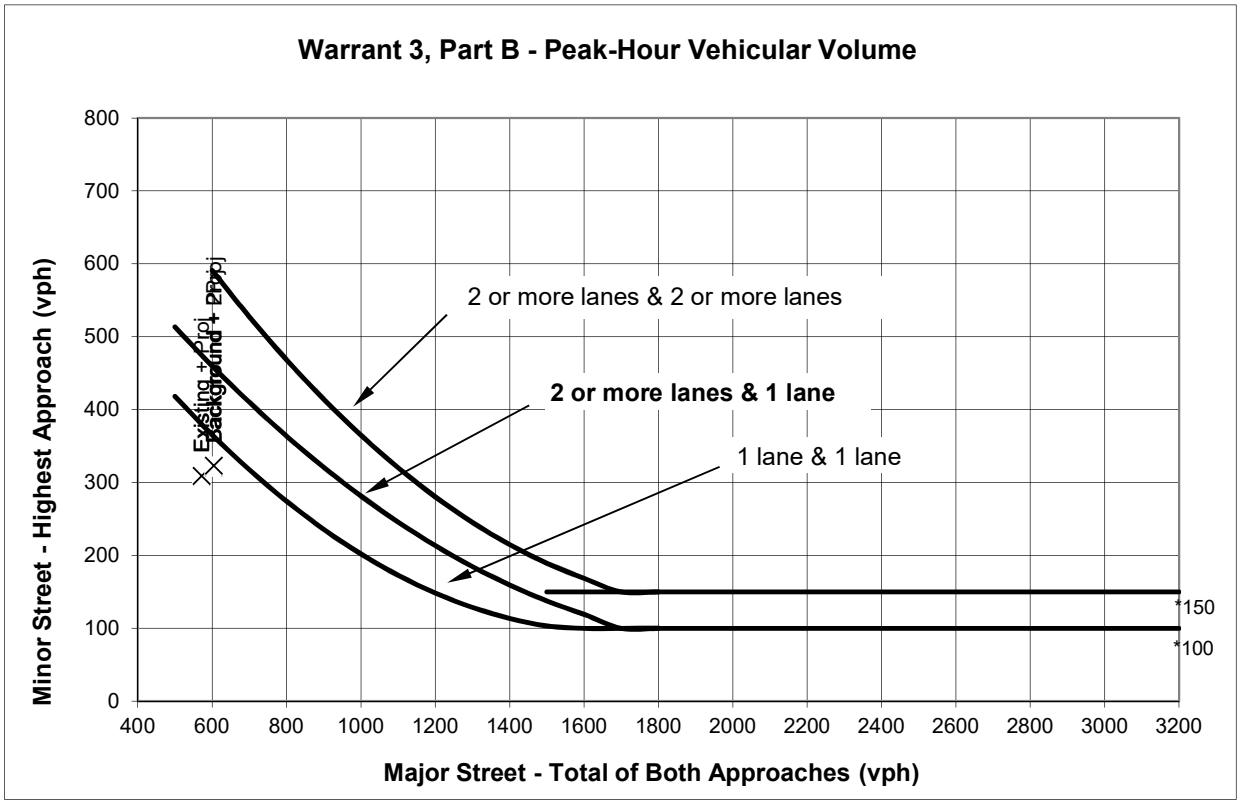
Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		AM PEAK PERIOD							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Background + 2Proj			
Major Street - Both Approaches	Oak Grove Avenue	X		750	751	757	758	759			
Minor Street - Highest Approach	Carolan Avenue	X		292	292	332	332	332			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**Yes**	**Yes**	**Yes**	**Yes**	**Yes**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.

Carolan Avenue and Oak Grove Avenue

Carolan Avenue and Oak Grove Avenue **PM PEAK HOUR**



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* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Part B - Peak-Hour Vehicular Volume

		Approach Lanes		PM PEAK HOUR							
		One	2 or More	Existing	Existing + Proj	Background	Background + Proj	Background + 2Proj			
Major Street - Both Approaches	Oak Grove Avenue	X		572	572	605	605	605			
Minor Street - Highest Approach	Carolan Avenue	X		308	309	321	322	323			
Signal Warranted Based on Part B - Peak-Hour Volumes?				**No**	**No**	**No**	**No**	**No**			

*Warrant is satisfied if plotted points fall above the appropriate curve in graph above.
Note 1: Right turn volume was removed from the minor WB approach.