Appendix A
Preliminary Utility Assessments

ENGINEERS / SURVEYORS / PLANNERS

1730 N. First Street, Suite 600
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MEMORANDUM

Date:	August 14, 2020	BKF No.: 20176058
To:	City of Millbrae (Public Works)	
Attention:	Mr. Khee Lim	
From:	Isaac Kontorovsky, BKF Engineers	
Subject:	1100 El Camino Real, Millbrae, CA **Residential Design Review -** Preliminary Sanitary Sewer Study	

Dear Mr. Lim,

Attached please find a brief summary analysis of the Sewage Generation Calculations for the existing and ultimate site conditions for the Residential Design Review project at 1100 El Camino Real. The components of the Residential Design project includes 384 multi-family units and 8,000± sf of amenity space. These preliminary calculations show approximately a 3% decrease in sewage for the Residential Design Review project *(This value has been rounded to the nearest whole percentage).*

For analysis purposes only, a (To be designed) Mixed-Use Project is also shown to demonstrate a 78% sewage increase of a Mixed-Use Project at this site. The (To be designed) Mixed-Use Project components consists of 200 hotel rooms, a 3,000± sf meeting room/event space, and a 1,500± sf dining/bar area that will all be added at a later date to the Residential Design Project described above.

Please review the attached analysis and provide us with your feedback. If you have any questions, please feel free to contact us.

Respectfully yours,
BKF ENGINEERS

Casey Johnson
Senior Project Engineer

CC: Isaac Kontorovsky, P.E., QSD/QSP
Vice President

BKF
ENGINEERS. SURVEYORS. PLANNERS

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Sewage Generation Summary
Existing/Proposed Condition Sewage Generation

Project Address: 1100 El Camino Real
BKF Job No: 20176058
Date: 8/14/2020
Calcs By: CJ

RESIDENTIAL DESIGN REVIEW - SEWAGE GENERATION ANALYSIS

	Sewage Average Daily Flow (GPD_s)	Peak Hourly Flow (cfs)
Existing Site Condtion	55,365	0.326
Proposed Site Condition	53,949	0.317
% Decrease in Sewage	**3%**	**3%**

1. Sewage increase shown for Residential Design Review project only
2. The proposed site condition sewer generation numbers shown are from items A & B in the proposed sewage generation projection table shown below.

(TO BE DESIGNED) - MIXED-USE PROJECT

	Sewage Average Daily Flow (GPD_s)	Peak Hourly Flow (cfs)
Existing Site Condtion	55,365	0.326
Proposed Site Condition	98,419	0.579
% Increase in Sewage	**78%**	**78%**

1. Sewage increase shown for (To be designed) Mixed-Use Project
2. The proposed site condition sewer generation numbers shown are from all items in the proposed sewage generation projection table shown below.

Notes
GPD_s = Gallons per Day (wastewater)
cfs = Cubic Feet per Second

BKF Engineers
1730 N. First Street, Suite 600
San Jose, CA 95112

August 14, 2020

1100 El Camino Real, Millbrae

EXISTING SEWAGE GENERATION PROJECTIONS

prepared by BKF Engineers

EXISTING SITE SEWAGE DEMAND

Description	Area		Generation Rate[2]		Sewage Average Daily Flow		Water Demand[3]			Peak Daily Wastewater Flow[4]		Peak Hourly Wastewater Flow[5]	
	Value	Units	Value	Units	Value	Units	Converstion Factor[3]	Value	Units	Value	Units	Value	Units
A. Residential (Multi-Family)	8	Units	138.41	GPD/unit[1]	1,107	GPD_s	(1.15 x Sewer Average Daily Flow)	1,273	GPD_w	2,436	GPD_s	0.007	cfs
B. Hotel	220	Rooms	200	GPD/room	44,000	GPD_s	(1.15 x Sewer Average Daily Flow)	50,600	GPD_w	96,800	GPD_s	0.259	cfs
C. Restaurant	246	Seats	41.7	GPD/seat[6]	10,258	GPD_s	(1.15 x Sewer Average Daily Flow)	11,797	GPD_w	22,568	GPDs	0.060	cfs
Total Projection					**55,365**	GPDs		**63,670**	GPD_w	**121,804**	GPD_s	**0.326**	cfs

[1] Based on average of 2.75 persons/unit and 50.3 GPCD
[2] Generation Rates from City of Millbrae Water Supply Assessment prepared by GHD (June 2015)
[3] Water demands are estimated from the wastewater demands by multiplying by a factor of 1.15, except for Residential. The 1.15 multiplication factor assumes 85% of the potable water is converted to wastewater (Wastewater Engineering; Metcalf & Eddy, 2003).
[4] Peak Daily Flow (GPD_s) = Peaking Factor (2.2) x Average Daily Flow (gpd) - Per City of Millbrae Technical Provisions 7.02A.2
[5] Peak Hourly Flow (cfs) = Peaking Factor (3.8) x Average Daily Flow (gpd) - Per City of Millbrae Technical Provisions 7.02A.2
[6] Based on average of 1 seat = 15 SF of dining and per the MSASP (refer to footnote 2), Restaurant Generation Rate is 2.78 GPD/SF of dining

Notes

GPCD = Gallons per Capita Day
GPD_s = Gallons per Day (wastewater)
GPD_w = Gallons per Day (water)
cfs = Cubic Feet per Second
1 US gpd =0.0000015475314076025 cfs

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August 14, 2020

1100 El Camino Real, Millbrae

PROPOSED SEWAGE GENERATION PROJECTIONS

prepared by BKF Engineers

PROPOSED DEVELOPMENT SEWAGE DEMAND

Description	Area		Generation Rate[4]		Sewage Average Daily Flow		Water Demand			Peak Wastewater Daily Flow[6]		Peak Wastewater Hourly Flow[7]	
	Value	Units	Value	Units	Value	Units	Converstion Factor[5]	Value	Units	Value	Units	Value	Units
A. Residential (High Density)	384	Units	138.41	GPD/unit[3]	53,149	GPD_s	(1.15 x Sewer Average Daily Flow)	61,122	GPD_w	116,929	GPD_s	0.313	cfs
B. Residential Ammenities (Retail)	8,000	SF[2]	0.1	GPD/SF	800	GPD_s	(1.15 x Sewer Average Daily Flow)	920	GPD_w	1,760	GPD_s	0.005	cfs
C. Hotel (SEE NOTE)	200	Rooms	200	GPD/room	40,000	GPD_s	(1.15 x Sewer Average Daily Flow)	46,000	GPD_w	88,000	GPD_s	0.235	cfs
D. Meeting Room/Event Space (SEE NOTE)	3,000	SF[2]	0.1	GPD/SF	300	GPD_s	(1.15 x Sewer Average Daily Flow)	345	GPD_w	660	GPD_s	0.002	cfs
E. Restaurant (SEE NOTE)	100	Seats[1]	41.7	GPD/seat	4,170	GPD_s	(1.15 x Sewer Average Daily Flow)	4,796	GPD_w	9,174	GPD_s	0.025	cfs
Total Projection					**98,419**	GPD_s				**216,523**	GPD_s	**0.579**	cfs

[1] Based on average of 1 seat/15 SF of dining and 1,500 SF dining/bar area, and per the MSASP (refer to footnote 4), Restaurant Generation Rate is 2.78 GPD/SF of dining

[2] Residential ammenities assumed to generate water demand similar to retail space

[3] Based on average of 2.75 persons/unit and 50.3 GPCD

[4] Generation Rates from City of Millbrae Water Supply Assessment prepared by GHD (June 2015)

[5] Water demands are estimated from the wastewater demands by multiplying by a factor of 1.15, except for Residential. The 1.15 multiplication factor assumes 85% of the potable water is converted to wastewater (Wastewater Engineering; Metcalf & Eddy, 2003).

[6] Peak Daily Flow (GPD_s) = Peaking Factor (2.2) x Average Daily Flow (gpd) - Per City of Millbrae Technical Provisions 7.02A.2

[7] Peak Hourly Flow (cfs) = Peaking Factor (3.8) x Average Daily Flow (gpd) - Per City of Millbrae Technical Provisions 7.02A.2

Notes

Hotel rooms, Meeting room/event space, and restaurant space assumed for purposes of (To be designed) Mixed-Use project sewage generation analysis.

GPD_s = Gallons per Day (wastewater)

GPD_w = Gallons per Day (water)

cfs = Cubic Feet per Second

1 US gpd = 0.0000015475314076025 cfs

SF = Square Feet

Appendix B
Air Quality and Greenhouse Gas Assessment

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M E M O

Date: March 28, 2021

To: Garrett Borges
Development Manager
Anton Dev Co, Inc.
4900 Hopyard Road, Suite 300
Pleasanton, CA 94588

From: James Reyff
Illingworth & Rodkin, Inc.
429 East Cotati Avenue
Cotati, CA 94931

Via E-mail: **gborges@antondev.com**

SUBJECT: **1100 El Camino Real, Millbrae, CA – Millbrae CAP Adoption** Job# 19-149

Illingworth & Rodkin, Inc. prepared the air quality and GHG assessment for the 1100 El Camino Real project,[1] which addressed the air quality and GHG impacts caused by the construction and operation of a proposed residential project and a residential plus hotel project in Millbrae, California. At the time of this analysis, the City of Millbrae's Climate Action Plan (CAP), which sets policies, greenhouse gas emissions reduction targets, and measures for reducing greenhouse gases, was in its final draft stages and had not yet been adopted. The Final 2020 Climate Action Plan (CAP) was adopted by the City on October 27, 2020. The City's goal with the CAP is to reduce 2005 base year GHG emissions 32 percent by 2025 and 49 percent by 2030, which aligns with the SB 32 goal of reducing GHG emissions 40 percent below 1990 levels. As reported in the project assessment. The project is consistent with the adopted CAP goals and the adoption of the CAP after the project assessment does not change or affect the analysis or findings in the report. Note that the project would be subject to the CAP measures as the modifies their building code and adopts ordinances to implement these measures. Project consistency with applicable emission reduction measures from the City's CAP was addressed in the Project's Sustainable Communities Environmental Assessment (SCEA).

[1] Illingworth & Rodkin, Inc., *1100 El Camino Real Air Quality & Greenhouse Gas Assessment*. August 20, 2020.

1100 EL CAMINO REAL AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Millbrae, California

December 11, 2019
Revised August 20, 2020

Prepared for:

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I&R Project # 19-149

Introduction

The purpose of this report is to address air quality impacts and compute greenhouse gas (GHG) emissions associated with the residences and residences plus hotel project located at 1100 El Camino Real in Millbrae, California. The air quality impacts and GHG emissions would be associated with the demolition of the existing site, construction of the new buildings and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were predicted using models. In addition, the potential construction health risk impacts to nearby sensitive receptors and the impact of existing toxic air contaminant (TAC) sources were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The existing project site consists of a 220-key hotel, a restaurant, seven apartment units, a single-family home, and parking lots. The 6.74-acre parcel is currently zoned for multi-family and commercial. The two zoning designations that make up the 6.74-acre parcel include R-3 (Multiple Family), which comprises approximately 6.02 acres, and C (Commercial), which comprise approximal 0.72 acres. The project proposes to demolish the existing uses and construct a multi-family residential development with 384 dwelling units. Parking would be provided in a separate parking garage with 548 stalls and an additional 12 unassigned surface stalls will be located near the Building A leasing lobby.

Additionally, since the project site is also zoned for commercial, this technical report includes an analysis of a hotel ranging from 175 to 200 keys for pre-planning purposes only. For this report, the project applicant presumed that the hotel would have 200 rooms, 2,500 sf of restaurant space, 3,000 sf of meeting room, and a 69,533-sf parking garage with 187 spaces. At this time a hotel is not a proposed part of the project. However, this report analyzes the impacts of the residential land use (i.e. Project) and the residential plus hotel land uses. It was assumed that in the residential plus hotel scenario both land uses would be built simultaneously.

Setting

The project is located in San Mateo County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

<u>Air Pollutants of Concern</u>

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

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

Toxic Air Contaminants

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.[2] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest existing sensitive receptors to the project site are the single- and multi-family residences and a nursey to the north of the project site

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.* Office of Environmental Health Hazard Assessment. February.

opposite Center Street. The project would also introduce new sensitive receptors in the form of residences.

Regulatory Agencies

The BAAQMD is the regional agency tasked with managing air quality in the region. At the State level, the CARB (a part of the California Environmental Protection Agency [EPA]) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has recently published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_X and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500 parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD), is currently required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.[4] In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources;

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[4] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

The BAAQMD California Environmental Quality Act (*CEQA) Air Quality Guidelines*[5] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions.

<u>Plan Bay Area 2040 Draft Environmental Impact Report (DEIR)</u>

Plan Bay Area (PBA) is a state-mandated long-range Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS) that meets CARB GHG reduction targets. This document addresses how the Bay Area will meet its long-range transportation and land use goals, while accommodating for the projected employment and residential growth expected in the area. The nine counties that encompass the Bay Area include Sonoma County, Napa County, Solano County, Contra Costa County, Alameda County, Santa Clara County, San Mateo County, San Francisco County, and Marin County. PBA 2040 is the four-year update of the original PBA adopted by the Association of the Bay Area Government (ABAG) and the Metropolitan Transportation Commotion (MTC) in July 18, 2019. PBA 2040 was adopted by ABAG and MTC on July 26, 2017. Chapter 2.2 and 2.5 of the PBA DEIR 2040 address air quality and GHG impacts, respectively. The following mitigation measures from the PBA DEIR 2040 are applicable to the project.

PBA Mitigation Measures 2.2-2

When screening levels are exceeded (see Table 2.2-8 or those most currently updated by BAAQMD), implementing agencies and/or project sponsors shall implement measures, where applicable, feasible, and necessary based on project- and site-specific considerations, that include, but are not limited to the following:

Construction Best Practices for Exhaust

The applicant/general contractor for the project shall submit a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of project construction, including equipment from subcontractors, to BAAQMD for review and certification. The list shall include all information necessary to ensure the equipment meets the following requirement:

- 1) Be zero emissions OR 2) have engines that meet or exceed either EPA or ARB Tier 2 off-road emission standards; and 3) have engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4

[5] Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

Interim or Tier 4 Final emission standards automatically meet this requirement; therefore, a VDECS would not be required.

- Idling time of diesel powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.

- Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.

Construction Best Practices for Dust

All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. For projects over five acres in size, soil moisture should be maintained at a minimum of 12 percent. Moisture content can be verified by lab samples or a moisture probe.

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

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. Dry power sweeping should only be performed in conjunction with thorough watering of the subject roads.

- All vehicle speeds on unpaved roads and surfaces shall be limited to 15 mph.

- All roadway, driveway, and sidewalk paving shall be completed as soon as possible. Building pads shall be paved as soon as possible after grading.

- All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the Lead Agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. BAAQMD's Complaint Line (1-800-334-6367) shall also be included on posted signs to ensure compliance with applicable regulations.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

- All trucks and equipment, including their tires, shall be washed off before leaving the site.

- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

These BMPs are consistent with recommendations in BAAQMD's CEQA guidelines and Planning Healthy Places (BAAQMD 2010b, BAAQMD 2016).[6] Applicable mitigation measures shall be required at the time grading permits are issued.

Significance after Mitigation

The measures described above would minimize PM_{10} and $PM_{2.5}$ dust emissions and minimize exhaust emissions of diesel PM through the use of readily available, lower-emitting diesel equipment, and/or equipment powered by alternative cleaner fuels (e.g., propane) or electricity, as well as on-road trucks using particulate exhaust filters.

To the extent that an individual project adopts and implements all feasible mitigation measures described above, the project's impact would be less than significant with mitigation (LS-M). Projects taking advantage of CEQA Streamlining provisions of SB 375 (Public Resources sections 21155.1, 21155.2, and 21159.28) must apply the mitigation measures described above to address site-specific conditions. However, MTC/ABAG cannot require local implementing agencies to adopt the above mitigation measures, and it is ultimately the responsibility of a lead agency to determine and adopt mitigation. Therefore, this impact remains significant and unavoidable (SU) for purposes of this program-level review.

City of Millbrae General Plan EIR 1998

The City of Millbrae General Plan 1998 Environmental Impact Report (EIR) addresses the potential environmental impacts of future development under the City of Millbrae General Plan. Chapter 4.5 evaluates and identifies air quality impacts. The EIR identified significant impacts

[6] The latest BAAQMD CEQA Air Quality Guidelines is the May 2017 version. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

with respect to construction activities and vehicle traffic. The following mitigation measures from the City of Millbrae General Plan 1998 EIR are applicable to the project:

Mitigation Measures for Impact 4.5.1: Construction Activities during development or redevelopment of properties within the City would result in short-term PM10 emissions

PC6.5 Air Quality. Strive to achieve federal and state air quality standards by managing locally generated pollutants, coordinating with other jurisdictions, and implementing measures to reduce automobile trips in Millbrae and the region. Require that local project Environmental Impact Reports meet the air quality analysis criteria set forth by the Bay Area Air Quality Management District.

- Include a policy in the General Plan to reduce construction-related PM_{10} emission impacts to a less-than-significant level. The policy should reflect basic, enhanced, and optional dust control measures recommended by BAAQMD including:

    a. All active construction areas shall be watered at least twice daily.
    b. All trucks hauling soil, sand, and other loose materials shall be covered with tarpaulins or other effective covers.
    c. All unpaved access roads, parking area, and staging area at the construction site shall be paved; otherwise, water or non-toxic soil stabilizers shall be applied to all unpaved access roads. In addition, paved access roads, parking areas, and staging areas shall be swept daily with a water sweeper. Streets shall be swept daily with a water sweeper in areas where visible soil material is carried onto adjacent public streets.
    d. Inactive construction areas, including previously graded areas inactive for at least ten days, shall be hydroseeded or applied with a non-toxic soil stabilizers.
    e. Exposed stockpiles shall be enclosed, covered, and watered twice daily (or applied with a nontoxic soil binder).
    f. The speed of all vehicles driving on unpaved road shall be limited to 15 mph.
    g. To prevent silt runoff to public roadways, sandbags or other erosion control measures shall be implemented.
    h. Disturbed areas shall be replanted with vegetation as quickly as possible.
    i. Wheel washers shall be installed and used to clean all trucks and equipment leaving the construction site. If wheel washers cannot be installed, tires or tracks of all trucks and equipment shall be washed off before leaving the construction site.
    j. Wind breaks or tree wind breaks shall be installed/planted on windward sides of construction areas.
    k. Excavation and grading activities shall be terminated when winds exceed 25 mph.
    l. Limit the area subject to excavation, grading, and other construction activities at any one time.

Mitigation Measures for Impact 4.5.2: Construction activities during development or redevelopment of properties within the City would result in short-term exhaust emissions from construction equipment

- Normal City permit and review procedures generally address this potentially significant impact
- Include a policy or program in the General Plan to implement the following mitigation measures to reduce exhaust emissions from construction-related equipment to a less than significant level:
    a. The idling time of all construction equipment used at the site shall not exceed five minutes.
    b. Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
    c. All equipment shall be properly tuned and maintained in accordance with the manufacturer's
    d. specifications.
    e. When feasible, alternative fueled or electrical construction equipment shall be used at the project
    f. site.
    g. Use the minimum practical engine size for construction equipment.
    h. Gasoline-powered equipment shall be equipped with catalytic converters, where feasible.

BAAQMD Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1.

Table 1. Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1,000-foot zone of influence)**	
Excess Cancer Risk	>10.0 per one million	>100 per one million	
Hazard Index	>1.0	>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3	>0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually(for 2020)* OR 4.6 metric tons per capita (for 2020)*		
Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases. *BAAQMD does not have a recommended post-2020 GHG threshold.			

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable State or federal ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

The Bay Area is considered a non-attainment area for ground-level ozone and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for ozone precursor pollutants (ROG and NO_X), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts. The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 was used to estimate emissions from construction and operation of the site assuming full build-out of the project. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The model output from CalEEMod is included as *Attachment 2*.

Construction Period Emissions

CalEEMod provided annual emissions for construction and estimates emissions for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. A construction build-out scenario, including equipment list and schedule, was provided by the applicant. The proposed project land uses and hauling earthwork were entered into CalEEMod, as follows:

Residential and Hotel Land Uses

- 384 dwelling units entered as "Apartments Mid Rise" on 5.56-acres,
- 548 spaces entered as "Enclosed Parking with Elevator",
- 12 spaces entered as "Parking Lot",
- 200 rooms and 135,967-sf (includes 2,500 sf of restaurant space and 3,000 sf of meeting space) entered as "Hotel" on 1.17-acres, and
- 187 spaces and 69,533-sf entered as "Enclosed Parking with Elevator".

Construction Hauling Information

- 45,683-sf of building demolition,
- 5,022 cubic yards (cy) soil exported, and
- 26,734-cy soil imported.[7]

[7] Note that the demolition and site grading for the Residential and Hotel projects would be completed during the residential construction phase.

Construction was modeled in two scenarios; the first scenario consisting only of the Project (i.e. residences) and the second scenario consisting of the residences plus hotel land uses. For the Project only model, construction would begin April 2021 and last approximately 36 months with a total of 784 workdays. For the residences plus hotel model, construction would also begin April 2021 but last approximately 44 months with a total of 957 workdays.

Summary of Computed Construction Emissions

Average daily emissions were computed by dividing the total construction emissions by the number of construction days. Tables 2 and 3 show average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction of the Project and residences plus hotel, respectively. As indicated in Tables 2 and 3, predicted the construction period emissions would not exceed the BAAQMD significance thresholds.

Table 2. Construction Period Emissions for the Project

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total construction emissions (tons)	3.82	8.22	0.29	0.28
Average daily emissions (pounds/day)[1]	9.74	20.98	0.75	0.70
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Notes: [1]Assumes 784 workdays.

Table 3. Construction Period Emissions for the Residences Plus Hotel Model

Scenario	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Total construction emissions (tons)	4.96	11.92	0.44	0.42
Average daily emissions (pounds/day)[1]	10.36	24.91	0.93	0.87
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Notes: [1]Assumes 957workdays.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices (BMP) are implemented to reduce these emissions. This project would implement *Mitigation Measures (MM) AIR-1 (PBA 2.2-2),* which includes the BAAQMD construction best practices for dust.

Operational Period Emissions

Operational air pollutant emissions from the project would be generated primarily from autos driven by future residents for the Project and by future residents and customers for the residences plus hotel scenario. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was also used to estimate emissions from operation of the proposed Project and residences plus hotel scenario assuming full build-out. Since the existing land use also includes a hotel and residences, an existing land use model was not computed to net emissions.

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest the project (includes the residential and the residential plus hotel components) could possibly be constructed and begin operating would be 2025. Emissions associated with build-out later than 2025 would be lower.

EMFAC2017 Adjustment

The vehicle emission factors and fleet mix used in CalEEMod are based on EMission FACtors from 2014 (EMFAC2014), which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2016.3.2, new emission factors have been produced by CARB. EMFAC2017 became available for use in March 2018 and approved by the EPA in August 2019. It includes the latest data on California's car and truck fleets and travel activity. Additionally, CARB has recently released EMFAC off-model adjustment factors to account for the Safer Affordable Efficient (SAFE) Vehicle Rule Part one.[8,9] The SAFE vehicle Rule Part One revoked California's authority to set its own GHG emission standards and set zero emission vehicle mandates in California. As a result of this ruling, mobile criteria pollutant emissions and GHG emissions (i.e. CO_2) would increase. Therefore, the CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2017, which were adjusted with the CARB EMFAC off-model adjustment factors. More details about the updates in emissions calculation methodologies and data are available in the

[8] California Air Resource Board, 2019. EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One. November. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf

[9] California Air Resource Board, 2020. EMFAC Off-Model Adjustment Factors for Carbon Dioxide (CO20 Emissions to Accounts for the SAFE Vehicles Rule Part One and the Final SAFE Rule. June. Web: https://ww3.arb.ca.gov/msei/emfac_off_model_co2_adjustment_factors_06262020-final.pdf?utm_medium=email&utm_source=govdelivery

EMFAC2017 Technical Support Document.[10] *Attachment 3* includes the EMFAC2017 emissions modeling outputs.

Trip Generation Rates

CalEEMod allows the user to enter specific vehicle trip generation rates, which were input to the model using the daily trip generation rate provided by the traffic consultant. The project traffic analysis provided project daily trip generation values for the residential and hotel land uses.[11] Saturday and Sunday trip rates were computed based on the default CalEEMod ratio of Saturday to weekday and Sunday to weekday adjustments. The trip rates used for the residential use was 5.45 trips per unit for the weekday. The adjusted Saturday and Sunday trip rates were 5.24 trips per unit and 4.80 trips per unit, respectively. The daily trip rate used for the hotel was 4.47 trips per room. The adjusted Saturday and Sunday trip rates were 4.48 trips per room and 3.26 trips per room, respectively. The default trip lengths and trip types specified by CalEEMod were used.

Energy

The model has a default rate of 641.3 pounds of CO_2 per megawatt of electricity produced, which is based on PG&E's 2008 emissions rate. However, Peninsula Clean Energy (PCE) now provides electricity to San Mateo County, with 50 percent of the electricity coming from renewable sources and 90 percent being carbon free electricity.[12] The CO_2 intensity factor was adjusted to account for PCE's 2018 CO_2 intensity rate. The 2018 rate provided by PCE is 129.77 pounds of CO_2 per megawatt (lbs CO_2/MWh) of electricity delivered.[13] Additionally, PCE plans to provide 100 percent GHG free electricity by the year 2021. This project would be operational post-2021, so this goal was accounted for in the model by assuming 100 of the electricity used by residences and hotel would be from alternative, renewable energy sources.

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions. No hearths (wood or natural gas) would be install in the dwelling units or guest rooms.

Summary of Computed Operational Emissions

Annual emissions were calculated using CalEEMod and daily emissions were calculated assuming 365 days of operation. Tables 4 and 5 show the operational emissions calculated for the residential and residential plus hotel components, respectively. As shown in both tables, operational emissions would not exceed the BAAQMD significance thresholds.

[10] See CARB 2018: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac
[11] Hexagon Transportation Consultant, Inc., 2019. *1100 El Camino Real Mixed-Use Development*, November 1.
[12] Based on the ECOplus default electric option that residents and business are automatically enrolled in.
[13] Correspondence with Michael Totah, Peninsula Clean Energy, August 30, 2019.

Table 4. Operational Period Emissions for the Project

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2025 Project Operational Emissions (*tons/year*)	2.67	0.97	1.78	0.51
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	No	No	No	No
2025 Project Operational Emissions (*pounds/day*)[1]	14.64	5.51	9.77	2.77
BAAQMD Thresholds (pounds/day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Threshold?	No	No	No	No

Notes: [1] Assumes 365-day operation.

Table 5. Operational Period Emissions for The Residences Plus Hotel

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2025 Residences Operational Emissions (*Tons/Year*)	2.67	0.97	1.78	0.51
2025 Hotel Operational Emissions	0.92	0.54	0.63	0.18
Total	3.59	1.55	2.41	0.69
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	No	No	No	No
2025 Project Operational Emissions (*pounds/day*)[1]	19.69	8.48	13.20	3.78
BAAQMD Thresholds (pounds/day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Threshold?	No	No	No	No

Notes: [1] Assumes 365-day operation.

Impact AIR-2: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk would occur by introducing a new sources of TAC emissions with the potential to adversely affect existing sensitive receptors in the project vicinity. This project would introduce new sources of TACs during construction (i.e. on-site construction activity and truck hauling emissions) and operation (i.e. project traffic).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. This project operation would increase traffic in the area that would increase the air pollutant and TAC emissions in the area. However, the traffic generated would be mostly light-duty vehicles that are not a source of substantial TACs or $PM_{2.5}$. No stationary sources, like a diesel emergency generator, are proposed for either land use.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC was also assessed in terms of the cumulative risk that includes the project contribution.

Community Risk Methodology for Construction and Operation

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project is the combination of construction and operation sources. These sources include on-site construction activity, construction truck hauling, project generators, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure period was assumed with the sensitive receptors being exposed to project both construction and operation during this timeframe.

The project increased cancer risk is computed by summing the project construction and operation contribution. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration, and HI values are not additive but based on an annual maximum risk for the entirety of the project. The project MEI is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the modeling of TAC and $PM_{2.5}$ emissions, dispersion modeling and cancer risk computations

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This include existing residences and a daycare as shown in Figure 1. Residential receptors are assumed to include all receptor groups (i.e. infants, children, and adults) with almost continuous exposure to project emissions. The daycare was assumed to have students between the ages of two years old to five years old.

Community Risks from Project Construction – On-Site and Hauling Activity

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. Construction exhaust emissions may pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. A community risk assessment of the project's construction activities, which includes on-site construction and hauling activity, was conducted. The assessment evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[14] This assessment included dispersion modeling to predict the off-site concentrations resulting from project construction, so that increased cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod model provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. The total emissions from all construction stages for the Project was 0.2860 tons (414 pounds) and for the residences plus hotel scenario it was 0.0.4345 tons (479 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod as 0.2997 tons (569 pounds) for the overall construction period for the residential scenario and 0.5054 tons (685 pounds) for the overall construction period for the residential and hotel scenario.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ at sensitive receptors (residences) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[15] For each of the construction sites modeled, the modeling utilized two area sources to represent the on-site construction emissions, one for exhaust emissions and one for fugitive dust emissions. To represent the construction equipment exhaust emissions, an emission release height of 6 meters (20 feet) was used for the area sources.[16] The elevated source height reflects the height of the equipment exhaust pipes plus an additional distance for the height of the exhaust plume above the exhaust pipes to account for plume rise of the exhaust gases.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 2 meters (6.6 feet) was used for the area sources. Fugitive dust emissions at construction sites come from a variety of

[14] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.
[15] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en
[16] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology*. April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. These activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

Construction emissions were modeled as occurring daily between 7:00 a.m. to 7:00 p.m. per the project applicant's construction schedule. The emission rates used for dispersion modeling were calculated using the total annual construction emissions computed using CalEEMod (based on construction occurring 5 days per week) and dividing by 12 hours per day for 365 days (i.e., normalizing the emissions to an annualized pound per hour emission rate over the period being modeled). The dispersion modeling was conducted assuming emissions would occur 9 hours per day using the variable emission option in the U.S. EPA AERMOD dispersion model, 365 days per year.

The modeling used a 5-year meteorological data set (2013-2017) from the San Francisco International Airport prepared for use with the AERMOD model by BAAQMD. Annual DPM and $PM_{2.5}$ concentrations from construction activities at the project site during the 2021-2024 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptor locations. Receptor heights of 1.5 meters (4.9 feet) and 4.5 meters (14.7 feet) were used to represent the breathing height on the first and second levels of residences in nearby single- and multi-family residences and the nursery.[17]

Predicted Construction Health Risks

The increased cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described in *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant and adult exposures were assumed to occur at all residences during the entire construction period. Child exposure parameters were used for the Millbrae Nursey School.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 $\mu g/m^3$. Note that the total $PM_{2.5}$ concentration is the sum of the PM_{10} exhaust concentration and fugitive $PM_{2.5}$ concentration, which is a conservative approach to calculating the total $PM_{2.5}$ concentration.

Results of this assessment, reported in Table 6, found that the construction MEI for both modeling scenarios (Residential and Residential plus Hotel) was located on the first floor (1.5 meters) of a single-family residence adjacent to the northern project boundary opposite Center Street. The

[17] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

maximum excess residential cancer risks at this location would exceed the BAAQMD significance thresholds of greater than 10 in one million and the $PM_{2.5}$ concentrations would exceed the significance threshold of greater than 0.3 $\mu g/m^3$. Table 6 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities affecting the MEI for both modeling scenarios. The mitigated scenario was based on *MM AIR -1 and AIR-2 (PBA 2.2-2)*, which require the following: BAAQMD's best management practices to control dust shall be implemented onsite, forklifts shall be compressed natural gas powered, the use of temporary power line shall be provided onsite, and all other diesel-powered equipment shall be equipped with U.S. EPA Tier 4 interim engines.

Additionally, modeling was conducted to predict the cancer risks, non-cancer health hazards, and maximum $PM_{2.5}$ concentrations at the Millbrae Nursey School, which is northwest of the project site opposite Center Street. The preschool is open five days a week and has students ranging from the ages of two to five years old. The community risks from the construction of the residences and residences plus hotel upon the nursey, without mitigation, are below the BAAQMD single-source thresholds as shown in Table 7. *Attachment 4* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Table 6. Construction Risk Impacts at the Offsite Residential MEI for the Project and Residences Plus Hotel Scenario

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction (Residential Scenario)			
Unmitigated	**25.9 (infant)**	**0.37**	0.02
Mitigated	4.3 (infant)	0.07	<0.01
Project Construction (Residential + Hotel Scenario)			
Unmitigated	**31.6 (infant)**	**0.37**	0.02
Mitigated	3.8 (infant)	0.08	<0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?			
Unmitigated	***Yes***	***Yes***	*No*
Mitigated	*No*	*No*	*No*

Table 7. Construction Risk Impacts at the Millbrae Nursey School for the Project and Residences Plus Hotel Scenario

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction (Residential Scenario)			
Unmitigated	5.8 (child)	0.27	0.01
Project Construction (Residential + Hotel Scenario)			
Unmitigated	8.7 (child)	0.37	0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold? Unmitigated	*No*	*No*	*No*

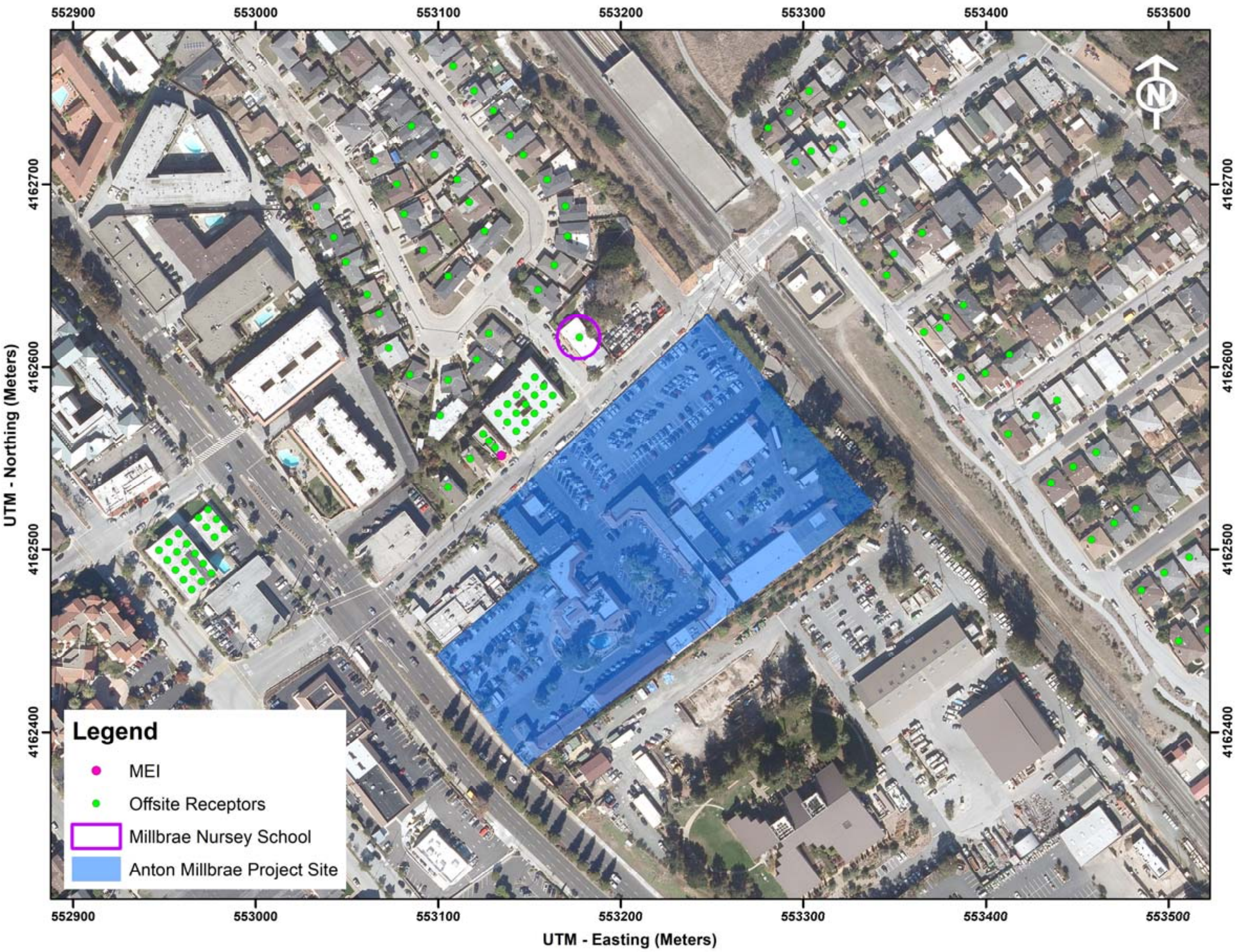
Community Risks from Project Operation – Traffic

Operation of the project would have long-term emissions from mobile sources (i.e. traffic) that are not considered a large source of DPM or $PM_{2.5}$. The residential project would generate 2,091 daily trips and the hotel would generate 894 daily trips. The total gross number of trips would be 2,985 trips, which is less than BAAQMD's 10,000 average daily traffic (ADT) total threshold. Roadways that exceed 10,000 (ADT) are potentially significant and would need to evaluate. Additionally, as stated above, these daily trips are assumed to be mostly light-duty vehicles and would be considered a minor, low-impact source of TACs per BAAQMD recommended guidance. Therefore, both project scenarios would not result in significant cancer risks, annual $PM_{2.5}$ concentrations, nor HI value during operation.

Summary of Project-Related Community Risks at the Offsite Project MEI

The total project community is usually based on the project' construction and operational risks and hazards. However, since the project's operational community risks would not be considered a significant source of TAC emissions, the total project risk is then solely based on the construction risk and hazards reported in Table 8.

Figure 1. Project Construction Site and Locations of Off-Site Sensitive Receptors and Maximum TAC Impacts



Cumulative Impact of All TAC Sources at the Offsite Project MEI

Community health risk assessments typically look at all substantial sources of TACs located within 1,000 feet of project sites and at new TAC sources that would be introduced by the project. These sources include rail lines, highways, busy surface streets, and stationary sources identified by BAAQMD. A review of the project area indicates that Caltrain has a rail line that passes through the project influence area and that traffic on El Camino Real (Highway 82) has average daily traffic (ADT) that exceeds 10,000 vehicles per day. All other nearby streets are assumed to have an ADT that is less than 10,000 vehicles per day. Six stationary sources were identified within the 1,000-foot influence area using the BAAQMD's stationary source Google Earth tool and GIS website. Figure 2 shows the sources affecting the project site. Details of the community risk calculations are included in *Attachment 5.*

Figure 2. Project Site, MEI, and Nearby TAC Sources

Rail Line – Caltrain

BAAQMD provides raster files with cancer risk and $PM_{2.5}$ values for all highways/freeways, roadways (ADT > 30,000), and rail lines within the Bay Area. The risk values shown in the raster files were modeled in AERMOD in 20x20-meter grid cells. The files incorporate the OEHHA 2015 factor. These raster files were used to screen the Caltrain rail line risk values upon the off-site MEI. At the off-site MEI, the cancer risk value would be 6.0 per million and the $PM_{2.5}$ value would be 0.01 $\mu g/m^3$.

Local Roadways – El Camino Real (Highway 82)

For local roadways, BAAQMD has provided the *Roadway Screening Analysis Calculator* to assess whether roadways with traffic volumes of over 10,000 vehicles per day may have a potentially significant effect on a proposed project.[18] Two adjustments were made to the cancer risk predictions made by this calculator: (1) adjustment for latest vehicle emissions rates predicted using EMFAC2014 and (2) adjustment of cancer risk to reflect new OEHHA guidance (see *Attachment 1*).

The calculator uses EMFAC2011 emission rates for the year 2014. However, an updated version of the emissions factor model, EMFAC2014, is available. This version predicts lower emission rates. An adjustment factor of 0.5 was developed by comparing emission rates of total organic gases (TOG) for running exhaust and running losses developed using EMFAC2011 for year 2014 and those from EMFAC2014 for 2018. The predicted cancer risk was then adjusted using a factor of 1.3744 to account for new OEHHA guidance. This factor was provided by BAAQMD for use with their CEQA screening tools that are used to predict cancer risk.

El Camino Real was identified as having over 10,000 vehicles per day. The ADT on El Camino Real was estimated to be 31,545 vehicles. This estimate was based on the peak-hour traffic volumes included in the project's traffic analysis for background plus project conditions.[19] The AM and PM peak-hour volumes were averaged and then multiplied by 10 to estimate the ADT.

The BAAQMD *Roadway Screening Analysis Calculator* for San Mateo County was used. El Camino Real was identified as a north-south directional roadway with the project sensitive receptors east of the roadway. Estimated risk values for the roadway is listed in Table 8. Note that BAAQMD has found that non-cancer hazards from all local roadways would be well below the BAAQMD thresholds. Chronic or acute HI for the roadway would be below 0.03.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth and identifies the location of nearby stationary sources and their estimated risk and hazard impacts. In

[18] Note that at the time of this analysis the BAAQMD Roadway Screening Analysis Calculator was an acceptable screening tool to use in air quality assessments. It is an overly conservative screening tool due to its use of an older EMFAC data set and singular meteorology data. Predicted risks from the local roadways would be lower with refined modeling.
[19] Hexagon Transportation Consultants, Inc. 2019. *1100 El Camino Real Mixed-Use Development*. November

addition, *BAAQMD's Permitted Stationary Sources 2017* GIS website[20] was used to locate updated nearby permitted stationary sources. Six stationary sources were identified with four of the sources being generators and the remaining two being gas stations. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD, who provided updated emissions data.[21] Those data were input into BAAQMD's *Risk and Hazards Emissions Screening Calculator* which computes the cancer risk, annual $PM_{2.5}$ concentrations, and HI using adjustments to account for new OEHHA guidance. The sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines, Gasoline Dispensing Facility Distance Multiplier Tool*, or *Generic Distance Multiplier Tool* when appropriate. Table 8 lists the results.

Summary of Cumulative TAC Risks at the Offsite Project MEI

Table 8 reports both the project and cumulative community risk impacts. The project would have an exceedance with respect to community risk caused by project construction and operation activities, since the maximum unmitigated cancer exceeds the BAAQMD single-source thresholds of greater than 10 per million. However, with *MM AIR-1 and AIR-2 (PBA 2.2-2)*, the project construction risks would be below the BAAQMD single-source thresholds. Mitigation assumptions for *MM AIR-1 and AIR-2 (PBA 2.2-2)* include BAAQMD's best management practices to control dust, forklifts are assumed to be compressed natural gas powered, generators are assumed to electric to simulate the use of temporary power line, and all other diesel-powered equipment are assumed to be equipped with U.S. Tier 4 interim engines.

The cumulative increased cancer risk, annual $PM_{2.5}$ concentration, and HI values (unmitigated or mitigated) would not exceed the BAAQMD cumulative source thresholds. Therefore, the project would not contribute to a cumulative increase in TAC emissions within the local area.

[20] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65
[21] Correspondence with Areana Flores, BAAQMD, September 26, 2019.

Table 8. Impacts from Combined Sources at Offsite Residential MEI

Source	Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Single-Sources			
Project Construction (Residential)			
Unmitigated	**25.9 (infant)**	**0.37**	0.02
Mitigated	4.3 (infant)	0.07	<0.01
Project Construction (Residential + Hotel)			
Unmitigated	**31.6 (infant)**	**0.37**	0.02
Mitigated	3.8 (infant)	0.08	<0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?			
Unmitigated	***Yes***	***Yes***	*No*
Mitigated	*No*	*No*	*No*
Cumulative-Sources			
Caltrain Rail Line	6.0	0.01	-
El Camino Real (Highway 82), MEI at 330-ft east, ADT 31,545	4.6	0.15	<0.03
City of Millbrae (Plant #20169, Generator), MEI at 300 meters	0.1	<0.01	<0.01
San Francisco Water Department (Plant #106250, Gas Station) MEI at 310 meters	<0.1	-	<0.01
SFPUC – Water Supply & Treatment (Plant #14241, Generator), MEI at 250 meters	<0.1	<0.01	<0.01
San Francisco Water Department (Plant #24451, 2 Generators) 380 meters	1.1	<0.01	0.13
Verizon Wireless (Plant #19561, Generator), MEI at 450 meters	0.3	<0.01	<0.01
Olympic (Plant #102970, Gas Station), MEI at 285 meters	<0.1	-	<0.01
Cumulative Total (Residential)			
Unmitigated	38.3	<0.57	<0.23
Mitigated	16.7	<0.27	<0.22
Cumulative Total (Residential + Hotel)			
Unmitigated	44.0	<0.57	<0.23
Mitigated	16.2	<0.28	<0.22
BAAQMD Cumulative Source Threshold	***>100***	***>0.8***	***>10.0***
Exceed Threshold?			
Unmitigated	*No*	*No*	*No*
Mitigated	*No*	*No*	*No*
Note: The mitigated construction emissions area based on *MM AIR-1 and AIR-2 (PBA 2.2-2)*			

MM AIR-1 (PBA 2.2-2) Construction Best Practices for Dust

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

Construction Best Practices for Dust

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. For projects over five acres in size, soil moisture should be maintained at a minimum of 12 percent. Moisture content can be verified by lab samples or a moisture probe.

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

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. Dry power sweeping should only be performed in conjunction with thorough watering of the subject roads.

- All vehicle speeds on unpaved roads and surfaces shall be limited to 15 mph.

- All roadway, driveway, and sidewalk paving shall be completed as soon as possible. Building pads shall be paved as soon as possible after grading.

- All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the Lead Agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. BAAQMD's Complaint Line (1-800-334-6367) shall also be included on posted signs to ensure compliance with applicable regulations.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

- All trucks and equipment, including their tires, shall be washed off before leaving the site.

- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

Effectiveness of Mitigation Measure AIR-1 (PBA MM 2.2-2)

Implementation of *Construction Best Practices for Dust in the PBA MM 2.2-2* are consistent with the BAAQMD-recommended basic control measures for reducing fugitive particulate matter. Fugitive dust impacts would be less than significant with application of the basic control measures.

MM AIR-2 (PBA-2.2-2) Construction Best Practices for Exhaust

Apply Tier 4 Emission Standards to All Diesel-Powered Off-Road Equipment

The project shall require that all diesel-powered off-road equipment meet U.S. EPA particulate matter emissions standards for Tier 4 Interim engines. The use of equipment meeting U.S. EPA Tier 3 engines with CARB level 3 verified diesel emissions control strategy would also meet this requirement. [22] Temporary power line would also need to be provided onsite in lieu of operating diesel generators. Additionally, forklifts operating onsite would need to power by compressed natural gas. The project applicant shall submit evidence (e.g. equipment list) that shows adherence to this mitigation measure to the City prior to commencement of construction activities.

Effectiveness of Mitigation Measures AIR 2

Implementation of *MM AIR-2* would reduce the cancer risk and $PM_{2.5}$ concentration, such that the mitigated infant cancer risk from the Project at the construction MEI would be 4.3 per million, the $PM_{2.5}$ concertation would be 0.07 µg/m^3, and the HI value would be <0.01. For the residences plus hotel scenario, the mitigated risk values would be 3.8 per million for cancer risk, 0.08 µg/m^3 for $PM_{2.5}$, and <0.01 for HI. After implementation of these mitigation measures, the project would not exceed the BAAQMD single-source thresholds with respect to community risk caused by construction activities.

[22] See http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

GREENHOUSE GAS EMISSIONS AND MITIGATION MEASURES

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions for California GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 80 percent below 1990 levels.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Executive Order B-30-15 & SB 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*.[23] While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive

[23] California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets.* November. Web: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons or HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 375, California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[24] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the

[24] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.

planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1,2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[25]

City of Millbrae Climate Action Plan

The City of Millbrae is currently preparing a climate action plan (CAP), which would help guide the City in reducing its local GHG emissions. The final draft CAP was presented to the City Council on June 23, 2020 and the document is still under CEQA review.[26] The City's goal with the CAP would be to reduce GHG emissions 32 percent by 2025 and 49 percent by 2030, which aligns with the SB 32 goal of reducing GHG emissions 40 percent below 1990 levels and is consistent with the BAAQMD guidelines for qualified GHG emission reduction strategy qualifications. The CAP will also help the City of Millbrae meet or exceed California's 2045 carbon neutrality goal (EO B-55-18). Additionally, the CAP will include new community measures to increase energy efficiency, increase water efficiency, encourage alternative modes of transportation, and reduce waste. Approval and adopted of this CAP is expected during Fall 2020.

BAAQMD Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines encourage GHG compliance be based on qualified GHG reduction plans (i.e. climate action plan) when available. The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). However, the City of Millbrae has not yet adopted the CAP, so this analysis cannot rely on consistency with the City's CAP to demonstrate that the project's GHG emissions would not be significant.

For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. In the event that operation of a project would occur beyond 2020, a threshold that addresses a future target is appropriate.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_{2e}/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.[27] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_{2e}/year threshold.

[25] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf
[26] City of Millbrae, 2020. *City of Millbrae Climate Action Plan Final Draft*. June. Web: https://www.ci.millbrae.ca.us/home/showdocument?id=23189
[27] Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

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

<u>CalEEMod Modeling</u>

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the operational period emissions. CalEEMod output is included in *Attachment 2*.

<u>Service Population Emissions</u>

The project service population efficiency rate is based on the number of future residents and future full-time employees. The number of future full-time employees for the proposed hotel per the project applicant is estimated to be a total of 30 employees. The number of future residents was calculated using the persons per household rate for the City of Millbrae provided by the California Department of Finance in the latest Population and Housing Estimates for Cities, Counties, and the State.[28] The total future resident population would be 1,064 using the 2.77 person per household rate for the City of Millbrae (i.e. multiplying the total 384 dwelling units by the 2.77 persons per household rate). The total service population would be 1,094 persons.

<u>Construction Greenhouse Gas Emissions</u>

GHG emissions associated with construction for the Project were computed to be 2,185 MT of CO_2e for the total construction period. For the residential and hotel component, the total construction GHG emissions were computed to be 2,964 MT of CO_2e. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. This project would implement Mitigation Measure GHG-1 during construction.

<u>Operational Greenhouse Gas Emissions</u>

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the projects that include the proposed residential

[28] State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2019*. Sacramento, California, May 2019.

project and the residential plus hotel project. The GHG emissions for the residential project are shown in Table 9. Emissions associated with the residential and hotel component are shown in Table 10.

As shown in Table 9 for the Project, the 2030 total emissions (1,724 MT CO_2e) exceed the 660 MT CO_2e/year bright-line threshold, but the 2030 service population emissions (1.62 MT CO_2e/year/service population) do not exceed the service population rate of 2.8 MT CO_2e/year/service population in 2030. The 2030 total emissions for the residences plus hotel scenario (2,547 MT CO_2e) exceed the bright-line threshold. However, the computed service population emissions of 2.33 MT CO_2e/year/service population do not exceed the 2030 per capita rate. To be considered significant, the project must exceed both the GHG significance threshold in metric tons per year and the service population significance threshold. Neither the Project nor the residences plus hotel scenario exceed both GHG thresholds.

Table 9. Annual GHG Emissions (CO_2e) in Metric Tons for the Project

Source Category	Proposed Project in 2025	Proposed Project in 2030
Area	5	5
Energy Consumption	180	180
Mobile	1,530	1,424
Solid Waste Generation	89	89
Water Usage	27	27
Total	1,831	1,724
Significance Threshold		*660 MT CO_2e/year*
Service Population Emissions (MT CO_2e/year/service population)*	1.72	1.62
Threshold		*2.8 in 2030*
Exceeds both thresholds?		*No*
Notes: *Based on a service population of 1,064 residents		

Table 10. Annual GHG Emissions (CO_2e) In Metric Tons for The Residences Plus Hotel Scenario

Source Category	Proposed Project in 2025		Proposed Project in 2030	
	Residential	Hotel	Residential	Hotel
Area	5	<1	5	<1
Energy Consumption	180	266	180	266
Mobile	1,530	532	1,424	495
Solid Waste Generation	89	55	89	55
Water Usage	27	5	27	5
	1,831	859	1,725	822
Total	2,690		2,547	
Significance Threshold			*660 MT CO_2e/year*	
Service Population Emissions (MT CO_2e/year/service population)*	2.46		2.33	
Significance Threshold			*2.8 in 2030*	
Exceeds both thresholds?			*No*	
Notes: *Based on a service population of 1,064 residents and 30 employees, which total to 1,094 persons				

In addition, this analysis also evaluates the operational GHG emissions for consistency with regulatory guidance from CARB and the California Office of Planning and Research (OPR). This qualitative analysis of GHG emissions along with the quantified approach, provided above, follows the suggested guidance from OPR.[29] Each source of GHG emissions was evaluated with the appropriate regulatory guidance. The CARB 2017 scoping plan along with other relevant State and local requirements and guidance was used as the basis to evaluate the project qualitatively since the City's CAP has not been updated to address current State GHG reduction targets.

Land Use Emissions

There are 73 existing trees on the project site with 62 of those trees being removed due to the direct impact of future construction, site improvements, and due to the moderate-to-low quality of the existing trees (as determined by the arborist). The 11 remaining trees would be preserved and relocated and supplemented along with over 375 new trees. Therefore, the project would not result in a net loss in trees and be consistent with the 2017 Scoping Plan's goal of avoiding losses in carbon sequestration.

Area GHG Emissions

Area sources include hearths, consumer product use (i.e. cleaning supplies, kitchen aerosols, and toiletries), architectural coatings, and landscape maintenance equipment. As shown in Table 10, the residential development would have very low GHG emissions, approximately 20 MT of CO_2e per year and the hotel would have less than one MT of CO_2e per year. The residential development and hotel do not propose to include any wood-burning or natural gas fireplaces in the dwelling units or guest rooms. The residential development would include firepits in the communal community courtyards. Minimal landscaping (e.g. lawn mowers) would be needed since the project proposes to include low maintenance native plants, groundcover, and shrubs.

Energy GHG Emissions

Energy use in CalEEMod is the combination of natural gas and electricity usage. As shown in Table 10, the residential development would generate approximately 180 MT of CO_2e per year and the hotel would generate approximately 266 MT of CO_2e per year. The electricity used by the project would be provided by PCE, which will be providing 100 percent carbon free energy and 100 percent renewable sourced energy by 2025 when the project is operational. The project would also include high-efficiency natural gas appliances in the dwelling units. The project would also follow the 2019 Building Energy Efficiency Standards. Using electricity from PCE and installing high-efficiency gas appliances would be consistent with the 2017 Scoping Plans goal of reducing use of electricity sourced from fossil fuels and the use of high-efficiency appliances would comply with potential additional actions suggested in the Scoping Plan.

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[29] Governor's Office of Planning and Research. 2018. *Discussion Draft CEQA and Climate Change Advisory*. December. Web: https://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf

Mobile GHG Emissions

In CalEEMod, mobile sources of GHG emissions include running and starting exhaust emissions, evaporative emissions, brake and tire wear, and fugitive dust from paved and unpaved roads. These emissions are associated with residents, workers, customers, and delivery vehicles travel. Since transportation GHG emissions are the largest contributor to California's total emissions, the 2017 Scoping Plan prioritize transportation sustainability. The main objectives from the CARB 2017 Scoping Plan is to implement low carbon fuel standards, to reduce carbon intensity, reduce vehicle miles traveled (VMT), and to increase fuel efficiency in vehicles. However, per a November 2018 progress report from CARB, the State is not on track to meet GHG reductions expected under SB 375 due to increase in VMT per capita.[30] To meet the EO S-03-05 2030 goals, it is necessary to reduce VMT and to integrate land use planning with transportation policy further to achieve the VMT per capita reduction.[31]

As shown in Table 10, the residential development would generate approximately 1,530 MT of CO_2e in 2025 and 1,424 MT of CO_2e in 2030. The hotel would generate approximately 532 MT of CO_2e in 2025 and 495 MT of CO_2e in 2030. This infill project would locate high-density housing and a hotel in close proximity to public transit (bus and train service), the San Francisco International (SFO) Airport, and a variety of commercial/retail developments are in close proximity. The project is one-mile northwest of the Millbrae Transit Center, which provides access to Caltrain and Bay Area Rapid Transit (BART), and there are shuttle services available that can transport people from the project to SFO airport that is approximately three miles east of the project site. There is also a bus stop for the San Mateo County Transit District 600 feet away from the project. In addition, the project would include 19 affordable rental apartments target at very low-income housing in a high-quality transit corridor. OPR suggests that it can be presumed that a development with affordable housing in infill locations near major transit would have lower VMT due to shorter commutes and proximity to workplaces.[32]

Therefore, this transit-oriented development would encourage alternative modes of transportation (e.g. walking, biking, using public transit) for residents, employees, and hotel guest, which would reduce VMT per capita from personal vehicle travel. This would be in alignment with the 2017 CARB Scoping goal, recommendations from OPR, and SB 375.

Solid Waste Generation GHG Emissions

Solid waste is the amount of the material that is disposed in landfills, recycled, or composted. CalEEMod computes the GHG emissions associated with the decomposition of waste disposed of in landfills. The residential development would generate approximately 89 MT of CO_2e per year of solid waste GHG emissions, while the hotel would produce 55 MT of CO_2e per year. The project would include a residential trash management plan that would design waste and recycling systems

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[30] California Air Resource Board, 2018. *2018 Progress Report California's Sustainable Communities and Climate Protection Act*. November. Web: https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf
[31] California Air Resource Board, 2019. *California Air Resources Board 2017 Scoping Plan-Identified VMT reductions and Relationships to State Climate Goals.* January. Web: https://ww2.arb.ca.gov/sites/default/files/2019-01/2017_sp_vmt_reductions_jan19.pdf
[32] Governor's Office of Planning and Research, 2018. *Technical Advisory On Evaluating Transportation Impacts in CEQA.* December. Web: https://www.opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

in the residential development that would separate waste and recycling. The project would comply with the City of Millbrae's Recycling & Waste Prevention Program and comply with AB 341's mandatory recycling requirement. This feature would comply with the City of Millbrae's Recycling & Waste Prevention Program, AB 341's mandatory recycling requirements and the 2017 Scoping Plan's goal of reducing landfill waste.

Water Usage GHG Emissions

Water usage is associated with indoor water, outdoor water and wastewater. CalEEMod computes indirect GHG emissions associated with the of supplying, distributing, and treating the of the water and wastewater. The residential development would generate 27 MT of CO_2e per year, while the hotel development would generate 5 MT of CO_2e per year. The project's outdoor water use would include a water efficient landscape with low water using plants and a water efficient irrigation system that would use recirculating water. The project would comply with the 2019 CALGreen Code standards and the 2019 Building Energy Efficiency Standards. These practices would be consistent' s with the 2017 Scoping Plan goal of reducing the energy intensity of the water sector.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would not conflict or otherwise interfere with the statewide GHG reduction measures identified in CARB's Scoping Plan nor would the project conflict with SB 100 goals. This is a proposed infill development with high-density housing and located near public transit and employment centers. For example, proposed buildings would be constructed in conformance with CALGreen and the Title 24 Building Code, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficacy standards. Compliance with the CalGreen and Title 24 Building Code is also consistent with policies PC6.12 (Water Saving Landscaping and Irrigation), PC6.15 (Energy Efficiency: Title 24) in the City of Millbrae's General Plan 1998-2015. The project would also use electricity provided by PCE, which plans to provide 100 percent carbon-free electricity by 2021 and 100 percent renewable by 2025. These target goals align with the target timelines established by SB 100.

MM GHG-1: Implement BAAQMD's Best Management Practices to Reduce GHG emissions from Construction

The project shall implement MM GHG-1 to reduce construction GHG emissions. The following measures, which are based on PBA MM 2.2-2, shall be applied to the project:

- Idling time of diesel-powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points
- All construction equipment shall be maintained and properly tuned in accordance with the manufacture's specifications
- Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational outputs for 2030 uses are also included in this attachment. Also included are any modeling assumptions.

Attachment 3 includes the EMFAC2017 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the construction health risk assessment. AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 5 includes the screening community risk calculations affecting the MEI. Due to the large size of the BAAQMD health risk calculators, these files were not included but are available upon request and would be provided in digital format.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminant (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[33] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[34] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[35] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs are calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day). As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of 30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD.

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33 OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.* Office of Environmental Health Hazard Assessment. February.

34 CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.

35 BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.* December 2016.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity that would have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR^* \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
8HrBR = 8-hour breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

* An 8-hour breathing rate is used for worker exposures.

The health risk parameters used in this evaluation are summarized as follows:

Parameter	***Exposure Type →***	**Infant**		**Child**		**Adult**
	Age Range →	**3rd Trimester**	**0<2**	**2 < 9**	**2 < 16**	**16 - 30**
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	631	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	861	745	335
Inhalation Absorption Factor		1	1	1	1	1
Averaging Time (years)		70	70	70	70	70
Exposure Duration (years)		0.25	2	14	14	14*
Exposure Frequency (days/year)		350	350	350	350	350*
Age Sensitivity Factor		10	10	3	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.72-1.0	0.73*

* For worker exposures (adult) the exposure duration and frequency are 25 years 250 days/year and FAH is not applicable.

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). The HI value represents the maximum concentration at which no adverse health effects to the respiratory system are anticipated to occur. OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Modeling Output

Air Quality Construction Information Data Request

Project Name: Anton Millbrae Center St-ECR Project

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	384	Dwelling Units	5.65	total project acres disturbed
	397,272	s.f. residential		
		s.f. retail		
		s.f. office/commercial		
		s.f. other, specify:		
	203,514	s.f. parking garage	536	spaces
		s.f. parking lot		spaces
Construction Hours		am to		pm

Pile Driving? No

Project include GENERATOR OR FIRE PUMP on-site? Y/N? _N___

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _________

Fuel Type: ____________

Location in project (Plans Desired if Available):

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	Start Date:	4/1/2021	Total phase:	23			Overall Import/Export Volumes
		End Date:	5/1/2021					
2	Concrete/Industrial Saws	81	0.73	6	23	6	276	Demolition Volume
2	Excavators	158	0.38	7	23	7	322	Square footage of buildings to be demolished
2	Rubber-Tired Dozers	247	0.4	7	23	7	322	(or total tons to be hauled
2	Tractors/Loaders/Backhoes	97	0.37	7	23	7	322	45,683 square feet or
								_?_ Hauling volume (tons
	Site Preperation	Start Date:	4/1/2021	Total phase:	138			Any pavement demolished and hauled? Yes_unknown_ tons
		End Date:	10/1/2021					
	Graders	187	0.41			0	0	
	Rubber Tired Dozers	247	0.4			0	0	
4	Tractors/Loaders/Backhoes	97	0.37	7	138	7	3864	
	Grading / Excavation	Start Date:	6/1/2021	Total phase:	92			
		End Date:	2/1/2022					Soil Hauling Volume
2	Excavators	158	0.38	7	92	7	1288	Export volume = _5,022_ cubic yards?
2	Graders	187	0.41	7	92	7	1288	Import volume = _26,734_ cubic yards?
2	Rubber Tired Dozers	247	0.4	7	92	7	1288	
	Concrete/Industrial Saws	81	0.73			0	0	
	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
	Trenching/Foundation	Start Date:	6/1/2021	Total phase:	154			
		End Date:	2/1/2022					
4	Tractor/Loader/Backhoe	97	0.37	7	154	7	4312	
	Excavators	158	0.38			0	0	
	Other Equipment?							
	Building - Exterior	Start Date:	2/1/2022	Total phase:	528			Cement Trucks? _unknown_ Total Round-Trips
		End Date:	2/1/2024					
	Cranes	231	0.29			0	0	Electric? (Y/N) _N/A_ Otherwise assumed diese
2	Forklifts	89	0.2	7	528	7	7392	Liquid Propane (LPG)? (Y/N) _Y_ Otherwise Assumed diese
2	Generator Sets	84	0.74	7	100	1.32575758	1400	Or temporary line power? (Y/N) _May be needed for a portion of the projec_
2	Tractors/Loaders/Backhoes	97	0.37	7	528	7	7392	
2	Welders	46	0.45	7	528	7	7392	
	Other Equipment?						0	
	Paving	Start Date:	2/1/2024	Total phase:	44			
		Start Date:	4/1/2024					
2	Cement and Mortar Mixers	9	0.56	7	44	7	616	
2	Pavers	130	0.42	7	44	7	616	Asphalt? _Uknown at this time_ cubic yards or ____ round trips?
2	Paving Equipment	132	0.36	7	44	7	616	
2	Rollers	80	0.38	7	44	7	616	
2	Tractors/Loaders/Backhoes	97	0.37	7	44	7	616	
	Other Equipment?							
Building - Interior/Architectural Coating		Start Date:	3/1/2022	Total phase:	502			
		End Date:	2/1/2024					
	Air Compressors	78	0.48	7	502	79.8636364	0	
	Aerial Lift	62	0.31	7	502	79.8636364	0	
	Other Equipment?							

Equipment types listed in "Equipment Types" worksheet tab

Equipment listed in this sheet is to provide an example of inputs

Complete one sheet for each project component

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horepower or load factor, as appropriate

Air Quality Construction Information Data Request

Project Name: Anton Millbrae Hotel Center St-ECR Project

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

	Project Size	~~187~~	Dwelling Units	1.17	total project acres disturbed			
		200 room	Hotel					Pile Driving? No
		5,500	s.f. retail					
			s.f. office/commercial					Project include GENERATOR OR FIRE PUMP on-site? Y/N? _N___
		130,467	s.f. other, specify:					IF YES (if BOTH separate values) -->
		69,533	s.f. parking garage	187	spaces			Kilowatts/Horsepower: _________
			s.f. parking lot		spaces			Fuel Type: ____________
	Construction Hours		am to		pm			Location in project (Plans Desired if Available):
Quantity	**Description**	**HP**	**Load Factor**	**Hours/day**	**Total Work Days**	**Avg. Hours per day**	**Annual Hours**	**Comments**
	Demolition	Start Date:		Total phase:	0			Overall Import/Export Volumes
		End Date:						
	Concrete/Industrial Saws	81	0.73			#DIV/0!	0	Demolition Volume
	Excavators	158	0.38			#DIV/0!	0	Square footage of buildings to be demolished
	Rubber-Tired Dozers	247	0.4			#DIV/0!	0	(or total tons to be hauled
	Tractors/Loaders/Backhoes	97	0.37			#DIV/0!	0	All Demo will occur during Apartment build ou
	Site Preperation	Start Date:	10/1/2022	Total phase:	138			
		End Date:	4/4/2023					
	Graders	187	0.41			0	0	
	Rubber Tired Dozers	247	0.4			0	0	
4	Tractors/Loaders/Backhoes	97	0.37	7	138	7	3864	
	Grading / Excavation	Start Date:	12/3/2022	Total phase:	69			
		End Date:	3/4/2023					Soil Hauling Volume
2	Excavators	158	0.38	7	69	7	966	Export volume = _ cubic yards?
2	Graders	187	0.41	7	69	7	966	Import volume = _cubic yards?
2	Rubber Tired Dozers	247	0.4	7	69	7	966	Major import & Export done during Apartment Build out
	Concrete/Industrial Saws	81	0.73			0	0	
	Tractors/Loaders/Backhoes	97	0.37			0	0	
	Other Equipment?							
	Trenching/Foundation	Start Date:	3/4/2022	Total phase:	66			
		End Date:	6/1/2023					
4	Tractor/Loader/Backhoe	97	0.37	7	66	7	1848	
	Excavators	158	0.38			0	0	
	Other Equipment?							
	Building - Exterior	Start Date:	6/1/2023	Total phase:	352			Cement Trucks? _unknown_ Total Round-Trips
		End Date:	11/4/2024					
	Cranes	231	0.29			0	0	Electric? (Y/N) __N/A_ Otherwise assumed diese
2	Forklifts	89	0.2	7	352	7	4928	Liquid Propane (LPG)? (Y/N) _N_ Otherwise Assumed diese
2	Generator Sets	84	0.74	7	22	0.4375	308	Or temporary line power? (Y/N) _May be needed for a portion of the projec__
2	Tractors/Loaders/Backhoes	97	0.37	7	352	7	4928	
2	Welders	46	0.45	7	352	7	4928	
	Other Equipment?					0		
	Paving	Start Date:	10/1/2023	Total phase:	44			
		Start Date:	12/1/2024					
2	Cement and Mortar Mixers	9	0.56	7	44	7	616	
2	Pavers	130	0.42	7	44	7	616	Asphalt? _Uknown at this time__ cubic yards or ____ round trips?
2	Paving Equipment	132	0.36	7	44	7	616	
2	Rollers	80	0.38	7	44	7	616	
2	Tractors/Loaders/Backhoes	97	0.37	7	44	7	616	
	Other Equipment?							
Building - Interior/Architectural Coating		Start Date:	7/1/2023	Total phase:	336			
		End Date:	11/4/2024					
	Air Compressors	78	0.48	7	336	53.4545455	0	
	Aerial Lift	62	0.31	7	336	53.4545455	0	
	Other Equipment?							

Equipment types listed in "Equipment Types" worksheet tab

Equipment listed in this sheet is to provide an example of inputs

Complete one sheet for each project component

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horepower or load factor, as appropriate

1100 El Camino Real

Land Use	ITE Code	Size	Daily Trip Rates	Daily Trips	AM Peak Hour Pk-Hr Rate	AM Trips In	AM Trips Out	AM Trips Total	PM Peak Hour Pk-Hr Rate	PM Trips In	PM Trips Out	PM Trips Total
Proposed Project												
Apartments[1]	221	384 units	5.45	2,091	0.33	33	95	128	0.42	98	63	161
Hotel[2]	310	200 rooms	4.47	894	0.29	34	23	57	0.25	25	24	49
		Gross Trips:		2,985		67	118	185		123	87	210
Existing Use												
Hotel/Restaurant[3]		220 rooms	4.47	(983)	0.29	(28)	(35)	(63)	0.25	(33)	(21)	(54)
Net New Project Trips:				**2,002**		**39**	**83**	**122**		**90**	**66**	**156**

Notes:

[1] Trips for apartments were estimated using regression equation from ITE *Trip Generation Manual, 10th Edition*, 2017.

[2] Hotel trips listed in this table were estimated using the trip rates observed at the existing hotel on site. The observed hotel trip rates are substantially lower than the hotel trip rates published in the ITE *Trip Generation Manual, 10th Edition* due to the project's proximity to transit and other factors related to the project location. To be conservative, the level of service calculations and queuing analysis contained in this report are based on ITE trip rates for hotels. Based on ITE rates, the proposed 200-room hotel is estimated to generate 1,831 daily trips including 95 and 124 trips during the AM and PM peak hours, respectively.

[3] Peak-hour trips from driveway counts conducted on Thursday, May 25th, 2017. Daily trips were estimated based on the ratio of daily trips to AM and PM peak hour trips published in the ITE *Trip Generation Manual, 10th Edition*, 2017.

Construction Criteria Air Pollutants - Residential Only						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust		
Year	Tons					
2021	0.2946	3.4823	0.1436	0.1324		
2022	1.5483	2.1793	0.0683	0.0652		
2023	1.7856	2.0901	0.0642	0.0614		
2024	0.1902	0.4706	0.0182	0.017		
2025						
2026						
2027						
	Total Construction Emissions					
Tons	3.82	8.22	0.29	0.28		
	Average Daily Emissions				Workdays	784
Pounds/Workdays	9.74	20.98	0.75	0.70		

Operational Criteria Air Pollutants - Residential Only						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
Total	2.67	1.00	1.78	0.51		
	Existing Use Emissions					
Total						
	Net Annual Operational Emissions					
Tons/year	2.67	1.00	1.78	0.51		
	Average Daily Emissions					
Pounds Per Day	14.64	5.51	9.77	2.77		

Category	**CO2e - Residential Only**			
	Project	Existing	Project 2030	Existing 2030
Area	5		5	
Energy	180		180	
Mobile	1,530		1,424	
Waste	89		89	
Water	27		27	
TOTAL	1,831		1,724	
Net GHG Emissions		1831		1724
Service Population	1,064			
Per Capita Emissions		1.72		1.62

Construction Criteria Air Pollutants - Residential + Hotel						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust		
Year	Tons					
2021	0.2946	3.4823	0.1436	0.1324		
2022	1.5483	2.1793	0.0683	0.0652		
2023	1.7856	2.0901	0.0642	0.0614		
2024	0.1902	0.4706	0.0182	0.017		
2022	0.0645	0.6606	0.0325	0.0299		
2023	0.4633	1.6476	0.066	0.0618		
2024	0.6127	1.3898	0.0511	0.0484		
	Total Construction Emissions					
Tons	4.96	11.92	0.44	0.42		
	Average Daily Emissions				Workdays	957
Pounds/Workdays	10.36	24.91	0.93	0.87		

Operational Criteria Air Pollutants - Residential + Hotel						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
Residential	2.67	1.00	1.78	0.51		
Hotel	0.92	0.54	0.63	0.18		
	Existing Use Emissions					
Total						
	Net Annual Operational Emissions					
Tons/year	3.59	1.55	2.41	0.69		
	Average Daily Emissions					
Annual Pounds	19.69	8.48	13.20	3.78		

Category	**CO_2e - Residential + Hotel**					
	Project		**Existing**	**Project 2030**		**Existing 2030**
	Res	**Hotel**		**Res**	**Hotel**	
Area	5	0.01		5	0.01	
Energy	180	266		180	266	
Mobile	1,530	532		1,424	495	
Waste	89	55		89	55	
Water	27	5		27	5	
TOTAL	1,831	859		1,724	822	
		2,689			2,546	
Net GHG Emissions			2,689			2,546
Service Population	1094					
Per Capita Emissions			2.46			2.33

Anton Millbrae Center - Multi-family Housing AQ

San Mateo County, Annual

Construction Criteria Pollutants Model for the Residential Development

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	548.00	Space	0.00	203,514.00	0
Parking Lot	12.00	Space	0.00	4,800.00	0
Apartments Mid Rise	384.00	Dwelling Unit	5.56	397,272.00	1098

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PCE

Land Use - 384 DU & 397,272 sqft on 5.56-acres. 548 parking spaces in an enclosed parking with elevator and 12 surface parking spaces

Construction Phase - Exact start date and total workdays

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Trips and VMT - AQ

Demolition - Demolition of 45,683-sqft

Grading - export: 5,022-cy, import: 26,734-cy

Vehicle Trips - 5.45, 5.24, 4.80

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation, CNG for forklifts, temporary power line instead of generators

Woodstoves - No wood hearths but assuming gas...total of 122.88

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	502.00
tblConstructionPhase	NumDays	230.00	528.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	92.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	10.00	138.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	57.60	122.88
tblFireplaces	NumberWood	65.28	0.00
tblGrading	AcresOfGrading	80.50	10.00
tblGrading	MaterialExported	0.00	5,022.00
tblGrading	MaterialImported	0.00	26,734.00
tblLandUse	LandUseSquareFeet	219,200.00	203,514.00
tblLandUse	LandUseSquareFeet	384,000.00	397,272.00
tblLandUse	LotAcreage	4.93	0.00
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	10.11	5.56
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblVehicleTrips	ST_TR	6.39	5.24
tblVehicleTrips	SU_TR	5.86	4.80
tblVehicleTrips	WD_TR	6.65	5.45
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
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					
2021	0.2946	3.4823	2.4752	5.5000e-003	0.5681	0.1436	0.7116	0.2853	0.1324	0.4177	0.0000	508.9269	508.9269	0.1240	0.0000	512.0274
2022	1.5483	2.1793	2.8041	8.0800e-003	0.4638	0.0683	0.5321	0.1248	0.0652	0.1900	0.0000	738.4614	738.4614	0.0655	0.0000	740.0984
2023	1.7856	2.0901	3.0165	8.6700e-003	0.5108	0.0642	0.5750	0.1374	0.0614	0.1988	0.0000	792.6582	792.6582	0.0703	0.0000	794.4165
2024	0.1902	0.4706	0.7054	1.5400e-003	0.0596	0.0182	0.0777	0.0160	0.0170	0.0330	0.0000	138.1662	138.1662	0.0237	0.0000	138.7578
Maximum	**1.7856**	**3.4823**	**3.0165**	**8.6700e-003**	**0.5681**	**0.1436**	**0.7116**	**0.2853**	**0.1324**	**0.4177**	**0.0000**	**792.6582**	**792.6582**	**0.1240**	**0.0000**	**794.4165**

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					

2021	0.0918	1.9790	2.7772	5.5000e-003	0.2852	7.9600e-003	0.2931	0.0755	7.8700e-003	0.0834	0.0000	508.9265	508.9265	0.1240	0.0000	512.0270
2022	1.4465	1.9823	4.3538	8.0800e-003	0.4638	0.0294	0.4932	0.1248	0.0290	0.1538	0.0000	725.1107	725.1107	0.0672	0.0000	726.7911
2023	1.6862	1.9320	4.6937	8.6700e-003	0.5108	0.0299	0.5407	0.1374	0.0295	0.1669	0.0000	778.1344	778.1344	0.0723	0.0000	779.9421
2024	0.1646	0.4638	0.9473	1.5400e-003	0.0596	4.3600e-003	0.0639	0.0160	4.3200e-003	0.0203	0.0000	136.5461	136.5461	0.0239	0.0000	137.1435
Maximum	**1.6862**	**1.9823**	**4.6937**	**8.6700e-003**	**0.5108**	**0.0299**	**0.5407**	**0.1374**	**0.0295**	**0.1669**	**0.0000**	**778.1344**	**778.1344**	**0.1240**	**0.0000**	**779.9421**

	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	**11.25**	**22.68**	**-41.89**	**0.00**	**17.66**	**75.67**	**26.66**	**37.23**	**74.36**	**49.44**	**0.00**	**1.35**	**1.35**	**-1.39**	**0.00**	**1.35**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2021**	**6-30-2021**	1.2784	0.6804
2	**7-1-2021**	**9-30-2021**	2.1020	1.1341
3	**10-1-2021**	**12-31-2021**	0.3764	0.2384
4	**1-1-2022**	**3-31-2022**	0.5457	0.4930
5	**4-1-2022**	**6-30-2022**	1.0461	0.9648
6	**7-1-2022**	**9-30-2022**	1.0576	0.9754
7	**10-1-2022**	**12-31-2022**	1.0698	0.9877
8	**1-1-2023**	**3-31-2023**	0.9641	0.9004
9	**4-1-2023**	**6-30-2023**	0.9644	0.9000
10	**7-1-2023**	**9-30-2023**	0.9750	0.9099
11	**10-1-2023**	**12-31-2023**	0.9855	0.9204
12	**1-1-2024**	**3-31-2024**	0.6414	0.6102
13	**4-1-2024**	**6-30-2024**	0.0092	0.0089
		Highest	2.1020	1.1341

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	4/1/2021	5/3/2021	5	23	
2	Site Preparation	Site Preparation	4/1/2021	10/11/2021	5	138	
3	Grading	Grading	6/1/2021	10/6/2021	5	92	
4	Trenching/Foundation	Trenching	6/1/2021	12/31/2021	5	154	
5	Building Construction	Building Construction	2/1/2022	2/8/2024	5	528	
6	Architectural Coating	Architectural Coating	3/1/2022	1/31/2024	5	502	
7	Paving	Paving	2/1/2024	4/2/2024	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 804,476; Residential Outdoor: 268,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	6.00	81	0.73
Demolition	Excavators	2	7.00	158	0.38
Demolition	Rubber Tired Dozers	2	7.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Grading	Excavators	2	7.00	158	0.38
Grading	Graders	2	7.00	187	0.41
Grading	Rubber Tired Dozers	2	7.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Trenching/Foundation	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20

Building Construction	Generator Sets	2	1.30	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	2	7.00	46	0.45
Architectural Coating	Aerial Lifts	1	7.00	63	0.31
Architectural Coating	Air Compressors	1	7.00	78	0.48
Paving	Cement and Mortar Mixers	2	7.00	9	0.56
Paving	Pavers	2	7.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	7.00	97	0.37

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	8	20.00	0.00	208.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	3,970.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	364.00	75.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	73.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	10	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0225	0.0000	0.0225	3.4000e-003	0.0000	3.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0361	0.3547	0.2560	4.5000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	39.0052	39.0052	0.0102	0.0000	39.2591
Total	**0.0361**	**0.3547**	**0.2560**	**4.5000e-004**	**0.0225**	**0.0181**	**0.0405**	**3.4000e-003**	**0.0169**	**0.0203**	**0.0000**	**39.0052**	**39.0052**	**0.0102**	**0.0000**	**39.2591**

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	8.8000e-004	0.0309	0.0145	8.0000e-005	1.7400e-003	9.0000e-005	1.8300e-003	4.8000e-004	9.0000e-005	5.7000e-004	0.0000	8.5419	8.5419	1.0900e-003	0.0000	8.5692
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	5.9000e-004	3.8000e-004	4.1300e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4541	1.4541	3.0000e-005	0.0000	1.4547
Total	**1.4700e-003**	**0.0313**	**0.0186**	**1.0000e-004**	**3.5500e-003**	**1.0000e-004**	**3.6500e-003**	**9.6000e-004**	**1.0000e-004**	**1.0600e-003**	**0.0000**	**9.9960**	**9.9960**	**1.1200e-003**	**0.0000**	**10.0240**

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					0.0101	0.0000	0.0101	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4600e-003	0.1568	0.2837	4.5000e-004		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	39.0052	39.0052	0.0102	0.0000	39.2590
Total	**7.4600e-003**	**0.1568**	**0.2837**	**4.5000e-004**	**0.0101**	**7.0000e-004**	**0.0108**	**7.7000e-004**	**7.0000e-004**	**1.4700e-003**	**0.0000**	**39.0052**	**39.0052**	**0.0102**	**0.0000**	**39.2590**

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	8.8000e-004	0.0309	0.0145	8.0000e-005	1.7400e-003	9.0000e-005	1.8300e-003	4.8000e-004	9.0000e-005	5.7000e-004	0.0000	8.5419	8.5419	1.0900e-003	0.0000	8.5692
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	5.9000e-004	3.8000e-004	4.1300e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4541	1.4541	3.0000e-005	0.0000	1.4547
Total	**1.4700e-003**	**0.0313**	**0.0186**	**1.0000e-004**	**3.5500e-003**	**1.0000e-004**	**3.6500e-003**	**9.6000e-004**	**1.0000e-004**	**1.0600e-003**	**0.0000**	**9.9960**	**9.9960**	**1.1200e-003**	**0.0000**	**10.0240**

3.3 Site Preparation - 2021

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	0.0452	0.4578	0.5459	7.5000e-004		0.0270	0.0270		0.0248	0.0248	0.0000	65.9227	65.9227	0.0213	0.0000	66.4558
Total	**0.0452**	**0.4578**	**0.5459**	**7.5000e-004**	**0.0000**	**0.0270**	**0.0270**	**0.0000**	**0.0248**	**0.0248**	**0.0000**	**65.9227**	**65.9227**	**0.0213**	**0.0000**	**66.4558**

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	1.7600e-003	1.1400e-003	0.0124	5.0000e-005	5.4300e-003	3.0000e-005	5.4700e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.3623	4.3623	8.0000e-005	0.0000	4.3642
Total	**1.7600e-003**	**1.1400e-003**	**0.0124**	**5.0000e-005**	**5.4300e-003**	**3.0000e-005**	**5.4700e-003**	**1.4500e-003**	**3.0000e-005**	**1.4800e-003**	**0.0000**	**4.3623**	**4.3623**	**8.0000e-005**	**0.0000**	**4.3642**

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	0.0168	0.3271	0.5656	7.5000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	65.9227	65.9227	0.0213	0.0000	66.4557
Total	**0.0168**	**0.3271**	**0.5656**	**7.5000e-004**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**65.9227**	**65.9227**	**0.0213**	**0.0000**	**66.4557**

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	1.7600e-003	1.1400e-003	0.0124	5.0000e-005	5.4300e-003	3.0000e-005	5.4700e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.3623	4.3623	8.0000e-005	0.0000	4.3642
Total	**1.7600e-003**	**1.1400e-003**	**0.0124**	**5.0000e-005**	**5.4300e-003**	**3.0000e-005**	**5.4700e-003**	**1.4500e-003**	**3.0000e-005**	**1.4800e-003**	**0.0000**	**4.3623**	**4.3623**	**8.0000e-005**	**0.0000**	**4.3642**

3.4 Grading - 2021

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					0.4919	0.0000	0.4919	0.2673	0.0000	0.2673	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1392	1.5335	0.7307	1.6400e-003		0.0664	0.0664		0.0611	0.0611	0.0000	143.8095	143.8095	0.0465	0.0000	144.9723
Total	**0.1392**	**1.5335**	**0.7307**	**1.6400e-003**	**0.4919**	**0.0664**	**0.5583**	**0.2673**	**0.0611**	**0.3284**	**0.0000**	**143.8095**	**143.8095**	**0.0465**	**0.0000**	**144.9723**

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	0.0168	0.5905	0.2763	1.5800e-003	0.0332	1.7900e-003	0.0350	9.1300e-003	1.7100e-003	0.0108	0.0000	163.0350	163.0350	0.0209	0.0000	163.5568
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	1.7600e-003	1.1400e-003	0.0124	5.0000e-005	5.4300e-003	3.0000e-005	5.4700e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.3623	4.3623	8.0000e-005	0.0000	4.3642
Total	**0.0185**	**0.5916**	**0.2887**	**1.6300e-003**	**0.0386**	**1.8200e-003**	**0.0405**	**0.0106**	**1.7400e-003**	**0.0123**	**0.0000**	**167.3972**	**167.3972**	**0.0210**	**0.0000**	**167.9211**

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					0.2213	0.0000	0.2213	0.0602	0.0000	0.0602	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0250	0.5047	0.9631	1.6400e-003		2.6700e-003	2.6700e-003		2.6700e-003	2.6700e-003	0.0000	143.8094	143.8094	0.0465	0.0000	144.9721
Total	**0.0250**	**0.5047**	**0.9631**	**1.6400e-003**	**0.2213**	**2.6700e-003**	**0.2240**	**0.0602**	**2.6700e-003**	**0.0628**	**0.0000**	**143.8094**	**143.8094**	**0.0465**	**0.0000**	**144.9721**

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	0.0168	0.5905	0.2763	1.5800e-003	0.0332	1.7900e-003	0.0350	9.1300e-003	1.7100e-003	0.0108	0.0000	163.0350	163.0350	0.0209	0.0000	163.5568
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

	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
Worker	1.7600e-003	1.1400e-003	0.0124	5.0000e-005	5.4300e-003	3.0000e-005	5.4700e-003	1.4500e-003	3.0000e-005	1.4800e-003	0.0000	4.3623	4.3623	8.0000e-005	0.0000	4.3642
Total	**0.0185**	**0.5916**	**0.2887**	**1.6300e-003**	**0.0386**	**1.8200e-003**	**0.0405**	**0.0106**	**1.7400e-003**	**0.0123**	**0.0000**	**167.3972**	**167.3972**	**0.0210**	**0.0000**	**167.9211**

3.5 Trenching/Foundation - 2021

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					
Off-Road	0.0505	0.5109	0.6091	8.4000e-004		0.0301	0.0301		0.0277	0.0277	0.0000	73.5659	73.5659	0.0238	0.0000	74.1608
Total	**0.0505**	**0.5109**	**0.6091**	**8.4000e-004**		**0.0301**	**0.0301**		**0.0277**	**0.0277**	**0.0000**	**73.5659**	**73.5659**	**0.0238**	**0.0000**	**74.1608**

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	1.9600e-003	1.2800e-003	0.0138	5.0000e-005	6.0600e-003	4.0000e-005	6.1000e-003	1.6100e-003	3.0000e-005	1.6500e-003	0.0000	4.8680	4.8680	9.0000e-005	0.0000	4.8702
Total	**1.9600e-003**	**1.2800e-003**	**0.0138**	**5.0000e-005**	**6.0600e-003**	**4.0000e-005**	**6.1000e-003**	**1.6100e-003**	**3.0000e-005**	**1.6500e-003**	**0.0000**	**4.8680**	**4.8680**	**9.0000e-005**	**0.0000**	**4.8702**

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					
Off-Road	0.0188	0.3651	0.6312	8.4000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	73.5659	73.5659	0.0238	0.0000	74.1607
Total	**0.0188**	**0.3651**	**0.6312**	**8.4000e-004**		**1.3600e-003**	**1.3600e-003**		**1.3600e-003**	**1.3600e-003**	**0.0000**	**73.5659**	**73.5659**	**0.0238**	**0.0000**	**74.1607**

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	1.9600e-003	1.2800e-003	0.0138	5.0000e-005	6.0600e-003	4.0000e-005	6.1000e-003	1.6100e-003	3.0000e-005	1.6500e-003	0.0000	4.8680	4.8680	9.0000e-005	0.0000	4.8702
Total	**1.9600e-003**	**1.2800e-003**	**0.0138**	**5.0000e-005**	**6.0600e-003**	**4.0000e-005**	**6.1000e-003**	**1.6100e-003**	**3.0000e-005**	**1.6500e-003**	**0.0000**	**4.8680**	**4.8680**	**9.0000e-005**	**0.0000**	**4.8702**

3.6 Building Construction - 2022

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					
Off-Road	0.1289	0.9907	1.2067	1.7600e-003		0.0525	0.0525		0.0499	0.0499	0.0000	146.5461	146.5461	0.0333	0.0000	147.3791
Total	**0.1289**	**0.9907**	**1.2067**	**1.7600e-003**		**0.0525**	**0.0525**		**0.0499**	**0.0499**	**0.0000**	**146.5461**	**146.5461**	**0.0333**	**0.0000**	**147.3791**

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	0.0269	0.8779	0.4001	2.3100e-003	0.0584	1.8900e-003	0.0603	0.0169	1.8000e-003	0.0187	0.0000	231.5353	231.5353	0.0201	0.0000	232.0387
Worker	0.1047	0.0651	0.7272	2.9300e-003	0.3424	2.0400e-003	0.3445	0.0911	1.8800e-003	0.0930	0.0000	264.9400	264.9400	4.5000e-003	0.0000	265.0526
Total	**0.1316**	**0.9430**	**1.1273**	**5.2400e-003**	**0.4009**	**3.9300e-003**	**0.4048**	**0.1080**	**3.6800e-003**	**0.1117**	**0.0000**	**496.4754**	**496.4754**	**0.0246**	**0.0000**	**497.0913**

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					
Off-Road	0.0271	0.7937	2.7563	1.7600e-003		0.0137	0.0137		0.0137	0.0137	0.0000	133.1954	133.1954	0.0351	0.0000	134.0719
Total	**0.0271**	**0.7937**	**2.7563**	**1.7600e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**133.1954**	**133.1954**	**0.0351**	**0.0000**	**134.0719**

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	0.0269	0.8779	0.4001	2.3100e-003	0.0584	1.8900e-003	0.0603	0.0169	1.8000e-003	0.0187	0.0000	231.5353	231.5353	0.0201	0.0000	232.0387
Worker	0.1047	0.0651	0.7272	2.9300e-003	0.3424	2.0400e-003	0.3445	0.0911	1.8800e-003	0.0930	0.0000	264.9400	264.9400	4.5000e-003	0.0000	265.0526
Total	**0.1316**	**0.9430**	**1.1273**	**5.2400e-003**	**0.4009**	**3.9300e-003**	**0.4048**	**0.1080**	**3.6800e-003**	**0.1117**	**0.0000**	**496.4754**	**496.4754**	**0.0246**	**0.0000**	**497.0913**

3.6 Building Construction - 2023

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					
Off-Road	0.1286	1.0056	1.3048	1.9200e-003		0.0487	0.0487		0.0462	0.0462	0.0000	159.4922	159.4922	0.0357	0.0000	160.3855
Total	**0.1286**	**1.0056**	**1.3048**	**1.9200e-003**		**0.0487**	**0.0487**		**0.0462**	**0.0462**	**0.0000**	**159.4922**	**159.4922**	**0.0357**	**0.0000**	**160.3855**

Unmitigated Construction Off-Site

Category	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
	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	0.0232	0.7491	0.4285	2.4300e-003	0.0636	1.0500e-003	0.0646	0.0184	1.0000e-003	0.0194	0.0000	244.6993	244.6993	0.0215	0.0000	245.2377
Worker	0.1082	0.0643	0.7365	3.0600e-003	0.3725	2.1900e-003	0.3747	0.0991	2.0100e-003	0.1012	0.0000	277.3407	277.3407	4.4300e-003	0.0000	277.4515
Total	**0.1314**	**0.8134**	**1.1651**	**5.4900e-003**	**0.4361**	**3.2400e-003**	**0.4393**	**0.1175**	**3.0100e-003**	**0.1205**	**0.0000**	**522.0400**	**522.0400**	**0.0260**	**0.0000**	**522.6892**

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	0.0291	0.8475	2.9820	1.9200e-003		0.0144	0.0144		0.0144	0.0144	0.0000	144.9685	144.9685	0.0377	0.0000	145.9112
Total	**0.0291**	**0.8475**	**2.9820**	**1.9200e-003**		**0.0144**	**0.0144**		**0.0144**	**0.0144**	**0.0000**	**144.9685**	**144.9685**	**0.0377**	**0.0000**	**145.9112**

Mitigated Construction Off-Site

Category	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
	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	0.0232	0.7491	0.4285	2.4300e-003	0.0636	1.0500e-003	0.0646	0.0184	1.0000e-003	0.0194	0.0000	244.6993	244.6993	0.0215	0.0000	245.2377
Worker	0.1082	0.0643	0.7365	3.0600e-003	0.3725	2.1900e-003	0.3747	0.0991	2.0100e-003	0.1012	0.0000	277.3407	277.3407	4.4300e-003	0.0000	277.4515
Total	**0.1314**	**0.8134**	**1.1651**	**5.4900e-003**	**0.4361**	**3.2400e-003**	**0.4393**	**0.1175**	**3.0100e-003**	**0.1205**	**0.0000**	**522.0400**	**522.0400**	**0.0260**	**0.0000**	**522.6892**

3.6 Building Construction - 2024

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					
Off-Road	0.0134	0.1062	0.1451	2.1000e-004		4.7100e-003	4.7100e-003		4.4700e-003	4.4700e-003	0.0000	17.7939	17.7939	3.9400e-003	0.0000	17.8925
Total	**0.0134**	**0.1062**	**0.1451**	**2.1000e-004**		**4.7100e-003**	**4.7100e-003**		**4.4700e-003**	**4.4700e-003**	**0.0000**	**17.7939**	**17.7939**	**3.9400e-003**	**0.0000**	**17.8925**

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	2.5100e-003	0.0812	0.0485	2.7000e-004	7.0900e-003	1.1000e-004	7.2000e-003	2.0500e-003	1.1000e-004	2.1600e-003	0.0000	27.0488	27.0488	2.4200e-003	0.0000	27.1093
Worker	0.0115	6.5300e-003	0.0768	3.3000e-004	0.0416	2.4000e-004	0.0418	0.0111	2.2000e-004	0.0113	0.0000	29.7312	29.7312	4.5000e-004	0.0000	29.7424

Total	**0.0140**	**0.0878**	**0.1253**	**6.0000e-004**	**0.0486**	**3.5000e-004**	**0.0490**	**0.0131**	**3.3000e-004**	**0.0134**	**0.0000**	**56.7799**	**56.7799**	**2.8700e-003**	**0.0000**	**56.8517**

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					
Off-Road	3.2200e-003	0.0931	0.3315	2.1000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	16.1739	16.1739	4.1700e-003	0.0000	16.2783
Total	**3.2200e-003**	**0.0931**	**0.3315**	**2.1000e-004**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**16.1739**	**16.1739**	**4.1700e-003**	**0.0000**	**16.2783**

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	2.5100e-003	0.0812	0.0485	2.7000e-004	7.0900e-003	1.1000e-004	7.2000e-003	2.0500e-003	1.1000e-004	2.1600e-003	0.0000	27.0488	27.0488	2.4200e-003	0.0000	27.1093
Worker	0.0115	6.5300e-003	0.0768	3.3000e-004	0.0416	2.4000e-004	0.0418	0.0111	2.2000e-004	0.0113	0.0000	29.7312	29.7312	4.5000e-004	0.0000	29.7424
Total	**0.0140**	**0.0878**	**0.1253**	**6.0000e-004**	**0.0486**	**3.5000e-004**	**0.0490**	**0.0131**	**3.3000e-004**	**0.0134**	**0.0000**	**56.7799**	**56.7799**	**2.8700e-003**	**0.0000**	**56.8517**

3.7 Architectural Coating - 2022

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					
Archit. Coating	1.2390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0296	0.2336	0.3365	5.4000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	46.7527	46.7527	6.7000e-003	0.0000	46.9201
Total	**1.2686**	**0.2336**	**0.3365**	**5.4000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**46.7527**	**46.7527**	**6.7000e-003**	**0.0000**	**46.9201**

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	0.0193	0.0120	0.1336	5.4000e-004	0.0629	3.8000e-004	0.0633	0.0168	3.5000e-004	0.0171	0.0000	48.6873	48.6873	8.3000e-004	0.0000	48.7079
Total	**0.0193**	**0.0120**	**0.1336**	**5.4000e-004**	**0.0629**	**3.8000e-004**	**0.0633**	**0.0168**	**3.5000e-004**	**0.0171**	**0.0000**	**48.6873**	**48.6873**	**8.3000e-004**	**0.0000**	**48.7079**

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					

	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
Archit. Coating	1.2390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0296	0.2336	0.3365	5.4000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	46.7526	46.7526	6.7000e-003	0.0000	46.9200
Total	**1.2686**	**0.2336**	**0.3365**	**5.4000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**46.7526**	**46.7526**	**6.7000e-003**	**0.0000**	**46.9200**

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	0.0193	0.0120	0.1336	5.4000e-004	0.0629	3.8000e-004	0.0633	0.0168	3.5000e-004	0.0171	0.0000	48.6873	48.6873	8.3000e-004	0.0000	48.7079
Total	**0.0193**	**0.0120**	**0.1336**	**5.4000e-004**	**0.0629**	**3.8000e-004**	**0.0633**	**0.0168**	**3.5000e-004**	**0.0171**	**0.0000**	**48.6873**	**48.6873**	**8.3000e-004**	**0.0000**	**48.7079**

3.7 Architectural Coating - 2023

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					
Archit. Coating	1.4709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0330	0.2583	0.3989	6.4000e-004		0.0118	0.0118		0.0117	0.0117	0.0000	55.5055	55.5055	7.7400e-003	0.0000	55.6991
Total	**1.5039**	**0.2583**	**0.3989**	**6.4000e-004**		**0.0118**	**0.0118**		**0.0117**	**0.0117**	**0.0000**	**55.5055**	**55.5055**	**7.7400e-003**	**0.0000**	**55.6991**

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	0.0217	0.0129	0.1477	6.1000e-004	0.0747	4.4000e-004	0.0752	0.0199	4.0000e-004	0.0203	0.0000	55.6205	55.6205	8.9000e-004	0.0000	55.6427
Total	**0.0217**	**0.0129**	**0.1477**	**6.1000e-004**	**0.0747**	**4.4000e-004**	**0.0752**	**0.0199**	**4.0000e-004**	**0.0203**	**0.0000**	**55.6205**	**55.6205**	**8.9000e-004**	**0.0000**	**55.6427**

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					
Archit. Coating	1.4709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0330	0.2583	0.3989	6.4000e-004		0.0118	0.0118		0.0117	0.0117	0.0000	55.5054	55.5054	7.7400e-003	0.0000	55.6990
Total	**1.5039**	**0.2583**	**0.3989**	**6.4000e-004**		**0.0118**	**0.0118**		**0.0117**	**0.0117**	**0.0000**	**55.5054**	**55.5054**	**7.7400e-003**	**0.0000**	**55.6990**

Mitigated Construction Off-Site

Category	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
	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	0.0217	0.0129	0.1477	6.1000e-004	0.0747	4.4000e-004	0.0752	0.0199	4.0000e-004	0.0203	0.0000	55.6205	55.6205	8.9000e-004	0.0000	55.6427
Total	**0.0217**	**0.0129**	**0.1477**	**6.1000e-004**	**0.0747**	**4.4000e-004**	**0.0752**	**0.0199**	**4.0000e-004**	**0.0203**	**0.0000**	**55.6205**	**55.6205**	**8.9000e-004**	**0.0000**	**55.6427**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Archit. Coating	0.1301					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7700e-003	0.0217	0.0353	6.0000e-005		9.1000e-004	9.1000e-004		9.0000e-004	9.0000e-004	0.0000	4.9101	4.9101	6.7000e-004	0.0000	4.9269
Total	**0.1329**	**0.0217**	**0.0353**	**6.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**4.9101**	**4.9101**	**6.7000e-004**	**0.0000**	**4.9269**

Unmitigated Construction Off-Site

Category	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
	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

Category	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
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	1.8300e-003	1.0400e-003	0.0122	5.0000e-005	6.6100e-003	4.0000e-005	6.6500e-003	1.7600e-003	4.0000e-005	1.7900e-003	0.0000	4.7289	4.7289	7.0000e-005	0.0000	4.7307
Total	**1.8300e-003**	**1.0400e-003**	**0.0122**	**5.0000e-005**	**6.6100e-003**	**4.0000e-005**	**6.6500e-003**	**1.7600e-003**	**4.0000e-005**	**1.7900e-003**	**0.0000**	**4.7289**	**4.7289**	**7.0000e-005**	**0.0000**	**4.7307**

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					
Archit. Coating	0.1301					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7700e-003	0.0217	0.0353	6.0000e-005		9.1000e-004	9.1000e-004		9.0000e-004	9.0000e-004	0.0000	4.9101	4.9101	6.7000e-004	0.0000	4.9269
Total	**0.1329**	**0.0217**	**0.0353**	**6.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**4.9101**	**4.9101**	**6.7000e-004**	**0.0000**	**4.9269**

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	1.8300e-003	1.0400e-003	0.0122	5.0000e-005	6.6100e-003	4.0000e-005	6.6500e-003	1.7600e-003	4.0000e-005	1.7900e-003	0.0000	4.7289	4.7289	7.0000e-005	0.0000	4.7307
Total	**1.8300e-003**	**1.0400e-003**	**0.0122**	**5.0000e-005**	**6.6100e-003**	**4.0000e-005**	**6.6500e-003**	**1.7600e-003**	**4.0000e-005**	**1.7900e-003**	**0.0000**	**4.7289**	**4.7289**	**7.0000e-005**	**0.0000**	**4.7307**

3.8 Paving - 2024

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					
Off-Road	0.0268	0.2533	0.3795	5.9000e-004		0.0121	0.0121		0.0112	0.0112	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0268**	**0.2533**	**0.3795**	**5.9000e-004**		**0.0121**	**0.0121**		**0.0112**	**0.0112**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

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	1.2000e-003	6.8000e-004	8.0000e-003	3.0000e-005	4.3300e-003	3.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.0982	3.0982	5.0000e-005	0.0000	3.0993
Total	**1.2000e-003**	**6.8000e-004**	**8.0000e-003**	**3.0000e-005**	**4.3300e-003**	**3.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1800e-003**	**0.0000**	**3.0982**	**3.0982**	**5.0000e-005**	**0.0000**	**3.0993**

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					
Off-Road	0.0114	0.2596	0.4350	5.9000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	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**	**0.2596**	**0.4350**	**5.9000e-004**		**1.4700e-003**	**1.4700e-003**		**1.4700e-003**	**1.4700e-003**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

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	1.2000e-003	6.8000e-004	8.0000e-003	3.0000e-005	4.3300e-003	3.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.0982	3.0982	5.0000e-005	0.0000	3.0993
Total	**1.2000e-003**	**6.8000e-004**	**8.0000e-003**	**3.0000e-005**	**4.3300e-003**	**3.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1800e-003**	**0.0000**	**3.0982**	**3.0982**	**5.0000e-005**	**0.0000**	**3.0993**

Anton Millbrae Center - Multi-family Housing TAC

San Mateo County, Annual

TAC Model for the Residential Development for HRA

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	548.00	Space	0.00	203,514.00	0
Apartments Mid Rise	384.00	Dwelling Unit	5.56	397,272.00	1098
Parking Lot	12.00	Space	0.00	4,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PG&E

Land Use - 384 DU & 397,272 sqft on 5.56-acres. 548 parking spaces in an enclosed parking with elevator and 12 surface parking spaces

Construction Phase - Exact start date and total workdays

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Trips and VMT - TAC localized emissions, Trip length 1 mile

Demolition - Demolition of 45,683-sqft

Grading - export: 5,022-cy, import: 26,734-cy

Vehicle Trips - Need update from traffic

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation, CNG for forklifts, temporary power line instead of generators

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	502.00
tblConstructionPhase	NumDays	230.00	528.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	92.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	10.00	138.00
tblGrading	AcresOfGrading	80.50	10.00
tblGrading	MaterialExported	0.00	5,022.00
tblGrading	MaterialImported	0.00	26,734.00
tblLandUse	LandUseSquareFeet	219,200.00	203,514.00
tblLandUse	LandUseSquareFeet	384,000.00	397,272.00
tblLandUse	LotAcreage	4.93	0.00
tblLandUse	LotAcreage	10.11	5.56
tblLandUse	LotAcreage	0.11	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00

tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00

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					
2021	0.2770	3.0524	2.2188	3.9000e-003	0.5179	0.1418	0.6597	0.2717	0.1307	0.4024	0.0000	345.9151	345.9151	0.1044	0.0000	348.5245
2022	1.4489	1.7592	1.9840	3.3100e-003	0.0462	0.0650	0.1112	0.0126	0.0621	0.0747	0.0000	290.3473	290.3473	0.0470	0.0000	291.5210
2023	1.6836	1.7731	2.1608	3.6200e-003	0.0509	0.0614	0.1122	0.0138	0.0588	0.0726	0.0000	317.3790	317.3790	0.0504	0.0000	318.6397
2024	0.1787	0.4364	0.6102	9.7000e-004	5.9200e-003	0.0178	0.0238	1.6100e-003	0.0167	0.0183	0.0000	84.9332	84.9332	0.0214	0.0000	85.4688
Maximum	**1.6836**	**3.0524**	**2.2188**	**3.9000e-003**	**0.5179**	**0.1418**	**0.6597**	**0.2717**	**0.1307**	**0.4024**	**0.0000**	**345.9151**	**345.9151**	**0.1044**	**0.0000**	**348.5245**

Mitigated Construction

Year	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
	tons/yr										MT/yr					
2021	0.0742	1.5492	2.5208	3.9000e-003	0.2350	6.2100e-003	0.2412	0.0619	6.2000e-003	0.0681	0.0000	345.9147	345.9147	0.1044	0.0000	348.5241
2022	1.3471	1.5623	3.5336	3.3100e-003	0.0462	0.0261	0.0723	0.0126	0.0259	0.0385	0.0000	276.9966	276.9966	0.0487	0.0000	278.2138
2023	1.5842	1.6149	3.8379	3.6200e-003	0.0509	0.0271	0.0779	0.0138	0.0269	0.0407	0.0000	302.8552	302.8552	0.0524	0.0000	304.1653
2024	0.1530	0.4296	0.8520	9.7000e-004	5.9200e-003	4.0400e-003	9.9500e-003	1.6100e-003	4.0200e-003	5.6300e-003	0.0000	83.3131	83.3131	0.0217	0.0000	83.8545
Maximum	**1.5842**	**1.6149**	**3.8379**	**3.9000e-003**	**0.2350**	**0.0271**	**0.2412**	**0.0619**	**0.0269**	**0.0681**	**0.0000**	**345.9147**	**345.9147**	**0.1044**	**0.0000**	**348.5241**

	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	**11.98**	**26.56**	**-54.07**	**0.00**	**45.56**	**77.83**	**55.74**	**70.01**	**76.49**	**73.07**	**0.00**	**2.84**	**2.84**	**-1.77**	**0.00**	**2.82**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**4-1-2021**	**6-30-2021**	1.1607	0.5627
2	**7-1-2021**	**9-30-2021**	1.8112	0.8433
3	**10-1-2021**	**12-31-2021**	0.3553	0.2172
4	**1-1-2022**	**3-31-2022**	0.4513	0.3987
5	**4-1-2022**	**6-30-2022**	0.9117	0.8305
6	**7-1-2022**	**9-30-2022**	0.9217	0.8396
7	**10-1-2022**	**12-31-2022**	0.9189	0.8368
8	**1-1-2023**	**3-31-2023**	0.8539	0.7902
9	**4-1-2023**	**6-30-2023**	0.8657	0.8013
10	**7-1-2023**	**9-30-2023**	0.8752	0.8101
11	**10-1-2023**	**12-31-2023**	0.8729	0.8078
12	**1-1-2024**	**3-31-2024**	0.5946	0.5634
13	**4-1-2024**	**6-30-2024**	0.0091	0.0088
		Highest	1.8112	0.8433

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	4/1/2021	5/3/2021	5	23	
2	Site Preparation	Site Preparation	4/1/2021	10/11/2021	5	138	
3	Grading	Grading	6/1/2021	10/6/2021	5	92	
4	Trenching/Foundation	Trenching	6/1/2021	12/31/2021	5	154	
5	Building Construction	Building Construction	2/1/2022	2/8/2024	5	528	
6	Architectural Coating	Architectural Coating	3/1/2022	1/31/2024	5	502	
7	Paving	Paving	2/1/2024	4/2/2024	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 804,476; Residential Outdoor: 268,159; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	6.00	81	0.73
Demolition	Excavators	2	7.00	158	0.38
Demolition	Rubber Tired Dozers	2	7.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	0.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Grading	Excavators	2	7.00	158	0.38
Grading	Graders	2	7.00	187	0.41
Grading	Rubber Tired Dozers	2	7.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Trenching/Foundation	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29

Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	2	1.30	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	2	7.00	46	0.45
Architectural Coating	Aerial Lifts	1	7.00	63	0.31
Architectural Coating	Air Compressors	1	7.00	78	0.48
Paving	Cement and Mortar Mixers	2	7.00	9	0.56
Paving	Pavers	2	7.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	7.00	97	0.37

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	8	20.00	0.00	208.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	3,970.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Trenching/Foundation	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	364.00	75.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	73.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Paving	10	25.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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					0.0225	0.0000	0.0225	3.4000e-003	0.0000	3.4000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0361	0.3547	0.2560	4.5000e-004		0.0181	0.0181		0.0169	0.0169	0.0000	39.0052	39.0052	0.0102	0.0000	39.2591
Total	**0.0361**	**0.3547**	**0.2560**	**4.5000e-004**	**0.0225**	**0.0181**	**0.0405**	**3.4000e-003**	**0.0169**	**0.0203**	**0.0000**	**39.0052**	**39.0052**	**0.0102**	**0.0000**	**39.2591**

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	2.1000e-004	9.6900e-003	3.2600e-003	1.0000e-005	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	1.0858	1.0858	1.3000e-004	0.0000	1.0889
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	1.8000e-004	8.0000e-005	1.1200e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1742	0.1742	1.0000e-005	0.0000	0.1743
Total	**3.9000e-004**	**9.7700e-003**	**4.3800e-003**	**1.0000e-005**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**7.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**1.2599**	**1.2599**	**1.4000e-004**	**0.0000**	**1.2632**

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					0.0101	0.0000	0.0101	7.7000e-004	0.0000	7.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.4600e-003	0.1568	0.2837	4.5000e-004		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	39.0052	39.0052	0.0102	0.0000	39.2590
Total	**7.4600e-003**	**0.1568**	**0.2837**	**4.5000e-004**	**0.0101**	**7.0000e-004**	**0.0108**	**7.7000e-004**	**7.0000e-004**	**1.4700e-003**	**0.0000**	**39.0052**	**39.0052**	**0.0102**	**0.0000**	**39.2590**

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	2.1000e-004	9.6900e-003	3.2600e-003	1.0000e-005	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	1.0858	1.0858	1.3000e-004	0.0000	1.0889
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	1.8000e-004	8.0000e-005	1.1200e-003	0.0000	1.7000e-004	0.0000	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1742	0.1742	1.0000e-005	0.0000	0.1743
Total	**3.9000e-004**	**9.7700e-003**	**4.3800e-003**	**1.0000e-005**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**7.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**1.2599**	**1.2599**	**1.4000e-004**	**0.0000**	**1.2632**

3.3 Site Preparation - 2021

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

	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
Off-Road	0.0452	0.4578	0.5459	7.5000e-004		0.0270	0.0270		0.0248	0.0248	0.0000	65.9227	65.9227	0.0213	0.0000	66.4558
Total	**0.0452**	**0.4578**	**0.5459**	**7.5000e-004**	**0.0000**	**0.0270**	**0.0270**	**0.0000**	**0.0248**	**0.0248**	**0.0000**	**65.9227**	**65.9227**	**0.0213**	**0.0000**	**66.4558**

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	5.5000e-004	2.5000e-004	3.3700e-003	1.0000e-005	5.1000e-004	1.0000e-005	5.2000e-004	1.4000e-004	1.0000e-005	1.4000e-004	0.0000	0.5225	0.5225	2.0000e-005	0.0000	0.5229
Total	**5.5000e-004**	**2.5000e-004**	**3.3700e-003**	**1.0000e-005**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**1.4000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**0.5225**	**0.5225**	**2.0000e-005**	**0.0000**	**0.5229**

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	0.0168	0.3271	0.5656	7.5000e-004		1.2200e-003	1.2200e-003		1.2200e-003	1.2200e-003	0.0000	65.9227	65.9227	0.0213	0.0000	66.4557
Total	**0.0168**	**0.3271**	**0.5656**	**7.5000e-004**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**65.9227**	**65.9227**	**0.0213**	**0.0000**	**66.4557**

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	5.5000e-004	2.5000e-004	3.3700e-003	1.0000e-005	5.1000e-004	1.0000e-005	5.2000e-004	1.4000e-004	1.0000e-005	1.4000e-004	0.0000	0.5225	0.5225	2.0000e-005	0.0000	0.5229
Total	**5.5000e-004**	**2.5000e-004**	**3.3700e-003**	**1.0000e-005**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**1.4000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**0.5225**	**0.5225**	**2.0000e-005**	**0.0000**	**0.5229**

3.4 Grading - 2021

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					0.4919	0.0000	0.4919	0.2673	0.0000	0.2673	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1392	1.5335	0.7307	1.6400e-003		0.0664	0.0664		0.0611	0.0611	0.0000	143.8095	143.8095	0.0465	0.0000	144.9723
Total	**0.1392**	**1.5335**	**0.7307**	**1.6400e-003**	**0.4919**	**0.0664**	**0.5583**	**0.2673**	**0.0611**	**0.3284**	**0.0000**	**143.8095**	**143.8095**	**0.0465**	**0.0000**	**144.9723**

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	3.9700e-003	0.1850	0.0623	2.0000e-004	1.7000e-003	2.2000e-004	1.9200e-003	4.7000e-004	2.1000e-004	6.8000e-004	0.0000	20.7237	20.7237	2.4100e-003	0.0000	20.7840
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	5.5000e-004	2.5000e-004	3.3700e-003	1.0000e-005	5.1000e-004	1.0000e-005	5.2000e-004	1.4000e-004	1.0000e-005	1.4000e-004	0.0000	0.5225	0.5225	2.0000e-005	0.0000	0.5229
Total	**4.5200e-003**	**0.1852**	**0.0656**	**2.1000e-004**	**2.2100e-003**	**2.3000e-004**	**2.4400e-003**	**6.1000e-004**	**2.2000e-004**	**8.2000e-004**	**0.0000**	**21.2462**	**21.2462**	**2.4300e-003**	**0.0000**	**21.3069**

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					0.2213	0.0000	0.2213	0.0602	0.0000	0.0602	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0250	0.5047	0.9631	1.6400e-003		2.6700e-003	2.6700e-003		2.6700e-003	2.6700e-003	0.0000	143.8094	143.8094	0.0465	0.0000	144.9721
Total	**0.0250**	**0.5047**	**0.9631**	**1.6400e-003**	**0.2213**	**2.6700e-003**	**0.2240**	**0.0602**	**2.6700e-003**	**0.0628**	**0.0000**	**143.8094**	**143.8094**	**0.0465**	**0.0000**	**144.9721**

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	3.9700e-003	0.1850	0.0623	2.0000e-004	1.7000e-003	2.2000e-004	1.9200e-003	4.7000e-004	2.1000e-004	6.8000e-004	0.0000	20.7237	20.7237	2.4100e-003	0.0000	20.7840
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

	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
Worker	5.5000e-004	2.5000e-004	3.3700e-003	1.0000e-005	5.1000e-004	1.0000e-005	5.2000e-004	1.4000e-004	1.0000e-005	1.4000e-004	0.0000	0.5225	0.5225	2.0000e-005	0.0000	0.5229
Total	**4.5200e-003**	**0.1852**	**0.0656**	**2.1000e-004**	**2.2100e-003**	**2.3000e-004**	**2.4400e-003**	**6.1000e-004**	**2.2000e-004**	**8.2000e-004**	**0.0000**	**21.2462**	**21.2462**	**2.4300e-003**	**0.0000**	**21.3069**

3.5 Trenching/Foundation - 2021

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					
Off-Road	0.0505	0.5109	0.6091	8.4000e-004		0.0301	0.0301		0.0277	0.0277	0.0000	73.5659	73.5659	0.0238	0.0000	74.1608
Total	**0.0505**	**0.5109**	**0.6091**	**8.4000e-004**		**0.0301**	**0.0301**		**0.0277**	**0.0277**	**0.0000**	**73.5659**	**73.5659**	**0.0238**	**0.0000**	**74.1608**

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	6.2000e-004	2.8000e-004	3.7600e-003	1.0000e-005	5.7000e-004	1.0000e-005	5.8000e-004	1.5000e-004	1.0000e-005	1.6000e-004	0.0000	0.5831	0.5831	2.0000e-005	0.0000	0.5835
Total	**6.2000e-004**	**2.8000e-004**	**3.7600e-003**	**1.0000e-005**	**5.7000e-004**	**1.0000e-005**	**5.8000e-004**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**0.5831**	**0.5831**	**2.0000e-005**	**0.0000**	**0.5835**

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					
Off-Road	0.0188	0.3651	0.6312	8.4000e-004		1.3600e-003	1.3600e-003		1.3600e-003	1.3600e-003	0.0000	73.5659	73.5659	0.0238	0.0000	74.1607
Total	**0.0188**	**0.3651**	**0.6312**	**8.4000e-004**		**1.3600e-003**	**1.3600e-003**		**1.3600e-003**	**1.3600e-003**	**0.0000**	**73.5659**	**73.5659**	**0.0238**	**0.0000**	**74.1607**

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	6.2000e-004	2.8000e-004	3.7600e-003	1.0000e-005	5.7000e-004	1.0000e-005	5.8000e-004	1.5000e-004	1.0000e-005	1.6000e-004	0.0000	0.5831	0.5831	2.0000e-005	0.0000	0.5835
Total	**6.2000e-004**	**2.8000e-004**	**3.7600e-003**	**1.0000e-005**	**5.7000e-004**	**1.0000e-005**	**5.8000e-004**	**1.5000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**0.5831**	**0.5831**	**2.0000e-005**	**0.0000**	**0.5835**

3.6 Building Construction - 2022

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					
Off-Road	0.1289	0.9907	1.2067	1.7600e-003		0.0525	0.0525		0.0499	0.0499	0.0000	146.5461	146.5461	0.0333	0.0000	147.3791
Total	**0.1289**	**0.9907**	**1.2067**	**1.7600e-003**		**0.0525**	**0.0525**		**0.0499**	**0.0499**	**0.0000**	**146.5461**	**146.5461**	**0.0333**	**0.0000**	**147.3791**

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	0.0134	0.5186	0.2112	5.9000e-004	8.2000e-003	5.1000e-004	8.7100e-003	2.3900e-003	4.8000e-004	2.8800e-003	0.0000	59.4587	59.4587	5.8000e-003	0.0000	59.6038
Worker	0.0322	0.0139	0.1939	3.5000e-004	0.0321	4.1000e-004	0.0325	8.5900e-003	3.8000e-004	8.9700e-003	0.0000	31.7544	31.7544	9.5000e-004	0.0000	31.7783
Total	**0.0455**	**0.5324**	**0.4052**	**9.4000e-004**	**0.0403**	**9.2000e-004**	**0.0412**	**0.0110**	**8.6000e-004**	**0.0119**	**0.0000**	**91.2131**	**91.2131**	**6.7500e-003**	**0.0000**	**91.3821**

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					
Off-Road	0.0271	0.7937	2.7563	1.7600e-003		0.0137	0.0137		0.0137	0.0137	0.0000	133.1954	133.1954	0.0351	0.0000	134.0719
Total	**0.0271**	**0.7937**	**2.7563**	**1.7600e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**133.1954**	**133.1954**	**0.0351**	**0.0000**	**134.0719**

Mitigated Construction Off-Site

Category	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
	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	0.0134	0.5186	0.2112	5.9000e-004	8.2000e-003	5.1000e-004	8.7100e-003	2.3900e-003	4.8000e-004	2.8800e-003	0.0000	59.4587	59.4587	5.8000e-003	0.0000	59.6038
Worker	0.0322	0.0139	0.1939	3.5000e-004	0.0321	4.1000e-004	0.0325	8.5900e-003	3.8000e-004	8.9700e-003	0.0000	31.7544	31.7544	9.5000e-004	0.0000	31.7783
Total	**0.0455**	**0.5324**	**0.4052**	**9.4000e-004**	**0.0403**	**9.2000e-004**	**0.0412**	**0.0110**	**8.6000e-004**	**0.0119**	**0.0000**	**91.2131**	**91.2131**	**6.7500e-003**	**0.0000**	**91.3821**

3.6 Building Construction - 2023

Unmitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	0.1286	1.0056	1.3048	1.9200e-003		0.0487	0.0487		0.0462	0.0462	0.0000	159.4922	159.4922	0.0357	0.0000	160.3855
Total	**0.1286**	**1.0056**	**1.3048**	**1.9200e-003**		**0.0487**	**0.0487**		**0.0462**	**0.0462**	**0.0000**	**159.4922**	**159.4922**	**0.0357**	**0.0000**	**160.3855**

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	0.0122	0.4930	0.2249	6.2000e-004	8.9300e-003	3.5000e-004	9.2700e-003	2.6100e-003	3.3000e-004	2.9400e-003	0.0000	62.4490	62.4490	5.8400e-003	0.0000	62.5950
Worker	0.0324	0.0135	0.1934	3.7000e-004	0.0349	4.4000e-004	0.0354	9.3500e-003	4.1000e-004	9.7600e-003	0.0000	33.2617	33.2617	9.3000e-004	0.0000	33.2848
Total	**0.0446**	**0.5065**	**0.4183**	**9.9000e-004**	**0.0439**	**7.9000e-004**	**0.0446**	**0.0120**	**7.4000e-004**	**0.0127**	**0.0000**	**95.7107**	**95.7107**	**6.7700e-003**	**0.0000**	**95.8798**

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					
Off-Road	0.0291	0.8475	2.9820	1.9200e-003		0.0144	0.0144		0.0144	0.0144	0.0000	144.9685	144.9685	0.0377	0.0000	145.9112
Total	**0.0291**	**0.8475**	**2.9820**	**1.9200e-003**		**0.0144**	**0.0144**		**0.0144**	**0.0144**	**0.0000**	**144.9685**	**144.9685**	**0.0377**	**0.0000**	**145.9112**

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	0.0122	0.4930	0.2249	6.2000e-004	8.9300e-003	3.5000e-004	9.2700e-003	2.6100e-003	3.3000e-004	2.9400e-003	0.0000	62.4490	62.4490	5.8400e-003	0.0000	62.5950
Worker	0.0324	0.0135	0.1934	3.7000e-004	0.0349	4.4000e-004	0.0354	9.3500e-003	4.1000e-004	9.7600e-003	0.0000	33.2617	33.2617	9.3000e-004	0.0000	33.2848
Total	**0.0446**	**0.5065**	**0.4183**	**9.9000e-004**	**0.0439**	**7.9000e-004**	**0.0446**	**0.0120**	**7.4000e-004**	**0.0127**	**0.0000**	**95.7107**	**95.7107**	**6.7700e-003**	**0.0000**	**95.8798**

3.6 Building Construction - 2024

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					
Off-Road	0.0134	0.1062	0.1451	2.1000e-004		4.7100e-003	4.7100e-003		4.4700e-003	4.4700e-003	0.0000	17.7939	17.7939	3.9400e-003	0.0000	17.8925
Total	**0.0134**	**0.1062**	**0.1451**	**2.1000e-004**		**4.7100e-003**	**4.7100e-003**		**4.4700e-003**	**4.4700e-003**	**0.0000**	**17.7939**	**17.7939**	**3.9400e-003**	**0.0000**	**17.8925**

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	1.3000e-003	0.0536	0.0251	7.0000e-005	1.0000e-003	4.0000e-005	1.0300e-003	2.9000e-004	3.0000e-005	3.2000e-004	0.0000	6.8670	6.8670	6.3000e-004	0.0000	6.8828
Worker	3.3700e-003	1.3500e-003	0.0199	4.0000e-005	3.8900e-003	5.0000e-005	3.9400e-003	1.0400e-003	5.0000e-005	1.0900e-003	0.0000	3.5678	3.5678	9.0000e-005	0.0000	3.5701

Total	4.6700e-003	0.0549	0.0450	1.1000e-004	4.8900e-003	9.0000e-005	4.9700e-003	1.3300e-003	8.0000e-005	1.4100e-003	0.0000	10.4348	10.4348	7.2000e-004	0.0000	10.4529

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					
Off-Road	3.2200e-003	0.0931	0.3315	2.1000e-004		1.5600e-003	1.5600e-003		1.5600e-003	1.5600e-003	0.0000	16.1739	16.1739	4.1700e-003	0.0000	16.2783
Total	**3.2200e-003**	**0.0931**	**0.3315**	**2.1000e-004**		**1.5600e-003**	**1.5600e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**16.1739**	**16.1739**	**4.1700e-003**	**0.0000**	**16.2783**

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	1.3000e-003	0.0536	0.0251	7.0000e-005	1.0000e-003	4.0000e-005	1.0300e-003	2.9000e-004	3.0000e-005	3.2000e-004	0.0000	6.8670	6.8670	6.3000e-004	0.0000	6.8828
Worker	3.3700e-003	1.3500e-003	0.0199	4.0000e-005	3.8900e-003	5.0000e-005	3.9400e-003	1.0400e-003	5.0000e-005	1.0900e-003	0.0000	3.5678	3.5678	9.0000e-005	0.0000	3.5701
Total	**4.6700e-003**	**0.0549**	**0.0450**	**1.1000e-004**	**4.8900e-003**	**9.0000e-005**	**4.9700e-003**	**1.3300e-003**	**8.0000e-005**	**1.4100e-003**	**0.0000**	**10.4348**	**10.4348**	**7.2000e-004**	**0.0000**	**10.4529**

3.7 Architectural Coating - 2022

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					
Archit. Coating	1.2390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0296	0.2336	0.3365	5.4000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	46.7527	46.7527	6.7000e-003	0.0000	46.9201
Total	**1.2686**	**0.2336**	**0.3365**	**5.4000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**46.7527**	**46.7527**	**6.7000e-003**	**0.0000**	**46.9201**

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	5.9100e-003	2.5500e-003	0.0356	6.0000e-005	5.9000e-003	8.0000e-005	5.9700e-003	1.5800e-003	7.0000e-005	1.6500e-003	0.0000	5.8354	5.8354	1.8000e-004	0.0000	5.8398
Total	**5.9100e-003**	**2.5500e-003**	**0.0356**	**6.0000e-005**	**5.9000e-003**	**8.0000e-005**	**5.9700e-003**	**1.5800e-003**	**7.0000e-005**	**1.6500e-003**	**0.0000**	**5.8354**	**5.8354**	**1.8000e-004**	**0.0000**	**5.8398**

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					

	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
Archit. Coating	1.2390					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0296	0.2336	0.3365	5.4000e-004		0.0114	0.0114		0.0114	0.0114	0.0000	46.7526	46.7526	6.7000e-003	0.0000	46.9200
Total	**1.2686**	**0.2336**	**0.3365**	**5.4000e-004**		**0.0114**	**0.0114**		**0.0114**	**0.0114**	**0.0000**	**46.7526**	**46.7526**	**6.7000e-003**	**0.0000**	**46.9200**

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	5.9100e-003	2.5500e-003	0.0356	6.0000e-005	5.9000e-003	8.0000e-005	5.9700e-003	1.5800e-003	7.0000e-005	1.6500e-003	0.0000	5.8354	5.8354	1.8000e-004	0.0000	5.8398
Total	**5.9100e-003**	**2.5500e-003**	**0.0356**	**6.0000e-005**	**5.9000e-003**	**8.0000e-005**	**5.9700e-003**	**1.5800e-003**	**7.0000e-005**	**1.6500e-003**	**0.0000**	**5.8354**	**5.8354**	**1.8000e-004**	**0.0000**	**5.8398**

3.7 Architectural Coating - 2023

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					
Archit. Coating	1.4709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0330	0.2583	0.3989	6.4000e-004		0.0118	0.0118		0.0117	0.0117	0.0000	55.5055	55.5055	7.7400e-003	0.0000	55.6991
Total	**1.5039**	**0.2583**	**0.3989**	**6.4000e-004**		**0.0118**	**0.0118**		**0.0117**	**0.0117**	**0.0000**	**55.5055**	**55.5055**	**7.7400e-003**	**0.0000**	**55.6991**

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	6.5000e-003	2.7100e-003	0.0388	7.0000e-005	7.0000e-003	9.0000e-005	7.0900e-003	1.8700e-003	8.0000e-005	1.9600e-003	0.0000	6.6706	6.6706	1.9000e-004	0.0000	6.6753
Total	**6.5000e-003**	**2.7100e-003**	**0.0388**	**7.0000e-005**	**7.0000e-003**	**9.0000e-005**	**7.0900e-003**	**1.8700e-003**	**8.0000e-005**	**1.9600e-003**	**0.0000**	**6.6706**	**6.6706**	**1.9000e-004**	**0.0000**	**6.6753**

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					
Archit. Coating	1.4709					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0330	0.2583	0.3989	6.4000e-004		0.0118	0.0118		0.0117	0.0117	0.0000	55.5054	55.5054	7.7400e-003	0.0000	55.6990
Total	**1.5039**	**0.2583**	**0.3989**	**6.4000e-004**		**0.0118**	**0.0118**		**0.0117**	**0.0117**	**0.0000**	**55.5054**	**55.5054**	**7.7400e-003**	**0.0000**	**55.6990**

Mitigated Construction Off-Site

Category	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
	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	6.5000e-003	2.7100e-003	0.0388	7.0000e-005	7.0000e-003	9.0000e-005	7.0900e-003	1.8700e-003	8.0000e-005	1.9600e-003	0.0000	6.6706	6.6706	1.9000e-004	0.0000	6.6753
Total	**6.5000e-003**	**2.7100e-003**	**0.0388**	**7.0000e-005**	**7.0000e-003**	**9.0000e-005**	**7.0900e-003**	**1.8700e-003**	**8.0000e-005**	**1.9600e-003**	**0.0000**	**6.6706**	**6.6706**	**1.9000e-004**	**0.0000**	**6.6753**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Archit. Coating	0.1301					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7700e-003	0.0217	0.0353	6.0000e-005		9.1000e-004	9.1000e-004		9.0000e-004	9.0000e-004	0.0000	4.9101	4.9101	6.7000e-004	0.0000	4.9269
Total	**0.1329**	**0.0217**	**0.0353**	**6.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**4.9101**	**4.9101**	**6.7000e-004**	**0.0000**	**4.9269**

Unmitigated Construction Off-Site

Category	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
	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

Category	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
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	5.4000e-004	2.2000e-004	3.1600e-003	1.0000e-005	6.2000e-004	1.0000e-005	6.3000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5675	0.5675	1.0000e-005	0.0000	0.5678
Total	**5.4000e-004**	**2.2000e-004**	**3.1600e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5675**	**0.5675**	**1.0000e-005**	**0.0000**	**0.5678**

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					
Archit. Coating	0.1301					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7700e-003	0.0217	0.0353	6.0000e-005		9.1000e-004	9.1000e-004		9.0000e-004	9.0000e-004	0.0000	4.9101	4.9101	6.7000e-004	0.0000	4.9269
Total	**0.1329**	**0.0217**	**0.0353**	**6.0000e-005**		**9.1000e-004**	**9.1000e-004**		**9.0000e-004**	**9.0000e-004**	**0.0000**	**4.9101**	**4.9101**	**6.7000e-004**	**0.0000**	**4.9269**

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	5.4000e-004	2.2000e-004	3.1600e-003	1.0000e-005	6.2000e-004	1.0000e-005	6.3000e-004	1.7000e-004	1.0000e-005	1.7000e-004	0.0000	0.5675	0.5675	1.0000e-005	0.0000	0.5678
Total	**5.4000e-004**	**2.2000e-004**	**3.1600e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.5675**	**0.5675**	**1.0000e-005**	**0.0000**	**0.5678**

3.8 Paving - 2024

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					
Off-Road	0.0268	0.2533	0.3795	5.9000e-004		0.0121	0.0121		0.0112	0.0112	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0268**	**0.2533**	**0.3795**	**5.9000e-004**		**0.0121**	**0.0121**		**0.0112**	**0.0112**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

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	3.5000e-004	1.4000e-004	2.0700e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3718	0.3718	1.0000e-005	0.0000	0.3720
Total	**3.5000e-004**	**1.4000e-004**	**2.0700e-003**	**0.0000**	**4.1000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3718**	**0.3718**	**1.0000e-005**	**0.0000**	**0.3720**

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Off-Road	0.0114	0.2596	0.4350	5.9000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	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**	**0.2596**	**0.4350**	**5.9000e-004**		**1.4700e-003**	**1.4700e-003**		**1.4700e-003**	**1.4700e-003**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

Mitigated Construction Off-Site

Category	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
	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	3.5000e-004	1.4000e-004	2.0700e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3718	0.3718	1.0000e-005	0.0000	0.3720
Total	**3.5000e-004**	**1.4000e-004**	**2.0700e-003**	**0.0000**	**4.1000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3718**	**0.3718**	**1.0000e-005**	**0.0000**	**0.3720**

Anton Millbrae Center - Multi-family Housing AQ

San Mateo County, Annual

2025 Operational Criteria Pollutants Model for the Residential Development

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	548.00	Space	0.00	203,514.00	0
Parking Lot	12.00	Space	0.00	4,800.00	0
Apartments Mid Rise	384.00	Dwelling Unit	5.56	397,272.00	1098

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PG&E

Land Use - 384 DU & 397,272 sqft on 5.56-acres. 548 parking spaces in an enclosed parking with elevator and 12 surface parking spaces

Construction Phase - Exact start date and total workdays

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Trips and VMT - AQ

Demolition - Demolition of 45,683-sqft

Grading - export: 5,022-cy, import: 26,734-cy

Vehicle Trips - 5.45, 5.24, 4.80

Vehicle Emission Factors - 2025 EMFAC2017 San Mateo Emission Factors

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No wood hearths but assuming gas...total of 122.88

Energy Use -

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation, CNG for forklifts, temporary power line instead of generators

Energy Mitigation - PCE would provide 100% GHG free electricity by 2021. Project would be operational post-2021

Area Mitigation - No hearths in the residential dwelling units

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	502.00
tblConstructionPhase	NumDays	230.00	528.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	92.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	10.00	138.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	57.60	122.88
tblFireplaces	NumberWood	65.28	0.00
tblFleetMix	HHD	6.6460e-003	6.2010e-003
tblFleetMix	HHD	6.6460e-003	6.2010e-003
tblFleetMix	HHD	6.6460e-003	6.2010e-003
tblFleetMix	LDA	0.46	0.46
tblFleetMix	LDA	0.46	0.46
tblFleetMix	LDA	0.46	0.46
tblFleetMix	LDT1	0.05	0.07
tblFleetMix	LDT1	0.05	0.07

tblFleetMix	LDT1	0.05	0.07
tblFleetMix	LDT2	0.27	0.23
tblFleetMix	LDT2	0.27	0.23
tblFleetMix	LDT2	0.27	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	7.2140e-003	7.2200e-003
tblFleetMix	LHD2	7.2140e-003	7.2200e-003
tblFleetMix	LHD2	7.2140e-003	7.2200e-003
tblFleetMix	MCY	9.2950e-003	0.01
tblFleetMix	MCY	9.2950e-003	0.01
tblFleetMix	MCY	9.2950e-003	0.01
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MH	8.2400e-004	8.9400e-004
tblFleetMix	MH	8.2400e-004	8.9400e-004
tblFleetMix	MH	8.2400e-004	8.9400e-004
tblFleetMix	MHD	0.03	0.02
tblFleetMix	MHD	0.03	0.02
tblFleetMix	MHD	0.03	0.02
tblFleetMix	OBUS	4.2990e-003	3.1280e-003
tblFleetMix	OBUS	4.2990e-003	3.1280e-003
tblFleetMix	OBUS	4.2990e-003	3.1280e-003
tblFleetMix	SBUS	5.2200e-004	5.6300e-004
tblFleetMix	SBUS	5.2200e-004	5.6300e-004
tblFleetMix	SBUS	5.2200e-004	5.6300e-004
tblFleetMix	UBUS	3.0350e-003	1.4710e-003
tblFleetMix	UBUS	3.0350e-003	1.4710e-003

tblFleetMix	UBUS	3.0350e-003	1.4710e-003
tblGrading	AcresOfGrading	80.50	10.00
tblGrading	MaterialExported	0.00	5,022.00
tblGrading	MaterialImported	0.00	26,734.00
tblLandUse	LandUseSquareFeet	219,200.00	203,514.00
tblLandUse	LandUseSquareFeet	384,000.00	397,272.00
tblLandUse	LotAcreage	4.93	0.00
tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	10.11	5.56
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	1.30
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00

tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblVehicleEF	HHD	0.16	0.03
tblVehicleEF	HHD	0.26	0.18
tblVehicleEF	HHD	0.06	3.0000e-006
tblVehicleEF	HHD	1.33	5.29
tblVehicleEF	HHD	2.90	0.95
tblVehicleEF	HHD	11.27	0.03
tblVehicleEF	HHD	2,779.71	931.63
tblVehicleEF	HHD	1,748.63	1,585.25
tblVehicleEF	HHD	35.35	0.28
tblVehicleEF	HHD	12.92	5.24
tblVehicleEF	HHD	2.52	3.05
tblVehicleEF	HHD	16.09	2.40
tblVehicleEF	HHD	0.02	3.7460e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	7.0650e-003	0.02
tblVehicleEF	HHD	3.6600e-004	2.0000e-006
tblVehicleEF	HHD	0.01	3.5840e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.4900e-003	8.7190e-003
tblVehicleEF	HHD	6.7570e-003	0.02
tblVehicleEF	HHD	3.3600e-004	2.0000e-006

tblVehicleEF	HHD	1.8400e-004	4.0000e-006
tblVehicleEF	HHD	0.01	2.0300e-004
tblVehicleEF	HHD	0.30	0.36
tblVehicleEF	HHD	1.3800e-004	3.0000e-006
tblVehicleEF	HHD	0.10	0.03
tblVehicleEF	HHD	1.5220e-003	9.6500e-004
tblVehicleEF	HHD	0.22	1.4000e-005
tblVehicleEF	HHD	0.02	8.3030e-003
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	5.3700e-004	3.0000e-006
tblVehicleEF	HHD	1.8400e-004	4.0000e-006
tblVehicleEF	HHD	0.01	2.0300e-004
tblVehicleEF	HHD	0.37	0.42
tblVehicleEF	HHD	1.3800e-004	3.0000e-006
tblVehicleEF	HHD	0.37	0.21
tblVehicleEF	HHD	1.5220e-003	9.6500e-004
tblVehicleEF	HHD	0.24	1.6000e-005
tblVehicleEF	LDA	2.5880e-003	1.3630e-003
tblVehicleEF	LDA	3.8940e-003	0.04
tblVehicleEF	LDA	0.39	0.46
tblVehicleEF	LDA	0.93	2.02
tblVehicleEF	LDA	207.24	229.92
tblVehicleEF	LDA	49.82	49.06
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.15
tblVehicleEF	LDA	1.5630e-003	1.2090e-003
tblVehicleEF	LDA	2.2100e-003	1.6180e-003
tblVehicleEF	LDA	1.4400e-003	1.1130e-003
tblVehicleEF	LDA	2.0320e-003	1.4870e-003
tblVehicleEF	LDA	0.02	0.03

tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	6.5070e-003	5.1000e-003
tblVehicleEF	LDA	0.04	0.19
tblVehicleEF	LDA	0.05	0.18
tblVehicleEF	LDA	2.0740e-003	9.8000e-005
tblVehicleEF	LDA	5.1400e-004	0.00
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	9.4590e-003	7.4120e-003
tblVehicleEF	LDA	0.04	0.19
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDT1	3.9820e-003	2.1260e-003
tblVehicleEF	LDT1	5.7690e-003	0.04
tblVehicleEF	LDT1	0.57	0.60
tblVehicleEF	LDT1	1.36	2.14
tblVehicleEF	LDT1	259.32	271.48
tblVehicleEF	LDT1	61.19	57.93
tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.07	0.17
tblVehicleEF	LDT1	1.8230e-003	1.4330e-003
tblVehicleEF	LDT1	2.6060e-003	1.8860e-003
tblVehicleEF	LDT1	1.6770e-003	1.3180e-003
tblVehicleEF	LDT1	2.3960e-003	1.7340e-003
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	9.8810e-003	8.6090e-003
tblVehicleEF	LDT1	0.10	0.36

tblVehicleEF	LDT1	0.08	0.20
tblVehicleEF	LDT1	2.5980e-003	2.5070e-003
tblVehicleEF	LDT1	6.3500e-004	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.10	0.36
tblVehicleEF	LDT1	0.09	0.22
tblVehicleEF	LDT2	3.4690e-003	1.9400e-003
tblVehicleEF	LDT2	4.0940e-003	0.05
tblVehicleEF	LDT2	0.51	0.56
tblVehicleEF	LDT2	1.03	2.54
tblVehicleEF	LDT2	297.27	283.76
tblVehicleEF	LDT2	69.53	60.97
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.06	0.19
tblVehicleEF	LDT2	1.6830e-003	1.3140e-003
tblVehicleEF	LDT2	2.4040e-003	1.6860e-003
tblVehicleEF	LDT2	1.5480e-003	1.2100e-003
tblVehicleEF	LDT2	2.2100e-003	1.5500e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	8.6100e-003	7.4420e-003
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	2.9750e-003	9.9640e-003
tblVehicleEF	LDT2	7.1200e-004	9.5000e-005
tblVehicleEF	LDT2	0.02	0.03

tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	0.06	0.24
tblVehicleEF	LHD1	4.4510e-003	4.6830e-003
tblVehicleEF	LHD1	0.01	5.8360e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.69	0.51
tblVehicleEF	LHD1	1.94	0.97
tblVehicleEF	LHD1	8.97	8.57
tblVehicleEF	LHD1	656.10	751.95
tblVehicleEF	LHD1	28.64	11.12
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.58	0.34
tblVehicleEF	LHD1	0.74	0.26
tblVehicleEF	LHD1	8.6900e-004	8.5300e-004
tblVehicleEF	LHD1	0.01	9.7990e-003
tblVehicleEF	LHD1	0.01	7.0500e-003
tblVehicleEF	LHD1	7.3000e-004	2.2400e-004
tblVehicleEF	LHD1	8.3100e-004	8.1600e-004
tblVehicleEF	LHD1	2.5810e-003	2.4500e-003
tblVehicleEF	LHD1	0.01	6.6990e-003
tblVehicleEF	LHD1	6.7100e-004	2.0600e-004
tblVehicleEF	LHD1	1.4780e-003	1.0710e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	9.5600e-004	6.9000e-004
tblVehicleEF	LHD1	0.10	0.07

tblVehicleEF	LHD1	0.25	0.33
tblVehicleEF	LHD1	0.17	0.05
tblVehicleEF	LHD1	8.9000e-005	8.3000e-005
tblVehicleEF	LHD1	6.4190e-003	7.3400e-003
tblVehicleEF	LHD1	3.2200e-004	1.1000e-004
tblVehicleEF	LHD1	1.4780e-003	1.0710e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	9.5600e-004	6.9000e-004
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.25	0.33
tblVehicleEF	LHD1	0.19	0.06
tblVehicleEF	LHD2	2.9820e-003	2.8930e-003
tblVehicleEF	LHD2	5.8340e-003	5.4660e-003
tblVehicleEF	LHD2	4.3710e-003	5.9890e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.45	0.46
tblVehicleEF	LHD2	0.99	0.57
tblVehicleEF	LHD2	13.72	13.29
tblVehicleEF	LHD2	689.14	728.51
tblVehicleEF	LHD2	23.21	7.48
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.30	0.37
tblVehicleEF	LHD2	0.34	0.15
tblVehicleEF	LHD2	1.1500e-003	1.4140e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	9.9090e-003	0.01
tblVehicleEF	LHD2	3.8100e-004	1.2000e-004
tblVehicleEF	LHD2	1.1000e-003	1.3530e-003
tblVehicleEF	LHD2	2.6980e-003	2.6890e-003

tblVehicleEF	LHD2	9.4570e-003	0.01
tblVehicleEF	LHD2	3.5000e-004	1.1000e-004
tblVehicleEF	LHD2	4.3600e-004	5.6800e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.0000e-004	3.7300e-004
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.05	0.17
tblVehicleEF	LHD2	0.06	0.03
tblVehicleEF	LHD2	1.3400e-004	1.2700e-004
tblVehicleEF	LHD2	6.6990e-003	7.0360e-003
tblVehicleEF	LHD2	2.4900e-004	7.4000e-005
tblVehicleEF	LHD2	4.3600e-004	5.6800e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-004	3.7300e-004
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.05	0.17
tblVehicleEF	LHD2	0.06	0.03
tblVehicleEF	MCY	0.46	0.33
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	18.12	18.30
tblVehicleEF	MCY	10.44	9.27
tblVehicleEF	MCY	173.27	212.79
tblVehicleEF	MCY	42.90	59.80
tblVehicleEF	MCY	1.15	1.15
tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	2.1390e-003	2.1570e-003
tblVehicleEF	MCY	3.5490e-003	3.1010e-003
tblVehicleEF	MCY	1.9950e-003	2.0130e-003

tblVehicleEF	MCY	3.3260e-003	2.9050e-003
tblVehicleEF	MCY	0.60	1.20
tblVehicleEF	MCY	0.51	0.51
tblVehicleEF	MCY	0.35	0.71
tblVehicleEF	MCY	2.15	2.17
tblVehicleEF	MCY	0.43	1.71
tblVehicleEF	MCY	2.16	1.93
tblVehicleEF	MCY	2.0930e-003	2.1060e-003
tblVehicleEF	MCY	6.6300e-004	5.9200e-004
tblVehicleEF	MCY	0.60	1.20
tblVehicleEF	MCY	0.51	0.51
tblVehicleEF	MCY	0.35	0.71
tblVehicleEF	MCY	2.70	2.71
tblVehicleEF	MCY	0.43	1.71
tblVehicleEF	MCY	2.35	2.10
tblVehicleEF	MDV	5.0930e-003	1.9550e-003
tblVehicleEF	MDV	8.0210e-003	0.05
tblVehicleEF	MDV	0.65	0.55
tblVehicleEF	MDV	1.63	2.63
tblVehicleEF	MDV	393.72	340.70
tblVehicleEF	MDV	90.82	72.12
tblVehicleEF	MDV	0.07	0.04
tblVehicleEF	MDV	0.12	0.21
tblVehicleEF	MDV	1.7140e-003	1.3270e-003
tblVehicleEF	MDV	2.3890e-003	1.6910e-003
tblVehicleEF	MDV	1.5790e-003	1.2230e-003
tblVehicleEF	MDV	2.1970e-003	1.5550e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.10	0.08
tblVehicleEF	MDV	0.04	0.04

tblVehicleEF	MDV	0.01	7.6670e-003
tblVehicleEF	MDV	0.09	0.29
tblVehicleEF	MDV	0.11	0.25
tblVehicleEF	MDV	3.9360e-003	3.2660e-003
tblVehicleEF	MDV	9.3600e-004	6.9200e-004
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.10	0.08
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.09	0.29
tblVehicleEF	MDV	0.12	0.27
tblVehicleEF	MH	0.01	5.5960e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.67	0.42
tblVehicleEF	MH	3.91	1.78
tblVehicleEF	MH	1,185.18	1,419.69
tblVehicleEF	MH	56.59	16.60
tblVehicleEF	MH	0.80	0.92
tblVehicleEF	MH	0.59	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	9.1800e-004	2.4300e-004
tblVehicleEF	MH	3.2240e-003	3.2800e-003
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	8.4400e-004	2.2300e-004
tblVehicleEF	MH	0.29	0.25
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.13	0.11
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	9.5900e-003	0.56

tblVehicleEF	MH	0.22	0.08
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.3400e-004	1.6400e-004
tblVehicleEF	MH	0.29	0.25
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.13	0.11
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	9.5900e-003	0.56
tblVehicleEF	MH	0.24	0.09
tblVehicleEF	MHD	0.02	3.9340e-003
tblVehicleEF	MHD	3.2730e-003	1.4090e-003
tblVehicleEF	MHD	0.04	9.5150e-003
tblVehicleEF	MHD	0.36	0.38
tblVehicleEF	MHD	0.28	0.19
tblVehicleEF	MHD	4.58	1.06
tblVehicleEF	MHD	135.16	61.97
tblVehicleEF	MHD	1,176.19	1,043.81
tblVehicleEF	MHD	58.95	9.62
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	1.02	1.30
tblVehicleEF	MHD	10.30	1.66
tblVehicleEF	MHD	7.5000e-005	2.4000e-004
tblVehicleEF	MHD	2.9360e-003	6.2030e-003
tblVehicleEF	MHD	8.3500e-004	1.1800e-004
tblVehicleEF	MHD	7.2000e-005	2.3000e-004
tblVehicleEF	MHD	2.8030e-003	5.9280e-003
tblVehicleEF	MHD	7.6800e-004	1.0900e-004
tblVehicleEF	MHD	5.2400e-004	2.6600e-004
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.02	0.02

tblVehicleEF	MHD	3.5100e-004	1.7600e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.01	0.09
tblVehicleEF	MHD	0.27	0.05
tblVehicleEF	MHD	1.3020e-003	5.8900e-004
tblVehicleEF	MHD	0.01	9.9640e-003
tblVehicleEF	MHD	6.6900e-004	9.5000e-005
tblVehicleEF	MHD	5.2400e-004	2.6600e-004
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	3.5100e-004	1.7600e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.01	0.09
tblVehicleEF	MHD	0.30	0.05
tblVehicleEF	OBUS	0.01	6.7000e-003
tblVehicleEF	OBUS	4.6710e-003	2.5540e-003
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.24	0.63
tblVehicleEF	OBUS	0.35	0.31
tblVehicleEF	OBUS	4.29	1.48
tblVehicleEF	OBUS	119.16	103.58
tblVehicleEF	OBUS	1,289.22	1,286.62
tblVehicleEF	OBUS	64.48	12.91
tblVehicleEF	OBUS	0.26	0.44
tblVehicleEF	OBUS	0.95	1.48
tblVehicleEF	OBUS	3.00	1.21
tblVehicleEF	OBUS	2.4000e-005	1.4300e-004
tblVehicleEF	OBUS	2.9450e-003	7.6570e-003
tblVehicleEF	OBUS	8.9400e-004	1.4400e-004
tblVehicleEF	OBUS	2.3000e-005	1.3700e-004

tblVehicleEF	OBUS	2.7980e-003	7.3130e-003
tblVehicleEF	OBUS	8.2200e-004	1.3300e-004
tblVehicleEF	OBUS	7.7800e-004	7.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	4.1700e-004	4.0100e-004
tblVehicleEF	OBUS	0.04	0.02
tblVehicleEF	OBUS	0.02	0.14
tblVehicleEF	OBUS	0.26	0.07
tblVehicleEF	OBUS	1.1480e-003	9.8300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.2000e-004	1.2800e-004
tblVehicleEF	OBUS	7.7800e-004	7.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	4.1700e-004	4.0100e-004
tblVehicleEF	OBUS	0.05	0.02
tblVehicleEF	OBUS	0.02	0.14
tblVehicleEF	OBUS	0.29	0.08
tblVehicleEF	SBUS	0.83	0.11
tblVehicleEF	SBUS	0.01	8.8090e-003
tblVehicleEF	SBUS	0.06	0.01
tblVehicleEF	SBUS	12.94	4.01
tblVehicleEF	SBUS	0.72	0.80
tblVehicleEF	SBUS	11.86	1.56
tblVehicleEF	SBUS	832.67	367.56
tblVehicleEF	SBUS	847.81	971.83
tblVehicleEF	SBUS	89.56	8.11
tblVehicleEF	SBUS	3.62	3.13
tblVehicleEF	SBUS	1.69	4.12

tblVehicleEF	SBUS	6.20	0.74
tblVehicleEF	SBUS	2.9290e-003	3.4540e-003
tblVehicleEF	SBUS	9.2930e-003	0.01
tblVehicleEF	SBUS	9.2750e-003	0.02
tblVehicleEF	SBUS	1.7340e-003	1.3000e-004
tblVehicleEF	SBUS	2.8030e-003	3.3050e-003
tblVehicleEF	SBUS	2.3230e-003	2.5240e-003
tblVehicleEF	SBUS	8.8370e-003	0.02
tblVehicleEF	SBUS	1.5940e-003	1.1900e-004
tblVehicleEF	SBUS	2.8560e-003	6.7200e-004
tblVehicleEF	SBUS	0.03	8.3910e-003
tblVehicleEF	SBUS	1.55	0.48
tblVehicleEF	SBUS	1.5450e-003	3.3200e-004
tblVehicleEF	SBUS	0.06	0.09
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.59	0.06
tblVehicleEF	SBUS	8.4050e-003	3.5190e-003
tblVehicleEF	SBUS	8.2910e-003	9.3510e-003
tblVehicleEF	SBUS	1.0990e-003	8.0000e-005
tblVehicleEF	SBUS	2.8560e-003	6.7200e-004
tblVehicleEF	SBUS	0.03	8.3910e-003
tblVehicleEF	SBUS	2.25	0.70
tblVehicleEF	SBUS	1.5450e-003	3.3200e-004
tblVehicleEF	SBUS	0.08	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.64	0.06
tblVehicleEF	UBUS	0.26	1.52
tblVehicleEF	UBUS	0.04	0.01
tblVehicleEF	UBUS	3.57	11.42
tblVehicleEF	UBUS	7.08	0.83

tblVehicleEF	UBUS	2,018.95	1,603.69
tblVehicleEF	UBUS	104.71	9.21
tblVehicleEF	UBUS	5.87	0.69
tblVehicleEF	UBUS	14.44	0.10
tblVehicleEF	UBUS	0.59	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9940e-003
tblVehicleEF	UBUS	1.1330e-003	5.3000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.8010e-003
tblVehicleEF	UBUS	0.10	4.7760e-003
tblVehicleEF	UBUS	1.0420e-003	4.9000e-005
tblVehicleEF	UBUS	1.5560e-003	6.3800e-004
tblVehicleEF	UBUS	0.03	0.01
tblVehicleEF	UBUS	1.0220e-003	4.9700e-004
tblVehicleEF	UBUS	0.30	0.02
tblVehicleEF	UBUS	7.6000e-003	0.08
tblVehicleEF	UBUS	0.56	0.06
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.1750e-003	9.1000e-005
tblVehicleEF	UBUS	1.5560e-003	6.3800e-004
tblVehicleEF	UBUS	0.03	0.01
tblVehicleEF	UBUS	1.0220e-003	4.9700e-004
tblVehicleEF	UBUS	0.59	1.55
tblVehicleEF	UBUS	7.6000e-003	0.08
tblVehicleEF	UBUS	0.61	0.07
tblVehicleTrips	ST_TR	6.39	5.24
tblVehicleTrips	SU_TR	5.86	4.80
tblVehicleTrips	WD_TR	6.65	5.45
tblWater	AerobicPercent	87.46	100.00

tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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	1.9366	0.0461	2.8593	2.4000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	20.0077	20.0077	4.7800e-003	2.8000e-004	20.2110
Energy	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	344.6302	344.6302	0.0405	0.0109	348.9027
Mobile	0.7185	0.8173	5.7887	0.0194	1.7441	0.0108	1.7550	0.4675	0.0101	0.4776	0.0000	1,528.2578	1,528.2578	0.0774	0.0000	1,530.1922
Waste						0.0000	0.0000		0.0000	0.0000	35.8563	0.0000	35.8563	2.1191	0.0000	88.8325
Water						0.0000	0.0000		0.0000	0.0000	8.8518	11.2183	20.0701	0.0330	0.0198	26.7855
Total	**2.6732**	**1.0179**	**8.7137**	**0.0206**	**1.7441**	**0.0402**	**1.7843**	**0.4675**	**0.0395**	**0.5070**	**44.7081**	**1,904.1140**	**1,948.8221**	**2.2746**	**0.0310**	**2,014.9238**

Mitigated Operational

Category	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
	tons/yr										MT/yr					
Area	1.935	0.0329	2.8537	1.50E-04		0.0158	0.0158		0.0158	0.0158	0	4.6675	4.6675	4.49E-03	0	4.7796
Energy	0.0181	0.1545	0.0657	9.90E-04		0.0125	0.0125		0.0125	0.0125	0	178.9014	178.9014	3.43E-03	3.28E-03	179.9645
Mobile	0.7185	0.8173	5.7887	0.0194	1.7441	0.0108	1.755	0.4675	0.0101	0.4776	0	1,528.26	1,528.26	0.0774	0	1,530.19
Waste						0	0		0	0	35.8563	0	35.8563	2.1191	0	88.8325
Water						0	0		0	0	8.8518	11.2183	20.0701	0.033	0.0198	26.7855
Total	**2.6716**	**1.0047**	**8.7081**	**0.0205**	**1.7441**	**0.0391**	**1.7833**	**0.4675**	**0.0384**	**0.5059**	**44.7081**	**1,723.04**	**1,767.75**	**2.2373**	**0.0231**	**1,830.55**

	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	**0.06**	**1.30**	**0.06**	**0.44**	**0.00**	**2.66**	**0.06**	**0.00**	**2.71**	**0.21**	**0.00**	**9.51**	**9.29**	**1.64**	**25.62**	**9.15**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	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
	tons/yr										MT/yr					
Mitigated	0.7185	0.8173	5.7887	0.0194	1.7441	0.0108	1.7550	0.4675	0.0101	0.4776	0.0000	1,528.2578	1,528.2578	0.0774	0.0000	1,530.1922

Unmitigated	0.7185	0.8173	5.7887	0.0194	1.7441	0.0108	1.7550	0.4675	0.0101	0.4776	0.0000	1,528.2578	1,528.2578	0.0774	0.0000	1,530.1922

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,092.80	2,012.16	1843.20	4,724,585	4,724,585
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	2,092.80	2,012.16	1,843.20	4,724,585	4,724,585

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
Parking Lot	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	0.464099	0.072540	0.231585	0.147582	0.028775	0.007220	0.023140	0.006201	0.003128	0.001471	0.012802	0.000563	0.000894
Enclosed Parking with Elevator	0.464099	0.072540	0.231585	0.147582	0.028775	0.007220	0.023140	0.006201	0.003128	0.001471	0.012802	0.000563	0.000894
Parking Lot	0.464099	0.072540	0.231585	0.147582	0.028775	0.007220	0.023140	0.006201	0.003128	0.001471	0.012802	0.000563	0.000894

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	165.7288	165.7288	0.0370	7.6600e-003	168.9382
NaturalGas Mitigated	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645
NaturalGas Unmitigated	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645

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	3.35249e+006	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645
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
Parking Lot	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		**0.0181**	**0.1545**	**0.0657**	**9.9000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.9014**	**178.9014**	**3.4300e-003**	**3.2800e-003**	**179.9645**

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	3.35249e+006	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645
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
Parking Lot	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		**0.0181**	**0.1545**	**0.0657**	**9.9000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.9014**	**178.9014**	**3.4300e-003**	**3.2800e-003**	**179.9645**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.62124e+006	95.4308	0.0213	4.4100e-003	97.2788
Enclosed Parking with Elevator	1.19259e+006	70.1992	0.0157	3.2500e-003	71.5586
Parking Lot	1680	0.0989	2.0000e-005	0.0000	0.1008
Total		**165.7288**	**0.0370**	**7.6600e-003**	**168.9382**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	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	1.9350	0.0329	2.8537	1.5000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	4.6675	4.6675	4.4900e-003	0.0000	4.7796
Unmitigated	1.9366	0.0461	2.8593	2.4000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	20.0077	20.0077	4.7800e-003	2.8000e-004	20.2110

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	0.2840					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	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
Hearth	1.5500e-003	0.0133	5.6400e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3403	15.3403	2.9000e-004	2.8000e-004	15.4314
Landscaping	0.0860	0.0329	2.8537	1.5000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	4.6675	4.6675	4.4900e-003	0.0000	4.7796
Total	**1.9366**	**0.0461**	**2.8593**	**2.3000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**20.0077**	**20.0077**	**4.7800e-003**	**2.8000e-004**	**20.2110**

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	0.2840					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0860	0.0329	2.8537	1.5000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	4.6675	4.6675	4.4900e-003	0.0000	4.7796
Total	**1.9350**	**0.0329**	**2.8537**	**1.5000e-004**		**0.0158**	**0.0158**		**0.0158**	**0.0158**	**0.0000**	**4.6675**	**4.6675**	**4.4900e-003**	**0.0000**	**4.7796**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	20.0701	0.0330	0.0198	26.7855

Unmitigated	20.0701	0.0330	0.0198	26.7855

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	25.0191 / 15.7729	20.0701	0.0330	0.0198	26.7855
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**20.0701**	**0.0330**	**0.0198**	**26.7855**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	25.0191 / 15.7729	20.0701	0.0330	0.0198	26.7855
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**20.0701**	**0.0330**	**0.0198**	**26.7855**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.8563	2.1191	0.0000	88.8325
Unmitigated	35.8563	2.1191	0.0000	88.8325

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	176.64	35.8563	2.1191	0.0000	88.8325
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**35.8563**	**2.1191**	**0.0000**	**88.8325**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	176.64	35.8563	2.1191	0.0000	88.8325
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**35.8563**	**2.1191**	**0.0000**	**88.8325**

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

Anton Millbrae Center - Multi-family Housing AQ

San Mateo County, Annual

2030 Operation GHG Model for the Residential Development

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	548.00	Space	0.00	203,514.00	0
Parking Lot	12.00	Space	0.00	4,800.00	0
Apartments Mid Rise	384.00	Dwelling Unit	5.56	397,272.00	1098

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 70

Climate Zone 5 **Operational Year** 2030

Utility Company Pacific Gas & Electric Company

CO2 Intensity (lb/MWhr) 129.77 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PG&E

Land Use - 384 DU & 397,272 sqft on 5.56-acres. 548 parking spaces in an enclosed parking with elevator and 12 surface parking spaces

Construction Phase - Exact start date and total workdays

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Off-road Equipment - Applicant provided equipment list

Trips and VMT - AQ

Demolition - Demolition of 45,683-sqft

Grading - export: 5,022-cy, import: 26,734-cy

Vehicle Trips - 5.45, 5.24, 4.80

Vehicle Emission Factors - 2030 EMFAC2017 San Mateo Emission Factors

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - No wood hearths but assuming gas...total of 122.88

Energy Use -

Water And Wastewater - 100% aerobic

Construction Off-road Equipment Mitigation - BMPs, Tier 4 interim mitigation, CNG for forklifts, temporary power line instead of generators

Energy Mitigation - PCE would provide 100% GHG free electricity by 2021. Project would be operational post-2021

Area Mitigation - No hearths in the residential dwelling units

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstructionPhase	NumDays	230.00	528.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	20.00	92.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	10.00	138.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	57.60	122.88
tblFireplaces	NumberWood	65.28	0.00
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tblFleetMix	HHD	6.8130e-003	6.3112e-003
tblFleetMix	HHD	6.8130e-003	6.3112e-003
tblFleetMix	LDA	0.45	0.44
tblFleetMix	LDA	0.45	0.44
tblFleetMix	LDA	0.45	0.44
tblFleetMix	LDT1	0.05	0.08
tblFleetMix	LDT1	0.05	0.08

tblFleetMix	LDT1	0.05	0.08
tblFleetMix	LDT2	0.28	0.24
tblFleetMix	LDT2	0.28	0.24
tblFleetMix	LDT2	0.28	0.24
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	7.6330e-003	7.8583e-003
tblFleetMix	LHD2	7.6330e-003	7.8583e-003
tblFleetMix	LHD2	7.6330e-003	7.8583e-003
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tblFleetMix	MDV	0.15	0.16
tblFleetMix	MDV	0.15	0.16
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tblFleetMix	MHD	0.03	0.03
tblFleetMix	MHD	0.03	0.03
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tblFleetMix	OBUS	4.4760e-003	2.9572e-003
tblFleetMix	OBUS	4.4760e-003	2.9572e-003
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tblFleetMix	UBUS	2.8550e-003	1.4301e-003
tblFleetMix	UBUS	2.8550e-003	1.4301e-003

tblFleetMix	UBUS	2.8550e-003	1.4301e-003
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tblGrading	MaterialImported	0.00	26,734.00
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tblLandUse	LandUseSquareFeet	384,000.00	397,272.00
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tblLandUse	LotAcreage	0.11	0.00
tblLandUse	LotAcreage	10.11	5.56
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
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tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
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tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00

tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
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tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
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tblVehicleEF	LDT2	0.06	0.06
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tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	0.24	0.12
tblVehicleEF	LHD2	1.0250e-003	1.4740e-003
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tblVehicleEF	LHD2	8.2320e-003	0.01
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tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.6800e-004	3.0400e-004
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tblVehicleEF	LHD2	0.01	0.02
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tblVehicleEF	MCY	2.0910e-003	2.1040e-003
tblVehicleEF	MCY	6.5200e-004	5.8200e-004
tblVehicleEF	MCY	0.61	1.21
tblVehicleEF	MCY	0.50	0.49
tblVehicleEF	MCY	0.36	0.71
tblVehicleEF	MCY	2.68	2.68
tblVehicleEF	MCY	0.38	1.40
tblVehicleEF	MCY	2.31	2.06
tblVehicleEF	MDV	3.5530e-003	1.2400e-003
tblVehicleEF	MDV	4.8880e-003	0.04
tblVehicleEF	MDV	0.52	0.46
tblVehicleEF	MDV	1.17	2.24
tblVehicleEF	MDV	345.39	309.56
tblVehicleEF	MDV	79.35	64.69
tblVehicleEF	MDV	0.05	0.02
tblVehicleEF	MDV	0.08	0.15
tblVehicleEF	MDV	1.3240e-003	9.7100e-004
tblVehicleEF	MDV	2.0250e-003	1.2840e-003
tblVehicleEF	MDV	1.2200e-003	8.9500e-004
tblVehicleEF	MDV	1.8620e-003	1.1810e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.07
tblVehicleEF	MDV	0.04	0.04

tblVehicleEF	MDV	8.9310e-003	4.5600e-003
tblVehicleEF	MDV	0.08	0.26
tblVehicleEF	MDV	0.07	0.16
tblVehicleEF	MDV	3.4520e-003	2.8580e-003
tblVehicleEF	MDV	8.1300e-004	5.9800e-004
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.07
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.01	6.5940e-003
tblVehicleEF	MDV	0.08	0.26
tblVehicleEF	MDV	0.07	0.18
tblVehicleEF	MH	5.3780e-003	4.0670e-003
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.26	0.22
tblVehicleEF	MH	3.31	1.59
tblVehicleEF	MH	1,174.79	1,315.39
tblVehicleEF	MH	56.01	15.06
tblVehicleEF	MH	0.68	0.84
tblVehicleEF	MH	0.53	0.22
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9500e-003	9.1290e-003
tblVehicleEF	MH	8.6500e-004	2.2300e-004
tblVehicleEF	MH	3.2220e-003	3.2890e-003
tblVehicleEF	MH	6.6090e-003	8.6970e-003
tblVehicleEF	MH	7.9600e-004	2.0500e-004
tblVehicleEF	MH	0.22	0.16
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	5.4280e-003	0.25

tblVehicleEF	MH	0.19	0.07
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.1700e-004	1.4900e-004
tblVehicleEF	MH	0.22	0.16
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	5.4280e-003	0.25
tblVehicleEF	MH	0.21	0.08
tblVehicleEF	MHD	0.02	3.9010e-003
tblVehicleEF	MHD	2.5460e-003	9.3700e-004
tblVehicleEF	MHD	0.03	8.5280e-003
tblVehicleEF	MHD	0.36	0.38
tblVehicleEF	MHD	0.24	0.14
tblVehicleEF	MHD	3.51	0.87
tblVehicleEF	MHD	134.54	55.53
tblVehicleEF	MHD	1,162.44	958.82
tblVehicleEF	MHD	57.83	8.66
tblVehicleEF	MHD	0.34	0.29
tblVehicleEF	MHD	0.99	1.31
tblVehicleEF	MHD	10.23	1.67
tblVehicleEF	MHD	4.2000e-005	1.1600e-004
tblVehicleEF	MHD	2.8940e-003	6.3200e-003
tblVehicleEF	MHD	8.0800e-004	1.1300e-004
tblVehicleEF	MHD	4.0000e-005	1.1100e-004
tblVehicleEF	MHD	2.7630e-003	6.0400e-003
tblVehicleEF	MHD	7.4300e-004	1.0400e-004
tblVehicleEF	MHD	4.5900e-004	2.1500e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.02	0.02

tblVehicleEF	MHD	3.3600e-004	1.5500e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.01	0.06
tblVehicleEF	MHD	0.22	0.04
tblVehicleEF	MHD	1.2960e-003	5.2700e-004
tblVehicleEF	MHD	0.01	9.1500e-003
tblVehicleEF	MHD	6.3900e-004	8.6000e-005
tblVehicleEF	MHD	4.5900e-004	2.1500e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	3.3600e-004	1.5500e-004
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.01	0.06
tblVehicleEF	MHD	0.24	0.05
tblVehicleEF	OBUS	0.01	6.7860e-003
tblVehicleEF	OBUS	3.7210e-003	1.7360e-003
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.24	0.67
tblVehicleEF	OBUS	0.29	0.22
tblVehicleEF	OBUS	3.83	1.34
tblVehicleEF	OBUS	125.90	104.99
tblVehicleEF	OBUS	1,274.07	1,195.47
tblVehicleEF	OBUS	63.49	11.93
tblVehicleEF	OBUS	0.28	0.47
tblVehicleEF	OBUS	0.88	1.49
tblVehicleEF	OBUS	3.03	1.22
tblVehicleEF	OBUS	2.6000e-005	1.5600e-004
tblVehicleEF	OBUS	2.9110e-003	8.0770e-003
tblVehicleEF	OBUS	9.4500e-004	1.4600e-004
tblVehicleEF	OBUS	2.5000e-005	1.4900e-004

tblVehicleEF	OBUS	2.7640e-003	7.7140e-003
tblVehicleEF	OBUS	8.6900e-004	1.3400e-004
tblVehicleEF	OBUS	8.1200e-004	6.9700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	4.5300e-004	3.8500e-004
tblVehicleEF	OBUS	0.04	0.01
tblVehicleEF	OBUS	0.02	0.15
tblVehicleEF	OBUS	0.24	0.07
tblVehicleEF	OBUS	1.2120e-003	9.9600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.0200e-004	1.1800e-004
tblVehicleEF	OBUS	8.1200e-004	6.9700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	4.5300e-004	3.8500e-004
tblVehicleEF	OBUS	0.05	0.02
tblVehicleEF	OBUS	0.02	0.15
tblVehicleEF	OBUS	0.27	0.07
tblVehicleEF	SBUS	0.82	0.16
tblVehicleEF	SBUS	6.7640e-003	5.7190e-003
tblVehicleEF	SBUS	0.05	0.01
tblVehicleEF	SBUS	13.58	5.81
tblVehicleEF	SBUS	0.37	0.52
tblVehicleEF	SBUS	10.81	2.02
tblVehicleEF	SBUS	774.42	372.76
tblVehicleEF	SBUS	809.72	883.04
tblVehicleEF	SBUS	94.79	11.09
tblVehicleEF	SBUS	1.96	2.28
tblVehicleEF	SBUS	0.86	2.37

tblVehicleEF	SBUS	5.09	0.99
tblVehicleEF	SBUS	9.3400e-004	1.7990e-003
tblVehicleEF	SBUS	9.1050e-003	9.6950e-003
tblVehicleEF	SBUS	4.8090e-003	0.01
tblVehicleEF	SBUS	1.9160e-003	1.8900e-004
tblVehicleEF	SBUS	8.9300e-004	1.7210e-003
tblVehicleEF	SBUS	2.2760e-003	2.4240e-003
tblVehicleEF	SBUS	4.5600e-003	0.01
tblVehicleEF	SBUS	1.7620e-003	1.7400e-004
tblVehicleEF	SBUS	3.7070e-003	1.0240e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	1.61	0.71
tblVehicleEF	SBUS	2.0970e-003	5.6900e-004
tblVehicleEF	SBUS	0.04	0.06
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.55	0.08
tblVehicleEF	SBUS	7.8740e-003	3.5870e-003
tblVehicleEF	SBUS	7.9330e-003	8.5400e-003
tblVehicleEF	SBUS	1.1340e-003	1.1000e-004
tblVehicleEF	SBUS	3.7070e-003	1.0240e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	2.35	1.03
tblVehicleEF	SBUS	2.0970e-003	5.6900e-004
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.61	0.09
tblVehicleEF	UBUS	0.25	1.75
tblVehicleEF	UBUS	0.05	8.0630e-003
tblVehicleEF	UBUS	2.66	13.25
tblVehicleEF	UBUS	7.71	0.82

tblVehicleEF	UBUS	1,920.81	1,616.16
tblVehicleEF	UBUS	124.76	7.49
tblVehicleEF	UBUS	3.13	0.67
tblVehicleEF	UBUS	13.14	0.07
tblVehicleEF	UBUS	0.54	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.05	4.9300e-003
tblVehicleEF	UBUS	1.3970e-003	9.1000e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	3.0000e-003	7.8010e-003
tblVehicleEF	UBUS	0.05	4.7100e-003
tblVehicleEF	UBUS	1.2850e-003	8.3000e-005
tblVehicleEF	UBUS	2.0810e-003	1.3500e-004
tblVehicleEF	UBUS	0.04	1.6730e-003
tblVehicleEF	UBUS	1.5040e-003	8.4000e-005
tblVehicleEF	UBUS	0.15	0.03
tblVehicleEF	UBUS	9.5820e-003	9.4520e-003
tblVehicleEF	UBUS	0.65	0.04
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.3880e-003	7.4000e-005
tblVehicleEF	UBUS	2.0810e-003	1.3500e-004
tblVehicleEF	UBUS	0.04	1.6730e-003
tblVehicleEF	UBUS	1.5040e-003	8.4000e-005
tblVehicleEF	UBUS	0.41	1.79
tblVehicleEF	UBUS	9.5820e-003	9.4520e-003
tblVehicleEF	UBUS	0.71	0.04
tblVehicleTrips	ST_TR	6.39	5.24
tblVehicleTrips	SU_TR	5.86	4.80
tblVehicleTrips	WD_TR	6.65	5.45
tblWater	AerobicPercent	87.46	100.00

tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

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	1.9361	0.0461	2.8545	2.4000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	20.0077	20.0077	4.7600e-003	2.8000e-004	20.2105
Energy	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	344.6302	344.6302	0.0405	0.0109	348.9027
Mobile	0.6021	0.7172	5.0674	0.0185	1.7463	8.8500e-003	1.7552	0.4684	8.2600e-003	0.4767	0.0000	1,422.3855	1,422.3855	0.0669	0.0000	1,424.0579
Waste						0.0000	0.0000		0.0000	0.0000	35.8563	0.0000	35.8563	2.1191	0.0000	88.8325
Water						0.0000	0.0000		0.0000	0.0000	8.8518	11.2183	20.0701	0.0330	0.0198	26.7855
Total	**2.5562**	**0.9177**	**7.9876**	**0.0197**	**1.7463**	**0.0382**	**1.7845**	**0.4684**	**0.0377**	**0.5061**	**44.7081**	**1,798.2417**	**1,842.9498**	**2.2641**	**0.0310**	**1,908.7890**

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	1.9345	0.0328	2.8488	1.50E-04		0.0158	0.0158		0.0158	0.0158	0	4.6675	4.6675	4.46E-03	0	4.779
Energy	0.0181	0.1545	0.0657	9.90E-04		0.0125	0.0125		0.0125	0.0125	0	178.9014	178.9014	3.43E-03	3.28E-03	179.9645
Mobile	0.6021	0.7172	5.0674	0.0185	1.7463	8.85E-03	1.7552	0.4684	8.26E-03	0.4767	0	1,422.39	1,422.39	0.0669	0	1,424.06
Waste						0	0		0	0	35.8563	0	35.8563	2.1191	0	88.8325
Water						0	0		0	0	8.8518	11.2183	20.0701	0.033	0.0198	26.7855
Total	**2.5547**	**0.9045**	**7.9819**	**0.0196**	**1.7463**	**0.0372**	**1.7835**	**0.4684**	**0.0366**	**0.505**	**44.7081**	**1,617.17**	**1,661.88**	**2.2268**	**0.0231**	**1,724.42**

	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	**0.06**	**1.44**	**0.07**	**0.46**	**0.00**	**2.80**	**0.06**	**0.00**	**2.84**	**0.21**	**0.00**	**10.07**	**9.82**	**1.65**	**25.62**	**9.66**

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	0.6021	0.7172	5.0674	0.0185	1.7463	8.8500e-003	1.7552	0.4684	8.2600e-003	0.4767	0.0000	1,422.3855	1,422.3855	0.0669	0.0000	1,424.0579
Unmitigated	0.6021	0.7172	5.0674	0.0185	1.7463	8.8500e-003	1.7552	0.4684	8.2600e-003	0.4767	0.0000	1,422.3855	1,422.3855	0.0669	0.0000	1,424.0579

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,092.80	2,012.16	1843.20	4,724,585	4,724,585
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	2,092.80	2,012.16	1,843.20	4,724,585	4,724,585

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
Parking Lot	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	0.439373	0.076262	0.240335	0.155302	0.030200	0.007858	0.025976	0.006311	0.002957	0.001430	0.012414	0.000613	0.000969
Enclosed Parking with Elevator	0.439373	0.076262	0.240335	0.155302	0.030200	0.007858	0.025976	0.006311	0.002957	0.001430	0.012414	0.000613	0.000969
Parking Lot	0.439373	0.076262	0.240335	0.155302	0.030200	0.007858	0.025976	0.006311	0.002957	0.001430	0.012414	0.000613	0.000969

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	165.7288	165.7288	0.0370	7.6600e-003	168.9382
NaturalGas Mitigated	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645
NaturalGas Unmitigated	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645

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	3.35249e+006	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645
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
Parking Lot	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		**0.0181**	**0.1545**	**0.0657**	**9.9000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.9014**	**178.9014**	**3.4300e-003**	**3.2800e-003**	**179.9645**

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	3.35249e+006	0.0181	0.1545	0.0657	9.9000e-004		0.0125	0.0125		0.0125	0.0125	0.0000	178.9014	178.9014	3.4300e-003	3.2800e-003	179.9645

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
Parking Lot	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		**0.0181**	**0.1545**	**0.0657**	**9.9000e-004**		**0.0125**	**0.0125**		**0.0125**	**0.0125**	**0.0000**	**178.9014**	**178.9014**	**3.4300e-003**	**3.2800e-003**	**179.9645**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.62124e+006	95.4308	0.0213	4.4100e-003	97.2788
Enclosed Parking with Elevator	1.19259e+006	70.1992	0.0157	3.2500e-003	71.5586
Parking Lot	1680	0.0989	2.0000e-005	0.0000	0.1008
Total		**165.7288**	**0.0370**	**7.6600e-003**	**168.9382**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Category	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
	tons/yr										MT/yr					
Mitigated	1.9345	0.0328	2.8488	1.5000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	4.6675	4.6675	4.4600e-003	0.0000	4.7790
Unmitigated	1.9361	0.0461	2.8545	2.4000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	20.0077	20.0077	4.7600e-003	2.8000e-004	20.2105

6.2 Area by SubCategory

Unmitigated

SubCategory	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
	tons/yr										MT/yr					
Architectural Coating	0.2840					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.5500e-003	0.0133	5.6400e-003	8.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	15.3403	15.3403	2.9000e-004	2.8000e-004	15.4314
Landscaping	0.0855	0.0328	2.8488	1.5000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	4.6675	4.6675	4.4600e-003	0.0000	4.7790
Total	**1.9361**	**0.0461**	**2.8545**	**2.3000e-004**		**0.0169**	**0.0169**		**0.0169**	**0.0169**	**0.0000**	**20.0077**	**20.0077**	**4.7500e-003**	**2.8000e-004**	**20.2105**

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	0.2840					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5650					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0855	0.0328	2.8488	1.5000e-004		0.0158	0.0158		0.0158	0.0158	0.0000	4.6675	4.6675	4.4600e-003	0.0000	4.7790
Total	**1.9345**	**0.0328**	**2.8488**	**1.5000e-004**		**0.0158**	**0.0158**		**0.0158**	**0.0158**	**0.0000**	**4.6675**	**4.6675**	**4.4600e-003**	**0.0000**	**4.7790**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	20.0701	0.0330	0.0198	26.7855
Unmitigated	20.0701	0.0330	0.0198	26.7855

7.2 Water by Land Use

Unmitigated

Land Use	Indoor/Outdoor Use (Mgal)	Total CO2	CH4	N2O	CO2e
		MT/yr			
Apartments Mid Rise	25.0191 / 15.7729	20.0701	0.0330	0.0198	26.7855
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**20.0701**	**0.0330**	**0.0198**	**26.7855**

Mitigated

Land Use	Indoor/Outdoor Use (Mgal)	Total CO2	CH4	N2O	CO2e
		MT/yr			
Apartments Mid Rise	25.0191 / 15.7729	20.0701	0.0330	0.0198	26.7855
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**20.0701**	**0.0330**	**0.0198**	**26.7855**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	35.8563	2.1191	0.0000	88.8325
Unmitigated	35.8563	2.1191	0.0000	88.8325

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	176.64	35.8563	2.1191	0.0000	88.8325
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**35.8563**	**2.1191**	**0.0000**	**88.8325**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Apartments Mid Rise	176.64	35.8563	2.1191	0.0000	88.8325
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**35.8563**	**2.1191**	**0.0000**	**88.8325**

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

Anton Millbrae Center - Hotel AQ/GHG

San Mateo County, Annual

Construction Criteria Pollutant Model for the Hotel Development

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	187.00	Space	0.00	69,533.00	0
Hotel	200.00	Room	1.17	135,967.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PCE

Land Use - 200 room hotel (5,500+130,467 sqft = 135,967 sqft), 187 parking spaces in garage

Construction Phase - No demolition all occurs in residential construction, applicant construction schedule, exact start date and total workdays

Off-road Equipment - Default

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment -

Trips and VMT -

Vehicle Trips - Traffic Consultant: Weekday 4.47 trips, 4.48 Saturday Trips, 3.26 Sunday Trips

Energy Use -

Water And Wastewater - 100% aerobic

Solid Waste -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final, CNG forklifts, power line

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	336.00
tblConstructionPhase	NumDays	200.00	352.00
tblConstructionPhase	NumDays	4.00	69.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	2.00	138.00
tblGrading	AcresOfGrading	60.38	1.50
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LandUseSquareFeet	74,800.00	69,533.00
tblLandUse	LandUseSquareFeet	290,400.00	135,967.00
tblLandUse	LotAcreage	1.68	0.00
tblLandUse	LotAcreage	6.67	1.17
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.40
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblVehicleTrips	ST_TR	8.19	4.48
tblVehicleTrips	SU_TR	5.95	3.26
tblVehicleTrips	WD_TR	8.17	4.47
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	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					
2022	0.0645	0.6606	0.6585	1.0900e-003	0.1131	0.0325	0.1456	0.0598	0.0299	0.0897	0.0000	95.6454	95.6454	0.0294	0.0000	96.3812
2023	0.4633	1.6476	1.7299	3.7000e-003	0.3423	0.0660	0.4083	0.1645	0.0618	0.2263	0.0000	329.0312	329.0312	0.0644	0.0000	330.6410
2024	0.6127	1.3898	1.9242	3.9400e-003	0.1080	0.0511	0.1591	0.0293	0.0484	0.0777	0.0000	350.8039	350.8039	0.0573	0.0000	352.2356
Maximum	**0.6127**	**1.6476**	**1.9242**	**3.9400e-003**	**0.3423**	**0.0660**	**0.4083**	**0.1645**	**0.0618**	**0.2263**	**0.0000**	**350.8039**	**350.8039**	**0.0644**	**0.0000**	**352.2356**

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					
2022	0.0235	0.4053	0.7322	1.0900e-003	0.0544	1.7200e-003	0.0561	0.0148	1.7200e-003	0.0165	0.0000	95.6453	95.6453	0.0294	0.0000	96.3811
2023	0.3512	1.2417	2.9433	3.7000e-003	0.1996	0.0135	0.2131	0.0544	0.0135	0.0678	0.0000	330.2053	330.2053	0.0660	0.0000	331.8546
2024	0.5168	1.3673	3.3545	3.9400e-003	0.1080	0.0165	0.1245	0.0293	0.0165	0.0457	0.0000	352.3488	352.3488	0.0594	0.0000	353.8330
Maximum	**0.5168**	**1.3673**	**3.3545**	**3.9400e-003**	**0.1996**	**0.0165**	**0.2131**	**0.0544**	**0.0165**	**0.0678**	**0.0000**	**352.3488**	**352.3488**	**0.0660**	**0.0000**	**353.8330**

	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	**21.83**	**18.49**	**-63.01**	**0.00**	**35.76**	**78.80**	**44.79**	**61.19**	**77.43**	**66.97**	**0.00**	**-0.35**	**-0.35**	**-2.44**	**0.00**	**-0.36**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**10-1-2022**	**12-31-2022**	0.5245	0.2685
2	**1-1-2023**	**3-31-2023**	0.8103	0.4037
3	**4-1-2023**	**6-30-2023**	0.1434	0.1255
4	**7-1-2023**	**9-30-2023**	0.5787	0.5333

5	**10-1-2023**	**12-31-2023**	0.5817	0.5363
6	**1-1-2024**	**3-31-2024**	0.5542	0.5240
7	**4-1-2024**	**6-30-2024**	0.5513	0.5211
8	**7-1-2024**	**9-30-2024**	0.5574	0.5269
		Highest	0.8103	0.5363

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	3/4/2022	6/3/2022	5	66	
2	Site Preparation	Site Preparation	10/1/2022	4/12/2023	5	138	
3	Grading	Grading	12/3/2022	3/9/2023	5	69	
4	Building Construction	Building Construction	6/1/2023	10/4/2024	5	352	
5	Architectural Coating	Architectural Coating	7/1/2023	10/14/2024	5	336	
6	Paving	Paving	10/1/2024	11/29/2024	5	44	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 203,951; Non-Residential Outdoor: 67,984; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Grading	Graders	2	7.00	187	0.41
Grading	Rubber Tired Dozers	2	7.00	247	0.40

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	2	0.40	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	2	7.00	46	0.45
Architectural Coating	Aerial Lifts	1	7.00	63	0.31
Architectural Coating	Air Compressors	1	7.00	78	0.48
Paving	Cement and Mortar Mixers	2	7.00	9	0.56
Paving	Pavers	2	7.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	7.00	97	0.37

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
Trenching	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	86.00	34.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	17.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	10	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Trenching - 2022

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					
Off-Road	0.0190	0.1935	0.2585	3.6000e-004		0.0104	0.0104		9.5800e-003	9.5800e-003	0.0000	31.5638	31.5638	0.0102	0.0000	31.8190
Total	**0.0190**	**0.1935**	**0.2585**	**3.6000e-004**		**0.0104**	**0.0104**		**9.5800e-003**	**9.5800e-003**	**0.0000**	**31.5638**	**31.5638**	**0.0102**	**0.0000**	**31.8190**

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	7.9000e-004	4.9000e-004	5.5200e-003	2.0000e-005	2.6000e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.1000e-004	0.0000	2.0100	2.0100	3.0000e-005	0.0000	2.0108
Total	**7.9000e-004**	**4.9000e-004**	**5.5200e-003**	**2.0000e-005**	**2.6000e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**2.0100**	**2.0100**	**3.0000e-005**	**0.0000**	**2.0108**

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					
Off-Road	8.0400e-003	0.1565	0.2705	3.6000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	31.5637	31.5637	0.0102	0.0000	31.8189
Total	**8.0400e-003**	**0.1565**	**0.2705**	**3.6000e-004**		**5.8000e-004**	**5.8000e-004**		**5.8000e-004**	**5.8000e-004**	**0.0000**	**31.5637**	**31.5637**	**0.0102**	**0.0000**	**31.8189**

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	7.9000e-004	4.9000e-004	5.5200e-003	2.0000e-005	2.6000e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.1000e-004	0.0000	2.0100	2.0100	3.0000e-005	0.0000	2.0108
Total	**7.9000e-004**	**4.9000e-004**	**5.5200e-003**	**2.0000e-005**	**2.6000e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**2.0100**	**2.0100**	**3.0000e-005**	**0.0000**	**2.0108**

3.3 Site Preparation - 2022

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					

	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
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0187	0.1906	0.2546	3.5000e-004		0.0103	0.0103		9.4300e-003	9.4300e-003	0.0000	31.0855	31.0855	0.0101	0.0000	31.3369
Total	**0.0187**	**0.1906**	**0.2546**	**3.5000e-004**	**5.3000e-004**	**0.0103**	**0.0108**	**6.0000e-005**	**9.4300e-003**	**9.4900e-003**	**0.0000**	**31.0855**	**31.0855**	**0.0101**	**0.0000**	**31.3369**

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	7.8000e-004	4.9000e-004	5.4300e-003	2.0000e-005	2.5600e-003	2.0000e-005	2.5700e-003	6.8000e-004	1.0000e-005	6.9000e-004	0.0000	1.9795	1.9795	3.0000e-005	0.0000	1.9804
Total	**7.8000e-004**	**4.9000e-004**	**5.4300e-003**	**2.0000e-005**	**2.5600e-003**	**2.0000e-005**	**2.5700e-003**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**0.0000**	**1.9795**	**1.9795**	**3.0000e-005**	**0.0000**	**1.9804**

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					2.4000e-004	0.0000	2.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9200e-003	0.1541	0.2664	3.5000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	31.0855	31.0855	0.0101	0.0000	31.3368
Total	**7.9200e-003**	**0.1541**	**0.2664**	**3.5000e-004**	**2.4000e-004**	**5.8000e-004**	**8.2000e-004**	**1.0000e-005**	**5.8000e-004**	**5.9000e-004**	**0.0000**	**31.0855**	**31.0855**	**0.0101**	**0.0000**	**31.3368**

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	7.8000e-004	4.9000e-004	5.4300e-003	2.0000e-005	2.5600e-003	2.0000e-005	2.5700e-003	6.8000e-004	1.0000e-005	6.9000e-004	0.0000	1.9795	1.9795	3.0000e-005	0.0000	1.9804
Total	**7.8000e-004**	**4.9000e-004**	**5.4300e-003**	**2.0000e-005**	**2.5600e-003**	**2.0000e-005**	**2.5700e-003**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**0.0000**	**1.9795**	**1.9795**	**3.0000e-005**	**0.0000**	**1.9804**

3.3 Site Preparation - 2023

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					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0193	0.1962	0.2851	4.0000e-004		9.6900e-003	9.6900e-003		8.9100e-003	8.9100e-003	0.0000	34.9506	34.9506	0.0113	0.0000	35.2332
Total	**0.0193**	**0.1962**	**0.2851**	**4.0000e-004**	**5.3000e-004**	**9.6900e-003**	**0.0102**	**6.0000e-005**	**8.9100e-003**	**8.9700e-003**	**0.0000**	**34.9506**	**34.9506**	**0.0113**	**0.0000**	**35.2332**

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	8.3000e-004	5.0000e-004	5.6800e-003	2.0000e-005	2.8700e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.1393	2.1393	3.0000e-005	0.0000	2.1401
Total	**8.3000e-004**	**5.0000e-004**	**5.6800e-003**	**2.0000e-005**	**2.8700e-003**	**2.0000e-005**	**2.8900e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.1393**	**2.1393**	**3.0000e-005**	**0.0000**	**2.1401**

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					2.4000e-004	0.0000	2.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9000e-003	0.1731	0.2992	4.0000e-004		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	34.9505	34.9505	0.0113	0.0000	35.2331
Total	**8.9000e-003**	**0.1731**	**0.2992**	**4.0000e-004**	**2.4000e-004**	**6.5000e-004**	**8.9000e-004**	**1.0000e-005**	**6.5000e-004**	**6.6000e-004**	**0.0000**	**34.9505**	**34.9505**	**0.0113**	**0.0000**	**35.2331**

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	8.3000e-004	5.0000e-004	5.6800e-003	2.0000e-005	2.8700e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.1393	2.1393	3.0000e-005	0.0000	2.1401
Total	**8.3000e-004**	**5.0000e-004**	**5.6800e-003**	**2.0000e-005**	**2.8700e-003**	**2.0000e-005**	**2.8900e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.1393**	**2.1393**	**3.0000e-005**	**0.0000**	**2.1401**

3.4 Grading - 2022

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					0.1062	0.0000	0.1062	0.0580	0.0000	0.0580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2752	0.1320	3.2000e-004		0.0118	0.0118		0.0109	0.0109	0.0000	28.0930	28.0930	9.0900e-003	0.0000	28.3201
Total	**0.0248**	**0.2752**	**0.1320**	**3.2000e-004**	**0.1062**	**0.0118**	**0.1180**	**0.0580**	**0.0109**	**0.0689**	**0.0000**	**28.0930**	**28.0930**	**9.0900e-003**	**0.0000**	**28.3201**

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	3.6000e-004	2.2000e-004	2.5100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9136	0.9136	2.0000e-005	0.0000	0.9140
Total	**3.6000e-004**	**2.2000e-004**	**2.5100e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9136**	**0.9136**	**2.0000e-005**	**0.0000**	**0.9140**

Mitigated Construction On-Site

Category	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
	tons/yr										MT/yr					
Fugitive Dust					0.0478	0.0000	0.0478	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5500e-003	0.0936	0.1818	3.2000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	28.0929	28.0929	9.0900e-003	0.0000	28.3201
Total	**5.5500e-003**	**0.0936**	**0.1818**	**3.2000e-004**	**0.0478**	**5.2000e-004**	**0.0483**	**0.0131**	**5.2000e-004**	**0.0136**	**0.0000**	**28.0929**	**28.0929**	**9.0900e-003**	**0.0000**	**28.3201**

Mitigated Construction Off-Site

Category	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
	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	3.6000e-004	2.2000e-004	2.5100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	0.9136	0.9136	2.0000e-005	0.0000	0.9140
Total	**3.6000e-004**	**2.2000e-004**	**2.5100e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**0.9136**	**0.9136**	**2.0000e-005**	**0.0000**	**0.9140**

3.4 Grading - 2023

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					0.2590	0.0000	0.2590	0.1420	0.0000	0.1420	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0523	0.5709	0.3014	7.8000e-004		0.0235	0.0235		0.0216	0.0216	0.0000	68.8230	68.8230	0.0223	0.0000	69.3795
Total	**0.0523**	**0.5709**	**0.3014**	**7.8000e-004**	**0.2590**	**0.0235**	**0.2825**	**0.1420**	**0.0216**	**0.1636**	**0.0000**	**68.8230**	**68.8230**	**0.0223**	**0.0000**	**69.3795**

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	8.4000e-004	5.0000e-004	5.7200e-003	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.1539	2.1539	3.0000e-005	0.0000	2.1548
Total	**8.4000e-004**	**5.0000e-004**	**5.7200e-003**	**2.0000e-005**	**2.8900e-003**	**2.0000e-005**	**2.9100e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.1539**	**2.1539**	**3.0000e-005**	**0.0000**	**2.1548**

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					0.1166	0.0000	0.1166	0.0320	0.0000	0.0320	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0136	0.2293	0.4454	7.8000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	68.8230	68.8230	0.0223	0.0000	69.3794
Total	**0.0136**	**0.2293**	**0.4454**	**7.8000e-004**	**0.1166**	**1.2800e-003**	**0.1178**	**0.0320**	**1.2800e-003**	**0.0332**	**0.0000**	**68.8230**	**68.8230**	**0.0223**	**0.0000**	**69.3794**

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	8.4000e-004	5.0000e-004	5.7200e-003	2.0000e-005	2.8900e-003	2.0000e-005	2.9100e-003	7.7000e-004	2.0000e-005	7.9000e-004	0.0000	2.1539	2.1539	3.0000e-005	0.0000	2.1548
Total	**8.4000e-004**	**5.0000e-004**	**5.7200e-003**	**2.0000e-005**	**2.8900e-003**	**2.0000e-005**	**2.9100e-003**	**7.7000e-004**	**2.0000e-005**	**7.9000e-004**	**0.0000**	**2.1539**	**2.1539**	**3.0000e-005**	**0.0000**	**2.1548**

3.5 Building Construction - 2023

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					
Off-Road	0.0699	0.5415	0.7001	1.0100e-003		0.0263	0.0263		0.0248	0.0248	0.0000	83.5766	83.5766	0.0205	0.0000	84.0882
Total	**0.0699**	**0.5415**	**0.7001**	**1.0100e-003**		**0.0263**	**0.0263**		**0.0248**	**0.0248**	**0.0000**	**83.5766**	**83.5766**	**0.0205**	**0.0000**	**84.0882**

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	6.1500e-003	0.1985	0.1136	6.4000e-004	0.0169	2.8000e-004	0.0171	4.8700e-003	2.7000e-004	5.1400e-003	0.0000	64.8516	64.8516	5.7100e-003	0.0000	64.9943
Worker	0.0150	8.8800e-003	0.1017	4.2000e-004	0.0515	3.0000e-004	0.0518	0.0137	2.8000e-004	0.0140	0.0000	38.3072	38.3072	6.1000e-004	0.0000	38.3226
Total	**0.0211**	**0.2074**	**0.2153**	**1.0600e-003**	**0.0683**	**5.8000e-004**	**0.0689**	**0.0186**	**5.5000e-004**	**0.0191**	**0.0000**	**103.1588**	**103.1588**	**6.3200e-003**	**0.0000**	**103.3168**

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					
Off-Road	0.0170	0.4954	1.7433	1.0100e-003		8.4100e-003	8.4100e-003		8.4100e-003	8.4100e-003	0.0000	84.7508	84.7508	0.0220	0.0000	85.3019
Total	**0.0170**	**0.4954**	**1.7433**	**1.0100e-003**		**8.4100e-003**	**8.4100e-003**		**8.4100e-003**	**8.4100e-003**	**0.0000**	**84.7508**	**84.7508**	**0.0220**	**0.0000**	**85.3019**

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	6.1500e-003	0.1985	0.1136	6.4000e-004	0.0169	2.8000e-004	0.0171	4.8700e-003	2.7000e-004	5.1400e-003	0.0000	64.8516	64.8516	5.7100e-003	0.0000	64.9943
Worker	0.0150	8.8800e-003	0.1017	4.2000e-004	0.0515	3.0000e-004	0.0518	0.0137	2.8000e-004	0.0140	0.0000	38.3072	38.3072	6.1000e-004	0.0000	38.3226
Total	**0.0211**	**0.2074**	**0.2153**	**1.0600e-003**	**0.0683**	**5.8000e-004**	**0.0689**	**0.0186**	**5.5000e-004**	**0.0191**	**0.0000**	**103.1588**	**103.1588**	**6.3200e-003**	**0.0000**	**103.3168**

3.5 Building Construction - 2024

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					
Off-Road	0.0858	0.6751	0.9184	1.3300e-003		0.0300	0.0300		0.0283	0.0283	0.0000	109.9994	109.9994	0.0267	0.0000	110.6665
Total	**0.0858**	**0.6751**	**0.9184**	**1.3300e-003**		**0.0300**	**0.0300**		**0.0283**	**0.0283**	**0.0000**	**109.9994**	**109.9994**	**0.0267**	**0.0000**	**110.6665**

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	7.8500e-003	0.2540	0.1517	8.4000e-004	0.0222	3.5000e-004	0.0225	6.4100e-003	3.4000e-004	6.7500e-003	0.0000	84.5663	84.5663	7.5700e-003	0.0000	84.7555

Worker	0.0188	0.0106	0.1251	5.3000e-004	0.0677	3.9000e-004	0.0681	0.0180	3.6000e-004	0.0184	0.0000	48.4441	48.4441	7.3000e-004	0.0000	48.4624
Total	**0.0266**	**0.2646**	**0.2768**	**1.3700e-003**	**0.0899**	**7.4000e-004**	**0.0906**	**0.0244**	**7.0000e-004**	**0.0251**	**0.0000**	**133.0104**	**133.0104**	**8.3000e-003**	**0.0000**	**133.2179**

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					
Off-Road	0.0222	0.6420	2.2861	1.3300e-003		0.0108	0.0108		0.0108	0.0108	0.0000	111.5444	111.5444	0.0288	0.0000	112.2640
Total	**0.0222**	**0.6420**	**2.2861**	**1.3300e-003**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**111.5444**	**111.5444**	**0.0288**	**0.0000**	**112.2640**

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	7.8500e-003	0.2540	0.1517	8.4000e-004	0.0222	3.5000e-004	0.0225	6.4100e-003	3.4000e-004	6.7500e-003	0.0000	84.5663	84.5663	7.5700e-003	0.0000	84.7555
Worker	0.0188	0.0106	0.1251	5.3000e-004	0.0677	3.9000e-004	0.0681	0.0180	3.6000e-004	0.0184	0.0000	48.4441	48.4441	7.3000e-004	0.0000	48.4624
Total	**0.0266**	**0.2646**	**0.2768**	**1.3700e-003**	**0.0899**	**7.4000e-004**	**0.0906**	**0.0244**	**7.0000e-004**	**0.0251**	**0.0000**	**133.0104**	**133.0104**	**8.3000e-003**	**0.0000**	**133.2179**

3.6 Architectural Coating - 2023

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					
Archit. Coating	0.2799					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1291	0.1995	3.2000e-004		5.8900e-003	5.8900e-003		5.8500e-003	5.8500e-003	0.0000	27.7527	27.7527	3.8700e-003	0.0000	27.8495
Total	**0.2964**	**0.1291**	**0.1995**	**3.2000e-004**		**5.8900e-003**	**5.8900e-003**		**5.8500e-003**	**5.8500e-003**	**0.0000**	**27.7527**	**27.7527**	**3.8700e-003**	**0.0000**	**27.8495**

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	2.5300e-003	1.5000e-003	0.0172	7.0000e-005	8.7000e-003	5.0000e-005	8.7500e-003	2.3100e-003	5.0000e-005	2.3600e-003	0.0000	6.4764	6.4764	1.0000e-004	0.0000	6.4790
Total	**2.5300e-003**	**1.5000e-003**	**0.0172**	**7.0000e-005**	**8.7000e-003**	**5.0000e-005**	**8.7500e-003**	**2.3100e-003**	**5.0000e-005**	**2.3600e-003**	**0.0000**	**6.4764**	**6.4764**	**1.0000e-004**	**0.0000**	**6.4790**

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					
Archit. Coating	0.2799					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4800e-003	0.1341	0.2114	3.2000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003	0.0000	27.7527	27.7527	3.8700e-003	0.0000	27.8495
Total	**0.2864**	**0.1341**	**0.2114**	**3.2000e-004**		**2.4900e-003**	**2.4900e-003**		**2.4900e-003**	**2.4900e-003**	**0.0000**	**27.7527**	**27.7527**	**3.8700e-003**	**0.0000**	**27.8495**

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	2.5300e-003	1.5000e-003	0.0172	7.0000e-005	8.7000e-003	5.0000e-005	8.7500e-003	2.3100e-003	5.0000e-005	2.3600e-003	0.0000	6.4764	6.4764	1.0000e-004	0.0000	6.4790
Total	**2.5300e-003**	**1.5000e-003**	**0.0172**	**7.0000e-005**	**8.7000e-003**	**5.0000e-005**	**8.7500e-003**	**2.3100e-003**	**5.0000e-005**	**2.3600e-003**	**0.0000**	**6.4764**	**6.4764**	**1.0000e-004**	**0.0000**	**6.4790**

3.6 Architectural Coating - 2024

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					
Archit. Coating	0.4436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.1939	0.3160	5.1000e-004		8.1400e-003	8.1400e-003		8.0800e-003	8.0800e-003	0.0000	43.9774	43.9774	6.0300e-003	0.0000	44.1281

Total	0.4684	0.1939	0.3160	5.1000e-004		8.1400e-003	8.1400e-003		8.0800e-003	8.0800e-003	0.0000	43.9774	43.9774	6.0300e-003	0.0000	44.1281

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	3.8300e-003	2.1700e-003	0.0255	1.1000e-004	0.0138	8.0000e-005	0.0139	3.6700e-003	7.0000e-005	3.7400e-003	0.0000	9.8634	9.8634	1.5000e-004	0.0000	9.8672
Total	**3.8300e-003**	**2.1700e-003**	**0.0255**	**1.1000e-004**	**0.0138**	**8.0000e-005**	**0.0139**	**3.6700e-003**	**7.0000e-005**	**3.7400e-003**	**0.0000**	**9.8634**	**9.8634**	**1.5000e-004**	**0.0000**	**9.8672**

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					
Archit. Coating	0.4436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2124	0.3351	5.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	43.9774	43.9774	6.0300e-003	0.0000	44.1280
Total	**0.4538**	**0.2124**	**0.3351**	**5.1000e-004**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**	**0.0000**	**43.9774**	**43.9774**	**6.0300e-003**	**0.0000**	**44.1280**

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	3.8300e-003	2.1700e-003	0.0255	1.1000e-004	0.0138	8.0000e-005	0.0139	3.6700e-003	7.0000e-005	3.7400e-003	0.0000	9.8634	9.8634	1.5000e-004	0.0000	9.8672
Total	**3.8300e-003**	**2.1700e-003**	**0.0255**	**1.1000e-004**	**0.0138**	**8.0000e-005**	**0.0139**	**3.6700e-003**	**7.0000e-005**	**3.7400e-003**	**0.0000**	**9.8634**	**9.8634**	**1.5000e-004**	**0.0000**	**9.8672**

3.7 Paving - 2024

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					
Off-Road	0.0268	0.2533	0.3795	5.9000e-004		0.0121	0.0121		0.0112	0.0112	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0268**	**0.2533**	**0.3795**	**5.9000e-004**		**0.0121**	**0.0121**		**0.0112**	**0.0112**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

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	1.2000e-003	6.8000e-004	8.0000e-003	3.0000e-005	4.3300e-003	3.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.0982	3.0982	5.0000e-005	0.0000	3.0993
Total	**1.2000e-003**	**6.8000e-004**	**8.0000e-003**	**3.0000e-005**	**4.3300e-003**	**3.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1800e-003**	**0.0000**	**3.0982**	**3.0982**	**5.0000e-005**	**0.0000**	**3.0993**

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					
Off-Road	9.1100e-003	0.2454	0.4231	5.9000e-004		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1100e-003**	**0.2454**	**0.4231**	**5.9000e-004**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

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	1.2000e-003	6.8000e-004	8.0000e-003	3.0000e-005	4.3300e-003	3.0000e-005	4.3500e-003	1.1500e-003	2.0000e-005	1.1800e-003	0.0000	3.0982	3.0982	5.0000e-005	0.0000	3.0993

Total	**1.2000e-003**	**6.8000e-004**	**8.0000e-003**	**3.0000e-005**	**4.3300e-003**	**3.0000e-005**	**4.3500e-003**	**1.1500e-003**	**2.0000e-005**	**1.1800e-003**	**0.0000**	**3.0982**	**3.0982**	**5.0000e-005**	**0.0000**	**3.0993**

Anton Millbrae Center - Hotel TAC

San Mateo County, Annual

TAC Model for Hotel for the HRA

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	187.00	Space	0.00	69,533.00	0
Hotel	200.00	Room	1.17	135,967.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PCE

Land Use - 200 room hotel (5,500+130,467 sqft = 135,967 sqft), 187 parking spaces in garage

Construction Phase - No demolition all occurs in residential construction, applicant construction schedule, exact start date and total workdays

Off-road Equipment - Default

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment -

Trips and VMT - TAC trip length 1 mile for localized air emissions

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final, CNG forklifts, power line

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	336.00
tblConstructionPhase	NumDays	200.00	352.00

tblConstructionPhase	NumDays	4.00	69.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	2.00	138.00
tblGrading	AcresOfGrading	60.38	1.50
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LandUseSquareFeet	74,800.00	69,533.00
tblLandUse	LandUseSquareFeet	290,400.00	135,967.00
tblLandUse	LotAcreage	1.68	0.00
tblLandUse	LotAcreage	6.67	1.17
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.40

tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblSolidWaste	SolidWasteGenerationRate	109.50	102.38
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	VendorTripLength	7.30	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblTripsAndVMT	WorkerTripLength	10.80	1.00
tblWater	IndoorWaterUseRate	5,073,354.00	4,743,585.99
tblWater	OutdoorWaterUseRate	563,706.00	527,065.11

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					
2022	0.0632	0.6596	0.6486	1.0400e-003	0.1073	0.0325	0.1398	0.0582	0.0299	0.0881	0.0000	91.3299	91.3299	0.0294	0.0000	92.0641
2023	0.4470	1.5707	1.5798	2.7400e-003	0.2681	0.0655	0.3336	0.1444	0.0614	0.2058	0.0000	237.5393	237.5393	0.0596	0.0000	239.0296
2024	0.5921	1.2926	1.7335	2.7100e-003	0.0112	0.0505	0.0616	3.0600e-003	0.0478	0.0509	0.0000	233.6699	233.6699	0.0509	0.0000	234.9434
Maximum	**0.5921**	**1.5707**	**1.7335**	**2.7400e-003**	**0.2681**	**0.0655**	**0.3336**	**0.1444**	**0.0614**	**0.2058**	**0.0000**	**237.5393**	**237.5393**	**0.0596**	**0.0000**	**239.0296**

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					
2022	0.0221	0.4044	0.7223	1.0400e-003	0.0486	1.6900e-003	0.0503	0.0132	1.6900e-003	0.0149	0.0000	91.3298	91.3298	0.0294	0.0000	92.0640
2023	0.3349	1.1648	2.7932	2.7400e-003	0.1253	0.0130	0.1383	0.0343	0.0130	0.0473	0.0000	238.7134	238.7134	0.0612	0.0000	240.2431
2024	0.4962	1.2701	3.1639	2.7100e-003	0.0112	0.0159	0.0270	3.0600e-003	0.0159	0.0189	0.0000	235.2149	235.2149	0.0530	0.0000	236.5408
Maximum	**0.4962**	**1.2701**	**3.1639**	**2.7400e-003**	**0.1253**	**0.0159**	**0.1383**	**0.0343**	**0.0159**	**0.0473**	**0.0000**	**238.7134**	**238.7134**	**0.0612**	**0.0000**	**240.2431**

	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	22.59	19.40	-68.59	0.00	52.11	79.41	59.69	75.40	78.04	76.46	0.00	-0.48	-0.48	-2.63	0.00	-0.50

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2022	12-31-2022	0.5229	0.2670
2	1-1-2023	3-31-2023	0.8082	0.4016
3	4-1-2023	6-30-2023	0.1314	0.1136
4	7-1-2023	9-30-2023	0.5411	0.4957
5	10-1-2023	12-31-2023	0.5402	0.4948
6	1-1-2024	3-31-2024	0.5146	0.4844
7	4-1-2024	6-30-2024	0.5154	0.4852
8	7-1-2024	9-30-2024	0.5211	0.4906
		Highest	0.8082	0.4957

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	3/4/2022	6/3/2022	5	66	
2	Site Preparation	Site Preparation	10/1/2022	4/12/2023	5	138	
3	Grading	Grading	12/3/2022	3/9/2023	5	69	
4	Building Construction	Building Construction	6/1/2023	10/4/2024	5	352	
5	Architectural Coating	Architectural Coating	7/1/2023	10/14/2024	5	336	
6	Paving	Paving	10/1/2024	11/29/2024	5	44	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 203,951; Non-Residential Outdoor: 67,984; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Site Preparation	Graders	0	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Grading	Graders	2	7.00	187	0.41
Grading	Rubber Tired Dozers	2	7.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	0	0.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	2	0.40	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	2	7.00	46	0.45
Architectural Coating	Aerial Lifts	1	7.00	63	0.31
Architectural Coating	Air Compressors	1	7.00	78	0.48
Paving	Cement and Mortar Mixers	2	7.00	9	0.56
Paving	Pavers	2	7.00	130	0.42
Paving	Paving Equipment	2	7.00	132	0.36
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	7.00	97	0.37

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
Trenching	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	86.00	34.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	17.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

Paving	10	25.00	0.00	0.00	1.00	1.00	1.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Alternative Fuel for Construction Equipment

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Trenching - 2022

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					
Off-Road	0.0190	0.1935	0.2585	3.6000e-004		0.0104	0.0104		9.5800e-003	9.5800e-003	0.0000	31.5638	31.5638	0.0102	0.0000	31.8190
Total	**0.0190**	**0.1935**	**0.2585**	**3.6000e-004**		**0.0104**	**0.0104**		**9.5800e-003**	**9.5800e-003**	**0.0000**	**31.5638**	**31.5638**	**0.0102**	**0.0000**	**31.8190**

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	2.4000e-004	1.1000e-004	1.4700e-003	0.0000	2.4000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2409	0.2409	1.0000e-005	0.0000	0.2411
Total	**2.4000e-004**	**1.1000e-004**	**1.4700e-003**	**0.0000**	**2.4000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2409**	**0.2409**	**1.0000e-005**	**0.0000**	**0.2411**

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					
Off-Road	8.0400e-003	0.1565	0.2705	3.6000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	31.5637	31.5637	0.0102	0.0000	31.8189
Total	**8.0400e-003**	**0.1565**	**0.2705**	**3.6000e-004**		**5.8000e-004**	**5.8000e-004**		**5.8000e-004**	**5.8000e-004**	**0.0000**	**31.5637**	**31.5637**	**0.0102**	**0.0000**	**31.8189**

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	2.4000e-004	1.1000e-004	1.4700e-003	0.0000	2.4000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2409	0.2409	1.0000e-005	0.0000	0.2411
Total	**2.4000e-004**	**1.1000e-004**	**1.4700e-003**	**0.0000**	**2.4000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2409**	**0.2409**	**1.0000e-005**	**0.0000**	**0.2411**

3.3 Site Preparation - 2022

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					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0187	0.1906	0.2546	3.5000e-004		0.0103	0.0103		9.4300e-003	9.4300e-003	0.0000	31.0855	31.0855	0.0101	0.0000	31.3369
Total	**0.0187**	**0.1906**	**0.2546**	**3.5000e-004**	**5.3000e-004**	**0.0103**	**0.0108**	**6.0000e-005**	**9.4300e-003**	**9.4900e-003**	**0.0000**	**31.0855**	**31.0855**	**0.0101**	**0.0000**	**31.3369**

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	2.4000e-004	1.0000e-004	1.4500e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2373	0.2373	1.0000e-005	0.0000	0.2374
Total	**2.4000e-004**	**1.0000e-004**	**1.4500e-003**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2373**	**0.2373**	**1.0000e-005**	**0.0000**	**0.2374**

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					2.4000e-004	0.0000	2.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9200e-003	0.1541	0.2664	3.5000e-004		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004	0.0000	31.0855	31.0855	0.0101	0.0000	31.3368
Total	**7.9200e-003**	**0.1541**	**0.2664**	**3.5000e-004**	**2.4000e-004**	**5.8000e-004**	**8.2000e-004**	**1.0000e-005**	**5.8000e-004**	**5.9000e-004**	**0.0000**	**31.0855**	**31.0855**	**0.0101**	**0.0000**	**31.3368**

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	2.4000e-004	1.0000e-004	1.4500e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2373	0.2373	1.0000e-005	0.0000	0.2374
Total	**2.4000e-004**	**1.0000e-004**	**1.4500e-003**	**0.0000**	**2.4000e-004**	**0.0000**	**2.4000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2373**	**0.2373**	**1.0000e-005**	**0.0000**	**0.2374**

3.3 Site Preparation - 2023

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					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0193	0.1962	0.2851	4.0000e-004		9.6900e-003	9.6900e-003		8.9100e-003	8.9100e-003	0.0000	34.9506	34.9506	0.0113	0.0000	35.2332
Total	**0.0193**	**0.1962**	**0.2851**	**4.0000e-004**	**5.3000e-004**	**9.6900e-003**	**0.0102**	**6.0000e-005**	**8.9100e-003**	**8.9700e-003**	**0.0000**	**34.9506**	**34.9506**	**0.0113**	**0.0000**	**35.2332**

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	2.5000e-004	1.0000e-004	1.4900e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2566	0.2566	1.0000e-005	0.0000	0.2567
Total	**2.5000e-004**	**1.0000e-004**	**1.4900e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2566**	**0.2566**	**1.0000e-005**	**0.0000**	**0.2567**

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					2.4000e-004	0.0000	2.4000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9000e-003	0.1731	0.2992	4.0000e-004		6.5000e-004	6.5000e-004		6.5000e-004	6.5000e-004	0.0000	34.9505	34.9505	0.0113	0.0000	35.2331
Total	**8.9000e-003**	**0.1731**	**0.2992**	**4.0000e-004**	**2.4000e-004**	**6.5000e-004**	**8.9000e-004**	**1.0000e-005**	**6.5000e-004**	**6.6000e-004**	**0.0000**	**34.9505**	**34.9505**	**0.0113**	**0.0000**	**35.2331**

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	2.5000e-004	1.0000e-004	1.4900e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2566	0.2566	1.0000e-005	0.0000	0.2567
Total	**2.5000e-004**	**1.0000e-004**	**1.4900e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2566**	**0.2566**	**1.0000e-005**	**0.0000**	**0.2567**

3.4 Grading - 2022

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					0.1062	0.0000	0.1062	0.0580	0.0000	0.0580	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2752	0.1320	3.2000e-004		0.0118	0.0118		0.0109	0.0109	0.0000	28.0930	28.0930	9.0900e-003	0.0000	28.3201
Total	**0.0248**	**0.2752**	**0.1320**	**3.2000e-004**	**0.1062**	**0.0118**	**0.1180**	**0.0580**	**0.0109**	**0.0689**	**0.0000**	**28.0930**	**28.0930**	**9.0900e-003**	**0.0000**	**28.3201**

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	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096
Total	**1.1000e-004**	**5.0000e-005**	**6.7000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1095**	**0.1095**	**0.0000**	**0.0000**	**0.1096**

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					0.0478	0.0000	0.0478	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5500e-003	0.0936	0.1818	3.2000e-004		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	28.0929	28.0929	9.0900e-003	0.0000	28.3201
Total	**5.5500e-003**	**0.0936**	**0.1818**	**3.2000e-004**	**0.0478**	**5.2000e-004**	**0.0483**	**0.0131**	**5.2000e-004**	**0.0136**	**0.0000**	**28.0929**	**28.0929**	**9.0900e-003**	**0.0000**	**28.3201**

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	1.1000e-004	5.0000e-005	6.7000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1095	0.1095	0.0000	0.0000	0.1096
Total	**1.1000e-004**	**5.0000e-005**	**6.7000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1095**	**0.1095**	**0.0000**	**0.0000**	**0.1096**

3.4 Grading - 2023

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					0.2590	0.0000	0.2590	0.1420	0.0000	0.1420	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0523	0.5709	0.3014	7.8000e-004		0.0235	0.0235		0.0216	0.0216	0.0000	68.8230	68.8230	0.0223	0.0000	69.3795
Total	**0.0523**	**0.5709**	**0.3014**	**7.8000e-004**	**0.2590**	**0.0235**	**0.2825**	**0.1420**	**0.0216**	**0.1636**	**0.0000**	**68.8230**	**68.8230**	**0.0223**	**0.0000**	**69.3795**

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	2.5000e-004	1.0000e-004	1.5000e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2583	0.2583	1.0000e-005	0.0000	0.2585
Total	**2.5000e-004**	**1.0000e-004**	**1.5000e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2583**	**0.2583**	**1.0000e-005**	**0.0000**	**0.2585**

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					0.1166	0.0000	0.1166	0.0320	0.0000	0.0320	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0136	0.2293	0.4454	7.8000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	68.8230	68.8230	0.0223	0.0000	69.3794
Total	**0.0136**	**0.2293**	**0.4454**	**7.8000e-004**	**0.1166**	**1.2800e-003**	**0.1178**	**0.0320**	**1.2800e-003**	**0.0332**	**0.0000**	**68.8230**	**68.8230**	**0.0223**	**0.0000**	**69.3794**

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	2.5000e-004	1.0000e-004	1.5000e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2583	0.2583	1.0000e-005	0.0000	0.2585
Total	**2.5000e-004**	**1.0000e-004**	**1.5000e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2583**	**0.2583**	**1.0000e-005**	**0.0000**	**0.2585**

3.5 Building Construction - 2023

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					
Off-Road	0.0699	0.5415	0.7001	1.0100e-003		0.0263	0.0263		0.0248	0.0248	0.0000	83.5766	83.5766	0.0205	0.0000	84.0882
Total	**0.0699**	**0.5415**	**0.7001**	**1.0100e-003**		**0.0263**	**0.0263**		**0.0248**	**0.0248**	**0.0000**	**83.5766**	**83.5766**	**0.0205**	**0.0000**	**84.0882**

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	3.2300e-003	0.1307	0.0596	1.6000e-004	2.3700e-003	9.0000e-005	2.4600e-003	6.9000e-004	9.0000e-005	7.8000e-004	0.0000	16.5506	16.5506	1.5500e-003	0.0000	16.5893
Worker	4.4800e-003	1.8600e-003	0.0267	5.0000e-005	4.8200e-003	6.0000e-005	4.8800e-003	1.2900e-003	6.0000e-005	1.3500e-003	0.0000	4.5942	4.5942	1.3000e-004	0.0000	4.5974
Total	**7.7100e-003**	**0.1325**	**0.0863**	**2.1000e-004**	**7.1900e-003**	**1.5000e-004**	**7.3400e-003**	**1.9800e-003**	**1.5000e-004**	**2.1300e-003**	**0.0000**	**21.1448**	**21.1448**	**1.6800e-003**	**0.0000**	**21.1867**

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					
Off-Road	0.0170	0.4954	1.7433	1.0100e-003		8.4100e-003	8.4100e-003		8.4100e-003	8.4100e-003	0.0000	84.7508	84.7508	0.0220	0.0000	85.3019
Total	**0.0170**	**0.4954**	**1.7433**	**1.0100e-003**		**8.4100e-003**	**8.4100e-003**		**8.4100e-003**	**8.4100e-003**	**0.0000**	**84.7508**	**84.7508**	**0.0220**	**0.0000**	**85.3019**

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	3.2300e-003	0.1307	0.0596	1.6000e-004	2.3700e-003	9.0000e-005	2.4600e-003	6.9000e-004	9.0000e-005	7.8000e-004	0.0000	16.5506	16.5506	1.5500e-003	0.0000	16.5893
Worker	4.4800e-003	1.8600e-003	0.0267	5.0000e-005	4.8200e-003	6.0000e-005	4.8800e-003	1.2900e-003	6.0000e-005	1.3500e-003	0.0000	4.5942	4.5942	1.3000e-004	0.0000	4.5974
Total	**7.7100e-003**	**0.1325**	**0.0863**	**2.1000e-004**	**7.1900e-003**	**1.5000e-004**	**7.3400e-003**	**1.9800e-003**	**1.5000e-004**	**2.1300e-003**	**0.0000**	**21.1448**	**21.1448**	**1.6800e-003**	**0.0000**	**21.1867**

3.5 Building Construction - 2024

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					
Off-Road	0.0858	0.6751	0.9184	1.3300e-003		0.0300	0.0300		0.0283	0.0283	0.0000	109.9994	109.9994	0.0267	0.0000	110.6665
Total	**0.0858**	**0.6751**	**0.9184**	**1.3300e-003**		**0.0300**	**0.0300**		**0.0283**	**0.0283**	**0.0000**	**109.9994**	**109.9994**	**0.0267**	**0.0000**	**110.6665**

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	4.0500e-003	0.1674	0.0786	2.1000e-004	3.1100e-003	1.1000e-004	3.2200e-003	9.1000e-004	1.1000e-004	1.0100e-003	0.0000	21.4693	21.4693	1.9700e-003	0.0000	21.5186
Worker	5.5000e-003	2.2100e-003	0.0324	6.0000e-005	6.3500e-003	8.0000e-005	6.4300e-003	1.7000e-003	7.0000e-005	1.7700e-003	0.0000	5.8134	5.8134	1.5000e-004	0.0000	5.8171
Total	**9.5500e-003**	**0.1697**	**0.1110**	**2.7000e-004**	**9.4600e-003**	**1.9000e-004**	**9.6500e-003**	**2.6100e-003**	**1.8000e-004**	**2.7800e-003**	**0.0000**	**27.2826**	**27.2826**	**2.1200e-003**	**0.0000**	**27.3357**

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					
Off-Road	0.0222	0.6420	2.2861	1.3300e-003		0.0108	0.0108		0.0108	0.0108	0.0000	111.5444	111.5444	0.0288	0.0000	112.2640
Total	**0.0222**	**0.6420**	**2.2861**	**1.3300e-003**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**111.5444**	**111.5444**	**0.0288**	**0.0000**	**112.2640**

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					

	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
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	4.0500e-003	0.1674	0.0786	2.1000e-004	3.1100e-003	1.1000e-004	3.2200e-003	9.1000e-004	1.1000e-004	1.0100e-003	0.0000	21.4693	21.4693	1.9700e-003	0.0000	21.5186
Worker	5.5000e-003	2.2100e-003	0.0324	6.0000e-005	6.3500e-003	8.0000e-005	6.4300e-003	1.7000e-003	7.0000e-005	1.7700e-003	0.0000	5.8134	5.8134	1.5000e-004	0.0000	5.8171
Total	**9.5500e-003**	**0.1697**	**0.1110**	**2.7000e-004**	**9.4600e-003**	**1.9000e-004**	**9.6500e-003**	**2.6100e-003**	**1.8000e-004**	**2.7800e-003**	**0.0000**	**27.2826**	**27.2826**	**2.1200e-003**	**0.0000**	**27.3357**

3.6 Architectural Coating - 2023

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					
Archit. Coating	0.2799					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0165	0.1291	0.1995	3.2000e-004		5.8900e-003	5.8900e-003		5.8500e-003	5.8500e-003	0.0000	27.7527	27.7527	3.8700e-003	0.0000	27.8495
Total	**0.2964**	**0.1291**	**0.1995**	**3.2000e-004**		**5.8900e-003**	**5.8900e-003**		**5.8500e-003**	**5.8500e-003**	**0.0000**	**27.7527**	**27.7527**	**3.8700e-003**	**0.0000**	**27.8495**

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	7.6000e-004	3.2000e-004	4.5200e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7767	0.7767	2.0000e-005	0.0000	0.7773

Total	7.6000e-004	3.2000e-004	4.5200e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7767	0.7767	2.0000e-005	0.0000	0.7773

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					
Archit. Coating	0.2799					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4800e-003	0.1341	0.2114	3.2000e-004		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003	0.0000	27.7527	27.7527	3.8700e-003	0.0000	27.8495
Total	**0.2864**	**0.1341**	**0.2114**	**3.2000e-004**		**2.4900e-003**	**2.4900e-003**		**2.4900e-003**	**2.4900e-003**	**0.0000**	**27.7527**	**27.7527**	**3.8700e-003**	**0.0000**	**27.8495**

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	7.6000e-004	3.2000e-004	4.5200e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7767	0.7767	2.0000e-005	0.0000	0.7773
Total	**7.6000e-004**	**3.2000e-004**	**4.5200e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.7767**	**0.7767**	**2.0000e-005**	**0.0000**	**0.7773**

3.6 Architectural Coating - 2024

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					
Archit. Coating	0.4436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.1939	0.3160	5.1000e-004		8.1400e-003	8.1400e-003		8.0800e-003	8.0800e-003	0.0000	43.9774	43.9774	6.0300e-003	0.0000	44.1281
Total	**0.4684**	**0.1939**	**0.3160**	**5.1000e-004**		**8.1400e-003**	**8.1400e-003**		**8.0800e-003**	**8.0800e-003**	**0.0000**	**43.9774**	**43.9774**	**6.0300e-003**	**0.0000**	**44.1281**

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	1.1200e-003	4.5000e-004	6.6000e-003	1.0000e-005	1.2900e-003	2.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1836	1.1836	3.0000e-005	0.0000	1.1844
Total	**1.1200e-003**	**4.5000e-004**	**6.6000e-003**	**1.0000e-005**	**1.2900e-003**	**2.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1836**	**1.1836**	**3.0000e-005**	**0.0000**	**1.1844**

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					

Archit. Coating	0.4436					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.2124	0.3351	5.1000e-004		3.9500e-003	3.9500e-003		3.9500e-003	3.9500e-003	0.0000	43.9774	43.9774	6.0300e-003	0.0000	44.1280
Total	**0.4538**	**0.2124**	**0.3351**	**5.1000e-004**		**3.9500e-003**	**3.9500e-003**		**3.9500e-003**	**3.9500e-003**	**0.0000**	**43.9774**	**43.9774**	**6.0300e-003**	**0.0000**	**44.1280**

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	1.1200e-003	4.5000e-004	6.6000e-003	1.0000e-005	1.2900e-003	2.0000e-005	1.3100e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1836	1.1836	3.0000e-005	0.0000	1.1844
Total	**1.1200e-003**	**4.5000e-004**	**6.6000e-003**	**1.0000e-005**	**1.2900e-003**	**2.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.1836**	**1.1836**	**3.0000e-005**	**0.0000**	**1.1844**

3.7 Paving - 2024

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					
Off-Road	0.0268	0.2533	0.3795	5.9000e-004		0.0121	0.0121		0.0112	0.0112	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0268**	**0.2533**	**0.3795**	**5.9000e-004**		**0.0121**	**0.0121**		**0.0112**	**0.0112**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

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	3.5000e-004	1.4000e-004	2.0700e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3718	0.3718	1.0000e-005	0.0000	0.3720
Total	**3.5000e-004**	**1.4000e-004**	**2.0700e-003**	**0.0000**	**4.1000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3718**	**0.3718**	**1.0000e-005**	**0.0000**	**0.3720**

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					
Off-Road	9.1100e-003	0.2454	0.4231	5.9000e-004		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	50.8551	50.8551	0.0161	0.0000	51.2566
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1100e-003**	**0.2454**	**0.4231**	**5.9000e-004**		**9.1000e-004**	**9.1000e-004**		**9.1000e-004**	**9.1000e-004**	**0.0000**	**50.8551**	**50.8551**	**0.0161**	**0.0000**	**51.2566**

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	3.5000e-004	1.4000e-004	2.0700e-003	0.0000	4.1000e-004	1.0000e-005	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3718	0.3718	1.0000e-005	0.0000	0.3720
Total	**3.5000e-004**	**1.4000e-004**	**2.0700e-003**	**0.0000**	**4.1000e-004**	**1.0000e-005**	**4.1000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3718**	**0.3718**	**1.0000e-005**	**0.0000**	**0.3720**

Anton Millbrae Center - Hotel AQ/GHG

San Mateo County, Annual

2025 Operational Criteria Pollutant/GHG Model for the Hotel Development

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	187.00	Space	0.00	69,533.00	0
Hotel	200.00	Room	1.17	135,967.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PCE

Land Use - 200 room hotel (5,500+130,467 sqft = 135,967 sqft), 187 parking spaces in garage

Construction Phase - No demolition all occurs in residential construction, applicant construction schedule, exact start date and total workdays

Off-road Equipment - Default

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment -

Trips and VMT -

Vehicle Trips - Traffic Consultant: Weekday 4.47 trips, 4.48 Saturday Trips, 3.26 Sunday Trips

Vehicle Emission Factors - 2025 EMFAC2017 San Mateo Emission Factors

Energy Use -

Water And Wastewater - 100% aerobic

Solid Waste -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final, CNG forklifts, power line

Energy Mitigation - PCE plans to provide 100% GHG free electricity by 2021. Project would be operational post-2021

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	10.00	336.00
tblConstructionPhase	NumDays	200.00	352.00
tblConstructionPhase	NumDays	4.00	69.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	2.00	138.00
tblFleetMix	HHD	6.6460e-003	6.2010e-003
tblFleetMix	HHD	6.6460e-003	6.2010e-003
tblFleetMix	LDA	0.46	0.46
tblFleetMix	LDA	0.46	0.46
tblFleetMix	LDT1	0.05	0.07
tblFleetMix	LDT1	0.05	0.07
tblFleetMix	LDT2	0.27	0.23
tblFleetMix	LDT2	0.27	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	7.2140e-003	7.2200e-003
tblFleetMix	LHD2	7.2140e-003	7.2200e-003
tblFleetMix	MCY	9.2950e-003	0.01
tblFleetMix	MCY	9.2950e-003	0.01
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MDV	0.14	0.15
tblFleetMix	MH	8.2400e-004	8.9400e-004
tblFleetMix	MH	8.2400e-004	8.9400e-004
tblFleetMix	MHD	0.03	0.02
tblFleetMix	MHD	0.03	0.02

tblFleetMix	OBUS	4.2990e-003	3.1280e-003
tblFleetMix	OBUS	4.2990e-003	3.1280e-003
tblFleetMix	SBUS	5.2200e-004	5.6300e-004
tblFleetMix	SBUS	5.2200e-004	5.6300e-004
tblFleetMix	UBUS	3.0350e-003	1.4710e-003
tblFleetMix	UBUS	3.0350e-003	1.4710e-003
tblGrading	AcresOfGrading	60.38	1.50
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LandUseSquareFeet	74,800.00	69,533.00
tblLandUse	LandUseSquareFeet	290,400.00	135,967.00
tblLandUse	LotAcreage	1.68	0.00
tblLandUse	LotAcreage	6.67	1.17
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00

tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.40
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
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tblOffRoadEquipment	UsageHours	6.00	7.00
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tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblVehicleEF	HHD	0.16	0.03
tblVehicleEF	HHD	0.26	0.18
tblVehicleEF	HHD	0.06	3.0000e-006
tblVehicleEF	HHD	1.33	5.29
tblVehicleEF	HHD	2.90	0.95
tblVehicleEF	HHD	11.27	0.03
tblVehicleEF	HHD	2,779.71	931.63
tblVehicleEF	HHD	1,748.63	1,585.25
tblVehicleEF	HHD	35.35	0.28
tblVehicleEF	HHD	12.92	5.24
tblVehicleEF	HHD	2.52	3.05
tblVehicleEF	HHD	16.09	2.40
tblVehicleEF	HHD	0.02	3.7460e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	7.0650e-003	0.02
tblVehicleEF	HHD	3.6600e-004	2.0000e-006
tblVehicleEF	HHD	0.01	3.5840e-003

tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.4900e-003	8.7190e-003
tblVehicleEF	HHD	6.7570e-003	0.02
tblVehicleEF	HHD	3.3600e-004	2.0000e-006
tblVehicleEF	HHD	1.8400e-004	4.0000e-006
tblVehicleEF	HHD	0.01	2.0300e-004
tblVehicleEF	HHD	0.30	0.36
tblVehicleEF	HHD	1.3800e-004	3.0000e-006
tblVehicleEF	HHD	0.10	0.03
tblVehicleEF	HHD	1.5220e-003	9.6500e-004
tblVehicleEF	HHD	0.22	1.4000e-005
tblVehicleEF	HHD	0.02	8.3030e-003
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	5.3700e-004	3.0000e-006
tblVehicleEF	HHD	1.8400e-004	4.0000e-006
tblVehicleEF	HHD	0.01	2.0300e-004
tblVehicleEF	HHD	0.37	0.42
tblVehicleEF	HHD	1.3800e-004	3.0000e-006
tblVehicleEF	HHD	0.37	0.21
tblVehicleEF	HHD	1.5220e-003	9.6500e-004
tblVehicleEF	HHD	0.24	1.6000e-005
tblVehicleEF	LDA	2.5880e-003	1.3630e-003
tblVehicleEF	LDA	3.8940e-003	0.04
tblVehicleEF	LDA	0.39	0.46
tblVehicleEF	LDA	0.93	2.02
tblVehicleEF	LDA	207.24	229.92
tblVehicleEF	LDA	49.82	49.06
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.05	0.15
tblVehicleEF	LDA	1.5630e-003	1.2090e-003

tblVehicleEF	LDA	2.2100e-003	1.6180e-003
tblVehicleEF	LDA	1.4400e-003	1.1130e-003
tblVehicleEF	LDA	2.0320e-003	1.4870e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	6.5070e-003	5.1000e-003
tblVehicleEF	LDA	0.04	0.19
tblVehicleEF	LDA	0.05	0.18
tblVehicleEF	LDA	2.0740e-003	9.8000e-005
tblVehicleEF	LDA	5.1400e-004	0.00
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	9.4590e-003	7.4120e-003
tblVehicleEF	LDA	0.04	0.19
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDT1	3.9820e-003	2.1260e-003
tblVehicleEF	LDT1	5.7690e-003	0.04
tblVehicleEF	LDT1	0.57	0.60
tblVehicleEF	LDT1	1.36	2.14
tblVehicleEF	LDT1	259.32	271.48
tblVehicleEF	LDT1	61.19	57.93
tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.07	0.17
tblVehicleEF	LDT1	1.8230e-003	1.4330e-003
tblVehicleEF	LDT1	2.6060e-003	1.8860e-003
tblVehicleEF	LDT1	1.6770e-003	1.3180e-003
tblVehicleEF	LDT1	2.3960e-003	1.7340e-003
tblVehicleEF	LDT1	0.04	0.04

tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	9.8810e-003	8.6090e-003
tblVehicleEF	LDT1	0.10	0.36
tblVehicleEF	LDT1	0.08	0.20
tblVehicleEF	LDT1	2.5980e-003	2.5070e-003
tblVehicleEF	LDT1	6.3500e-004	0.00
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.10	0.36
tblVehicleEF	LDT1	0.09	0.22
tblVehicleEF	LDT2	3.4690e-003	1.9400e-003
tblVehicleEF	LDT2	4.0940e-003	0.05
tblVehicleEF	LDT2	0.51	0.56
tblVehicleEF	LDT2	1.03	2.54
tblVehicleEF	LDT2	297.27	283.76
tblVehicleEF	LDT2	69.53	60.97
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.06	0.19
tblVehicleEF	LDT2	1.6830e-003	1.3140e-003
tblVehicleEF	LDT2	2.4040e-003	1.6860e-003
tblVehicleEF	LDT2	1.5480e-003	1.2100e-003
tblVehicleEF	LDT2	2.2100e-003	1.5500e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	8.6100e-003	7.4420e-003
tblVehicleEF	LDT2	0.06	0.29

tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	2.9750e-003	9.9640e-003
tblVehicleEF	LDT2	7.1200e-004	9.5000e-005
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.02	0.04
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.29
tblVehicleEF	LDT2	0.06	0.24
tblVehicleEF	LHD1	4.4510e-003	4.6830e-003
tblVehicleEF	LHD1	0.01	5.8360e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.14	0.18
tblVehicleEF	LHD1	0.69	0.51
tblVehicleEF	LHD1	1.94	0.97
tblVehicleEF	LHD1	8.97	8.57
tblVehicleEF	LHD1	656.10	751.95
tblVehicleEF	LHD1	28.64	11.12
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.58	0.34
tblVehicleEF	LHD1	0.74	0.26
tblVehicleEF	LHD1	8.6900e-004	8.5300e-004
tblVehicleEF	LHD1	0.01	9.7990e-003
tblVehicleEF	LHD1	0.01	7.0500e-003
tblVehicleEF	LHD1	7.3000e-004	2.2400e-004
tblVehicleEF	LHD1	8.3100e-004	8.1600e-004
tblVehicleEF	LHD1	2.5810e-003	2.4500e-003
tblVehicleEF	LHD1	0.01	6.6990e-003
tblVehicleEF	LHD1	6.7100e-004	2.0600e-004
tblVehicleEF	LHD1	1.4780e-003	1.0710e-003

tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	9.5600e-004	6.9000e-004
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.25	0.33
tblVehicleEF	LHD1	0.17	0.05
tblVehicleEF	LHD1	8.9000e-005	8.3000e-005
tblVehicleEF	LHD1	6.4190e-003	7.3400e-003
tblVehicleEF	LHD1	3.2200e-004	1.1000e-004
tblVehicleEF	LHD1	1.4780e-003	1.0710e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	9.5600e-004	6.9000e-004
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.25	0.33
tblVehicleEF	LHD1	0.19	0.06
tblVehicleEF	LHD2	2.9820e-003	2.8930e-003
tblVehicleEF	LHD2	5.8340e-003	5.4660e-003
tblVehicleEF	LHD2	4.3710e-003	5.9890e-003
tblVehicleEF	LHD2	0.12	0.14
tblVehicleEF	LHD2	0.45	0.46
tblVehicleEF	LHD2	0.99	0.57
tblVehicleEF	LHD2	13.72	13.29
tblVehicleEF	LHD2	689.14	728.51
tblVehicleEF	LHD2	23.21	7.48
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.30	0.37
tblVehicleEF	LHD2	0.34	0.15
tblVehicleEF	LHD2	1.1500e-003	1.4140e-003
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	9.9090e-003	0.01
tblVehicleEF	LHD2	3.8100e-004	1.2000e-004
tblVehicleEF	LHD2	1.1000e-003	1.3530e-003
tblVehicleEF	LHD2	2.6980e-003	2.6890e-003
tblVehicleEF	LHD2	9.4570e-003	0.01
tblVehicleEF	LHD2	3.5000e-004	1.1000e-004
tblVehicleEF	LHD2	4.3600e-004	5.6800e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.0000e-004	3.7300e-004
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.05	0.17
tblVehicleEF	LHD2	0.06	0.03
tblVehicleEF	LHD2	1.3400e-004	1.2700e-004
tblVehicleEF	LHD2	6.6990e-003	7.0360e-003
tblVehicleEF	LHD2	2.4900e-004	7.4000e-005
tblVehicleEF	LHD2	4.3600e-004	5.6800e-004
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.0000e-004	3.7300e-004
tblVehicleEF	LHD2	0.11	0.11
tblVehicleEF	LHD2	0.05	0.17
tblVehicleEF	LHD2	0.06	0.03
tblVehicleEF	MCY	0.46	0.33
tblVehicleEF	MCY	0.16	0.26
tblVehicleEF	MCY	18.12	18.30
tblVehicleEF	MCY	10.44	9.27
tblVehicleEF	MCY	173.27	212.79
tblVehicleEF	MCY	42.90	59.80
tblVehicleEF	MCY	1.15	1.15

tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	2.1390e-003	2.1570e-003
tblVehicleEF	MCY	3.5490e-003	3.1010e-003
tblVehicleEF	MCY	1.9950e-003	2.0130e-003
tblVehicleEF	MCY	3.3260e-003	2.9050e-003
tblVehicleEF	MCY	0.60	1.20
tblVehicleEF	MCY	0.51	0.51
tblVehicleEF	MCY	0.35	0.71
tblVehicleEF	MCY	2.15	2.17
tblVehicleEF	MCY	0.43	1.71
tblVehicleEF	MCY	2.16	1.93
tblVehicleEF	MCY	2.0930e-003	2.1060e-003
tblVehicleEF	MCY	6.6300e-004	5.9200e-004
tblVehicleEF	MCY	0.60	1.20
tblVehicleEF	MCY	0.51	0.51
tblVehicleEF	MCY	0.35	0.71
tblVehicleEF	MCY	2.70	2.71
tblVehicleEF	MCY	0.43	1.71
tblVehicleEF	MCY	2.35	2.10
tblVehicleEF	MDV	5.0930e-003	1.9550e-003
tblVehicleEF	MDV	8.0210e-003	0.05
tblVehicleEF	MDV	0.65	0.55
tblVehicleEF	MDV	1.63	2.63
tblVehicleEF	MDV	393.72	340.70
tblVehicleEF	MDV	90.82	72.12
tblVehicleEF	MDV	0.07	0.04
tblVehicleEF	MDV	0.12	0.21
tblVehicleEF	MDV	1.7140e-003	1.3270e-003
tblVehicleEF	MDV	2.3890e-003	1.6910e-003
tblVehicleEF	MDV	1.5790e-003	1.2230e-003

tblVehicleEF	MDV	2.1970e-003	1.5550e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.10	0.08
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.01	7.6670e-003
tblVehicleEF	MDV	0.09	0.29
tblVehicleEF	MDV	0.11	0.25
tblVehicleEF	MDV	3.9360e-003	3.2660e-003
tblVehicleEF	MDV	9.3600e-004	6.9200e-004
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.10	0.08
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	0.09	0.29
tblVehicleEF	MDV	0.12	0.27
tblVehicleEF	MH	0.01	5.5960e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.67	0.42
tblVehicleEF	MH	3.91	1.78
tblVehicleEF	MH	1,185.18	1,419.69
tblVehicleEF	MH	56.59	16.60
tblVehicleEF	MH	0.80	0.92
tblVehicleEF	MH	0.59	0.23
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	9.1800e-004	2.4300e-004
tblVehicleEF	MH	3.2240e-003	3.2800e-003
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	8.4400e-004	2.2300e-004
tblVehicleEF	MH	0.29	0.25

tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.13	0.11
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	9.5900e-003	0.56
tblVehicleEF	MH	0.22	0.08
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.3400e-004	1.6400e-004
tblVehicleEF	MH	0.29	0.25
tblVehicleEF	MH	0.03	0.02
tblVehicleEF	MH	0.13	0.11
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	9.5900e-003	0.56
tblVehicleEF	MH	0.24	0.09
tblVehicleEF	MHD	0.02	3.9340e-003
tblVehicleEF	MHD	3.2730e-003	1.4090e-003
tblVehicleEF	MHD	0.04	9.5150e-003
tblVehicleEF	MHD	0.36	0.38
tblVehicleEF	MHD	0.28	0.19
tblVehicleEF	MHD	4.58	1.06
tblVehicleEF	MHD	135.16	61.97
tblVehicleEF	MHD	1,176.19	1,043.81
tblVehicleEF	MHD	58.95	9.62
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	1.02	1.30
tblVehicleEF	MHD	10.30	1.66
tblVehicleEF	MHD	7.5000e-005	2.4000e-004
tblVehicleEF	MHD	2.9360e-003	6.2030e-003
tblVehicleEF	MHD	8.3500e-004	1.1800e-004
tblVehicleEF	MHD	7.2000e-005	2.3000e-004
tblVehicleEF	MHD	2.8030e-003	5.9280e-003

tblVehicleEF	MHD	7.6800e-004	1.0900e-004
tblVehicleEF	MHD	5.2400e-004	2.6600e-004
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.5100e-004	1.7600e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.01	0.09
tblVehicleEF	MHD	0.27	0.05
tblVehicleEF	MHD	1.3020e-003	5.8900e-004
tblVehicleEF	MHD	0.01	9.9640e-003
tblVehicleEF	MHD	6.6900e-004	9.5000e-005
tblVehicleEF	MHD	5.2400e-004	2.6600e-004
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	3.5100e-004	1.7600e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.01	0.09
tblVehicleEF	MHD	0.30	0.05
tblVehicleEF	OBUS	0.01	6.7000e-003
tblVehicleEF	OBUS	4.6710e-003	2.5540e-003
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.24	0.63
tblVehicleEF	OBUS	0.35	0.31
tblVehicleEF	OBUS	4.29	1.48
tblVehicleEF	OBUS	119.16	103.58
tblVehicleEF	OBUS	1,289.22	1,286.62
tblVehicleEF	OBUS	64.48	12.91
tblVehicleEF	OBUS	0.26	0.44
tblVehicleEF	OBUS	0.95	1.48
tblVehicleEF	OBUS	3.00	1.21

tblVehicleEF	OBUS	2.4000e-005	1.4300e-004
tblVehicleEF	OBUS	2.9450e-003	7.6570e-003
tblVehicleEF	OBUS	8.9400e-004	1.4400e-004
tblVehicleEF	OBUS	2.3000e-005	1.3700e-004
tblVehicleEF	OBUS	2.7980e-003	7.3130e-003
tblVehicleEF	OBUS	8.2200e-004	1.3300e-004
tblVehicleEF	OBUS	7.7800e-004	7.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	4.1700e-004	4.0100e-004
tblVehicleEF	OBUS	0.04	0.02
tblVehicleEF	OBUS	0.02	0.14
tblVehicleEF	OBUS	0.26	0.07
tblVehicleEF	OBUS	1.1480e-003	9.8300e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.2000e-004	1.2800e-004
tblVehicleEF	OBUS	7.7800e-004	7.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	4.1700e-004	4.0100e-004
tblVehicleEF	OBUS	0.05	0.02
tblVehicleEF	OBUS	0.02	0.14
tblVehicleEF	OBUS	0.29	0.08
tblVehicleEF	SBUS	0.83	0.11
tblVehicleEF	SBUS	0.01	8.8090e-003
tblVehicleEF	SBUS	0.06	0.01
tblVehicleEF	SBUS	12.94	4.01
tblVehicleEF	SBUS	0.72	0.80
tblVehicleEF	SBUS	11.86	1.56
tblVehicleEF	SBUS	832.67	367.56

tblVehicleEF	SBUS	847.81	971.83
tblVehicleEF	SBUS	89.56	8.11
tblVehicleEF	SBUS	3.62	3.13
tblVehicleEF	SBUS	1.69	4.12
tblVehicleEF	SBUS	6.20	0.74
tblVehicleEF	SBUS	2.9290e-003	3.4540e-003
tblVehicleEF	SBUS	9.2930e-003	0.01
tblVehicleEF	SBUS	9.2750e-003	0.02
tblVehicleEF	SBUS	1.7340e-003	1.3000e-004
tblVehicleEF	SBUS	2.8030e-003	3.3050e-003
tblVehicleEF	SBUS	2.3230e-003	2.5240e-003
tblVehicleEF	SBUS	8.8370e-003	0.02
tblVehicleEF	SBUS	1.5940e-003	1.1900e-004
tblVehicleEF	SBUS	2.8560e-003	6.7200e-004
tblVehicleEF	SBUS	0.03	8.3910e-003
tblVehicleEF	SBUS	1.55	0.48
tblVehicleEF	SBUS	1.5450e-003	3.3200e-004
tblVehicleEF	SBUS	0.06	0.09
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.59	0.06
tblVehicleEF	SBUS	8.4050e-003	3.5190e-003
tblVehicleEF	SBUS	8.2910e-003	9.3510e-003
tblVehicleEF	SBUS	1.0990e-003	8.0000e-005
tblVehicleEF	SBUS	2.8560e-003	6.7200e-004
tblVehicleEF	SBUS	0.03	8.3910e-003
tblVehicleEF	SBUS	2.25	0.70
tblVehicleEF	SBUS	1.5450e-003	3.3200e-004
tblVehicleEF	SBUS	0.08	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.64	0.06

tblVehicleEF	UBUS	0.26	1.52
tblVehicleEF	UBUS	0.04	0.01
tblVehicleEF	UBUS	3.57	11.42
tblVehicleEF	UBUS	7.08	0.83
tblVehicleEF	UBUS	2,018.95	1,603.69
tblVehicleEF	UBUS	104.71	9.21
tblVehicleEF	UBUS	5.87	0.69
tblVehicleEF	UBUS	14.44	0.10
tblVehicleEF	UBUS	0.59	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.11	4.9940e-003
tblVehicleEF	UBUS	1.1330e-003	5.3000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.8010e-003
tblVehicleEF	UBUS	0.10	4.7760e-003
tblVehicleEF	UBUS	1.0420e-003	4.9000e-005
tblVehicleEF	UBUS	1.5560e-003	6.3800e-004
tblVehicleEF	UBUS	0.03	0.01
tblVehicleEF	UBUS	1.0220e-003	4.9700e-004
tblVehicleEF	UBUS	0.30	0.02
tblVehicleEF	UBUS	7.6000e-003	0.08
tblVehicleEF	UBUS	0.56	0.06
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.1750e-003	9.1000e-005
tblVehicleEF	UBUS	1.5560e-003	6.3800e-004
tblVehicleEF	UBUS	0.03	0.01
tblVehicleEF	UBUS	1.0220e-003	4.9700e-004
tblVehicleEF	UBUS	0.59	1.55
tblVehicleEF	UBUS	7.6000e-003	0.08
tblVehicleEF	UBUS	0.61	0.07

tblVehicleTrips	ST_TR	8.19	4.48
tblVehicleTrips	SU_TR	5.95	3.26
tblVehicleTrips	WD_TR	8.17	4.47
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	0.6082	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Energy	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	354.2782	354.2782	0.0251	8.9900e-003	357.5831
Mobile	0.2876	0.2993	2.1422	6.7100e-003	0.6030	3.8400e-003	0.6068	0.1616	3.5800e-003	0.1652	0.0000	531.7501	531.7501	0.0293	0.0000	532.4815
Waste						0.0000	0.0000		0.0000	0.0000	22.2275	0.0000	22.2275	1.3136	0.0000	55.0677
Water						0.0000	0.0000		0.0000	0.0000	1.7950	1.7320	3.5270	6.5700e-003	3.9800e-003	4.8782
Total	**0.9226**	**0.5427**	**2.3502**	**8.1700e-003**	**0.6030**	**0.0223**	**0.6253**	**0.1616**	**0.0221**	**0.1837**	**24.0225**	**887.7673**	**911.7898**	**1.3745**	**0.0130**	**950.0179**

Mitigated Operational

Category	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
	tons/yr										MT/yr					
Area	0.6082	3.00E-05	3.55E-03	0		1.00E-05	1.00E-05		1.00E-05	1.00E-05	0	6.92E-03	6.92E-03	2.00E-05	0	7.36E-03
Energy	0.0268	0.2433	0.2044	1.46E-03		0.0185	0.0185		0.0185	0.0185	0	264.9062	264.9062	5.08E-03	4.86E-03	266.4804
Mobile	0.2876	0.2993	2.1422	6.71E-03	0.603	3.84E-03	0.6068	0.1616	3.58E-03	0.1652	0	531.7501	531.7501	0.0293	0	532.4815
Waste						0	0		0	0	22.2275	0	22.2275	1.3136	0	55.0677
Water						0	0		0	0	1.795	1.732	3.527	6.57E-03	3.98E-03	4.8782
Total	**0.9226**	**0.5427**	**2.3502**	**8.17E-03**	**0.603**	**0.0223**	**0.6253**	**0.1616**	**0.0221**	**0.1837**	**24.0225**	**798.3953**	**822.4178**	**1.3545**	**8.84E-03**	**858.9152**

	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**	**10.07**	**9.80**	**1.45**	**31.84**	**9.59**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	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
	tons/yr										MT/yr					
Mitigated	0.2876	0.2993	2.1422	6.7100e-003	0.6030	3.8400e-003	0.6068	0.1616	3.5800e-003	0.1652	0.0000	531.7501	531.7501	0.0293	0.0000	532.4815

Unmitigated	0.2876	0.2993	2.1422	6.7100e-003	0.6030	3.8400e-003	0.6068	0.1616	3.5800e-003	0.1652	0.0000	531.7501	531.7501	0.0293	0.0000	532.4815

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	894.00	896.00	652.00	1,633,398	1,633,398
Total	894.00	896.00	652.00	1,633,398	1,633,398

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.464099	0.072540	0.231585	0.147582	0.028775	0.007220	0.023140	0.006201	0.003128	0.001471	0.012802	0.000563	0.000894
Hotel	0.464099	0.072540	0.231585	0.147582	0.028775	0.007220	0.023140	0.006201	0.003128	0.001471	0.012802	0.000563	0.000894

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	89.3720	89.3720	0.0200	4.1300e-003	91.1027
NaturalGas Mitigated	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804
NaturalGas Unmitigated	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804

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					
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
Hotel	4.96416e+006	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804
Total		**0.0268**	**0.2433**	**0.2044**	**1.4600e-003**		**0.0185**	**0.0185**		**0.0185**	**0.0185**	**0.0000**	**264.9062**	**264.9062**	**5.0800e-003**	**4.8600e-003**	**266.4804**

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					
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

Hotel	4.96416e+006	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804
Total		**0.0268**	**0.2433**	**0.2044**	**1.4600e-003**		**0.0185**	**0.0185**		**0.0185**	**0.0185**	**0.0000**	**264.9062**	**264.9062**	**5.0800e-003**	**4.8600e-003**	**266.4804**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	407463	23.9844	5.3600e-003	1.1100e-003	24.4489
Hotel	1.11085e+006	65.3876	0.0146	3.0200e-003	66.6539
Total		**89.3720**	**0.0200**	**4.1300e-003**	**91.1027**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.6082	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Unmitigated	0.6082	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003

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	0.0724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Total	**0.6082**	**3.0000e-005**	**3.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.9200e-003**	**6.9200e-003**	**2.0000e-005**	**0.0000**	**7.3600e-003**

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	0.0724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3000e-004	3.0000e-005	3.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Total	**0.6082**	**3.0000e-005**	**3.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.9200e-003**	**6.9200e-003**	**2.0000e-005**	**0.0000**	**7.3600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	3.5270	6.5700e-003	3.9800e-003	4.8782
Unmitigated	3.5270	6.5700e-003	3.9800e-003	4.8782

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	5.07335 / 0.563706	3.5270	6.5700e-003	3.9800e-003	4.8782
Total		**3.5270**	**6.5700e-003**	**3.9800e-003**	**4.8782**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	5.07335 / 0.563706	3.5270	6.5700e-003	3.9800e-003	4.8782
Total		**3.5270**	**6.5700e-003**	**3.9800e-003**	**4.8782**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.2275	1.3136	0.0000	55.0677

Unmitigated	22.2275	1.3136	0.0000	55.0677

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	109.5	22.2275	1.3136	0.0000	55.0677
Total		**22.2275**	**1.3136**	**0.0000**	**55.0677**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	109.5	22.2275	1.3136	0.0000	55.0677
Total		**22.2275**	**1.3136**	**0.0000**	**55.0677**

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

Anton Millbrae Center - Hotel AQ/GHG

San Mateo County, Annual

2030 Operational GHG Model for the Hotel Development

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	187.00	Space	0.00	69,533.00	0
Hotel	200.00	Room	1.17	135,967.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	70
Climate Zone	5			**Operational Year**	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	129.77	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Peninsula Clean Energy - 2018 Emission Facor 129.77 provided by PCE

Land Use - 200 room hotel (5,500+130,467 sqft = 135,967 sqft), 187 parking spaces in garage

Construction Phase - No demolition all occurs in residential construction, applicant construction schedule, exact start date and total workdays

Off-road Equipment - Default

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment - Applicant provided list

Off-road Equipment -

Trips and VMT -

Vehicle Trips - Traffic Consultant: Weekday 4.47 trips, 4.48 Saturday Trips, 3.26 Sunday Trips

Vehicle Emission Factors - 2030 EMFAC2017 San Mateo Emission Factors

Energy Use -

Water And Wastewater - 100% aerobic

Solid Waste -

Construction Off-road Equipment Mitigation - BMPs, Tier 4 final, CNG forklifts, power line

Energy Mitigation - PCE plans to provide 100% GHG free electricity by 2021. Project would be operational post-2021

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	FuelType	Diesel	CNG
tblConstEquipMitigation	FuelType	Diesel	Electrical
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstructionPhase	NumDays	200.00	352.00
tblConstructionPhase	NumDays	4.00	69.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	2.00	138.00
tblFleetMix	HHD	6.8130e-003	6.3112e-003
tblFleetMix	HHD	6.8130e-003	6.3112e-003
tblFleetMix	LDA	0.45	0.44
tblFleetMix	LDA	0.45	0.44
tblFleetMix	LDT1	0.05	0.08
tblFleetMix	LDT1	0.05	0.08
tblFleetMix	LDT2	0.28	0.24
tblFleetMix	LDT2	0.28	0.24
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	7.6330e-003	7.8583e-003
tblFleetMix	LHD2	7.6330e-003	7.8583e-003
tblFleetMix	MCY	9.5100e-003	0.01
tblFleetMix	MCY	9.5100e-003	0.01
tblFleetMix	MDV	0.15	0.16
tblFleetMix	MDV	0.15	0.16
tblFleetMix	MH	8.9600e-004	9.6919e-004
tblFleetMix	MH	8.9600e-004	9.6919e-004
tblFleetMix	MHD	0.03	0.03
tblFleetMix	MHD	0.03	0.03

tblFleetMix	OBUS	4.4760e-003	2.9572e-003
tblFleetMix	OBUS	4.4760e-003	2.9572e-003
tblFleetMix	SBUS	6.0500e-004	6.1275e-004
tblFleetMix	SBUS	6.0500e-004	6.1275e-004
tblFleetMix	UBUS	2.8550e-003	1.4301e-003
tblFleetMix	UBUS	2.8550e-003	1.4301e-003
tblGrading	AcresOfGrading	60.38	1.50
tblGrading	AcresOfGrading	0.00	1.00
tblLandUse	LandUseSquareFeet	74,800.00	69,533.00
tblLandUse	LandUseSquareFeet	290,400.00	135,967.00
tblLandUse	LotAcreage	1.68	0.00
tblLandUse	LotAcreage	6.67	1.17
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
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tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00

tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	0.40
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
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tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	129.77
tblVehicleEF	HHD	0.11	0.04
tblVehicleEF	HHD	0.28	0.19
tblVehicleEF	HHD	0.05	3.0000e-006
tblVehicleEF	HHD	1.07	5.46
tblVehicleEF	HHD	3.26	1.06
tblVehicleEF	HHD	13.75	0.04
tblVehicleEF	HHD	2,510.78	860.08
tblVehicleEF	HHD	1,676.74	1,405.74
tblVehicleEF	HHD	41.53	0.35
tblVehicleEF	HHD	10.05	5.01
tblVehicleEF	HHD	2.04	2.73
tblVehicleEF	HHD	15.12	2.40
tblVehicleEF	HHD	7.9170e-003	2.7380e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.03	0.04
tblVehicleEF	HHD	6.1140e-003	0.02
tblVehicleEF	HHD	4.7500e-004	3.0000e-006
tblVehicleEF	HHD	7.5750e-003	2.6200e-003

tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.5070e-003	8.7570e-003
tblVehicleEF	HHD	5.8470e-003	0.02
tblVehicleEF	HHD	4.3600e-004	3.0000e-006
tblVehicleEF	HHD	2.5200e-004	6.0000e-006
tblVehicleEF	HHD	0.01	3.2200e-004
tblVehicleEF	HHD	0.24	0.36
tblVehicleEF	HHD	1.9400e-004	5.0000e-006
tblVehicleEF	HHD	0.10	0.03
tblVehicleEF	HHD	2.1810e-003	1.5900e-003
tblVehicleEF	HHD	0.23	1.4000e-005
tblVehicleEF	HHD	0.02	7.5950e-003
tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	HHD	2.5200e-004	6.0000e-006
tblVehicleEF	HHD	0.01	3.2200e-004
tblVehicleEF	HHD	0.30	0.43
tblVehicleEF	HHD	1.9400e-004	5.0000e-006
tblVehicleEF	HHD	0.39	0.23
tblVehicleEF	HHD	2.1810e-003	1.5900e-003
tblVehicleEF	HHD	0.26	1.6000e-005
tblVehicleEF	LDA	1.7710e-003	8.5200e-004
tblVehicleEF	LDA	2.2600e-003	0.03
tblVehicleEF	LDA	0.30	0.38
tblVehicleEF	LDA	0.65	1.73
tblVehicleEF	LDA	178.28	211.73
tblVehicleEF	LDA	42.09	44.88
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.03	0.12
tblVehicleEF	LDA	1.0490e-003	8.7300e-004

tblVehicleEF	LDA	1.7270e-003	1.2290e-003
tblVehicleEF	LDA	9.6500e-004	8.0300e-004
tblVehicleEF	LDA	1.5880e-003	1.1300e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	4.4340e-003	2.9350e-003
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	0.03	0.12
tblVehicleEF	LDA	1.7830e-003	9.2000e-005
tblVehicleEF	LDA	4.3100e-004	0.00
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	6.4520e-003	4.2640e-003
tblVehicleEF	LDA	0.04	0.17
tblVehicleEF	LDA	0.03	0.13
tblVehicleEF	LDT1	2.5780e-003	1.1990e-003
tblVehicleEF	LDT1	3.0940e-003	0.03
tblVehicleEF	LDT1	0.42	0.45
tblVehicleEF	LDT1	0.88	1.84
tblVehicleEF	LDT1	226.43	252.62
tblVehicleEF	LDT1	53.15	53.60
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	0.04	0.14
tblVehicleEF	LDT1	1.3290e-003	1.0040e-003
tblVehicleEF	LDT1	2.0980e-003	1.3910e-003
tblVehicleEF	LDT1	1.2220e-003	9.2400e-004
tblVehicleEF	LDT1	1.9290e-003	1.2790e-003
tblVehicleEF	LDT1	0.02	0.03

tblVehicleEF	LDT1	0.08	0.07
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	6.3870e-003	4.4390e-003
tblVehicleEF	LDT1	0.08	0.28
tblVehicleEF	LDT1	0.04	0.13
tblVehicleEF	LDT1	2.2670e-003	2.4210e-003
tblVehicleEF	LDT1	5.4600e-004	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.08	0.07
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	9.3180e-003	6.4760e-003
tblVehicleEF	LDT1	0.08	0.28
tblVehicleEF	LDT1	0.05	0.14
tblVehicleEF	LDT2	2.6000e-003	1.3110e-003
tblVehicleEF	LDT2	2.6890e-003	0.04
tblVehicleEF	LDT2	0.44	0.48
tblVehicleEF	LDT2	0.82	2.26
tblVehicleEF	LDT2	259.84	258.02
tblVehicleEF	LDT2	60.40	55.03
tblVehicleEF	LDT2	0.04	0.03
tblVehicleEF	LDT2	0.04	0.15
tblVehicleEF	LDT2	1.2860e-003	9.9600e-004
tblVehicleEF	LDT2	2.0260e-003	1.3140e-003
tblVehicleEF	LDT2	1.1830e-003	9.1700e-004
tblVehicleEF	LDT2	1.8630e-003	1.2080e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	6.4580e-003	4.8000e-003
tblVehicleEF	LDT2	0.06	0.26

tblVehicleEF	LDT2	0.04	0.16
tblVehicleEF	LDT2	2.6010e-003	9.1500e-003
tblVehicleEF	LDT2	6.1700e-004	8.6000e-005
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	9.4150e-003	6.9660e-003
tblVehicleEF	LDT2	0.06	0.26
tblVehicleEF	LDT2	0.04	0.17
tblVehicleEF	LHD1	3.5790e-003	3.9860e-003
tblVehicleEF	LHD1	6.9490e-003	4.4850e-003
tblVehicleEF	LHD1	8.0930e-003	7.3910e-003
tblVehicleEF	LHD1	0.13	0.18
tblVehicleEF	LHD1	0.52	0.40
tblVehicleEF	LHD1	1.42	0.86
tblVehicleEF	LHD1	8.92	8.08
tblVehicleEF	LHD1	630.67	689.79
tblVehicleEF	LHD1	25.19	9.94
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.33	0.18
tblVehicleEF	LHD1	0.54	0.20
tblVehicleEF	LHD1	7.9500e-004	9.1600e-004
tblVehicleEF	LHD1	0.01	9.8940e-003
tblVehicleEF	LHD1	8.7410e-003	5.8960e-003
tblVehicleEF	LHD1	5.7500e-004	2.0100e-004
tblVehicleEF	LHD1	7.6000e-004	8.7600e-004
tblVehicleEF	LHD1	2.6230e-003	2.4740e-003
tblVehicleEF	LHD1	8.3320e-003	5.5970e-003
tblVehicleEF	LHD1	5.2800e-004	1.8500e-004
tblVehicleEF	LHD1	1.0880e-003	8.5500e-004

tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	7.4600e-004	5.9000e-004
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.20	0.29
tblVehicleEF	LHD1	0.11	0.03
tblVehicleEF	LHD1	8.8000e-005	7.8000e-005
tblVehicleEF	LHD1	6.1550e-003	6.7280e-003
tblVehicleEF	LHD1	2.7700e-004	9.8000e-005
tblVehicleEF	LHD1	1.0880e-003	8.5500e-004
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.4600e-004	5.9000e-004
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.20	0.29
tblVehicleEF	LHD1	0.12	0.04
tblVehicleEF	LHD2	2.5060e-003	2.4420e-003
tblVehicleEF	LHD2	5.0690e-003	4.9160e-003
tblVehicleEF	LHD2	2.8610e-003	4.1310e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.43	0.44
tblVehicleEF	LHD2	0.87	0.49
tblVehicleEF	LHD2	13.54	12.62
tblVehicleEF	LHD2	673.90	670.16
tblVehicleEF	LHD2	21.85	6.49
tblVehicleEF	LHD2	0.07	0.06
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	0.24	0.12
tblVehicleEF	LHD2	1.0250e-003	1.4740e-003
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	8.6290e-003	0.01
tblVehicleEF	LHD2	3.7300e-004	1.0700e-004
tblVehicleEF	LHD2	9.8000e-004	1.4100e-003
tblVehicleEF	LHD2	2.7070e-003	2.7060e-003
tblVehicleEF	LHD2	8.2320e-003	0.01
tblVehicleEF	LHD2	3.4300e-004	9.9000e-005
tblVehicleEF	LHD2	3.6400e-004	4.2300e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.6800e-004	3.0400e-004
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.04	0.11
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	1.3200e-004	1.2100e-004
tblVehicleEF	LHD2	6.5470e-003	6.4700e-003
tblVehicleEF	LHD2	2.3300e-004	6.4000e-005
tblVehicleEF	LHD2	3.6400e-004	4.2300e-004
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	2.6800e-004	3.0400e-004
tblVehicleEF	LHD2	0.10	0.11
tblVehicleEF	LHD2	0.04	0.11
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	MCY	0.47	0.32
tblVehicleEF	MCY	0.16	0.25
tblVehicleEF	MCY	17.68	17.76
tblVehicleEF	MCY	10.53	9.39
tblVehicleEF	MCY	173.86	212.58
tblVehicleEF	MCY	41.80	58.78
tblVehicleEF	MCY	1.14	1.14

tblVehicleEF	MCY	0.32	0.27
tblVehicleEF	MCY	2.2080e-003	2.2180e-003
tblVehicleEF	MCY	3.4030e-003	3.0130e-003
tblVehicleEF	MCY	2.0580e-003	2.0680e-003
tblVehicleEF	MCY	3.1790e-003	2.8140e-003
tblVehicleEF	MCY	0.61	1.21
tblVehicleEF	MCY	0.50	0.49
tblVehicleEF	MCY	0.36	0.71
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.38	1.40
tblVehicleEF	MCY	2.12	1.89
tblVehicleEF	MCY	2.0910e-003	2.1040e-003
tblVehicleEF	MCY	6.5200e-004	5.8200e-004
tblVehicleEF	MCY	0.61	1.21
tblVehicleEF	MCY	0.50	0.49
tblVehicleEF	MCY	0.36	0.71
tblVehicleEF	MCY	2.68	2.68
tblVehicleEF	MCY	0.38	1.40
tblVehicleEF	MCY	2.31	2.06
tblVehicleEF	MDV	3.5530e-003	1.2400e-003
tblVehicleEF	MDV	4.8880e-003	0.04
tblVehicleEF	MDV	0.52	0.46
tblVehicleEF	MDV	1.17	2.24
tblVehicleEF	MDV	345.39	309.56
tblVehicleEF	MDV	79.35	64.69
tblVehicleEF	MDV	0.05	0.02
tblVehicleEF	MDV	0.08	0.15
tblVehicleEF	MDV	1.3240e-003	9.7100e-004
tblVehicleEF	MDV	2.0250e-003	1.2840e-003
tblVehicleEF	MDV	1.2200e-003	8.9500e-004

tblVehicleEF	MDV	1.8620e-003	1.1810e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.07
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	8.9310e-003	4.5600e-003
tblVehicleEF	MDV	0.08	0.26
tblVehicleEF	MDV	0.07	0.16
tblVehicleEF	MDV	3.4520e-003	2.8580e-003
tblVehicleEF	MDV	8.1300e-004	5.9800e-004
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.09	0.07
tblVehicleEF	MDV	0.04	0.04
tblVehicleEF	MDV	0.01	6.5940e-003
tblVehicleEF	MDV	0.08	0.26
tblVehicleEF	MDV	0.07	0.18
tblVehicleEF	MH	5.3780e-003	4.0670e-003
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.26	0.22
tblVehicleEF	MH	3.31	1.59
tblVehicleEF	MH	1,174.79	1,315.39
tblVehicleEF	MH	56.01	15.06
tblVehicleEF	MH	0.68	0.84
tblVehicleEF	MH	0.53	0.22
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.9500e-003	9.1290e-003
tblVehicleEF	MH	8.6500e-004	2.2300e-004
tblVehicleEF	MH	3.2220e-003	3.2890e-003
tblVehicleEF	MH	6.6090e-003	8.6970e-003
tblVehicleEF	MH	7.9600e-004	2.0500e-004
tblVehicleEF	MH	0.22	0.16

tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	5.4280e-003	0.25
tblVehicleEF	MH	0.19	0.07
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.1700e-004	1.4900e-004
tblVehicleEF	MH	0.22	0.16
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	0.11	0.08
tblVehicleEF	MH	0.04	0.04
tblVehicleEF	MH	5.4280e-003	0.25
tblVehicleEF	MH	0.21	0.08
tblVehicleEF	MHD	0.02	3.9010e-003
tblVehicleEF	MHD	2.5460e-003	9.3700e-004
tblVehicleEF	MHD	0.03	8.5280e-003
tblVehicleEF	MHD	0.36	0.38
tblVehicleEF	MHD	0.24	0.14
tblVehicleEF	MHD	3.51	0.87
tblVehicleEF	MHD	134.54	55.53
tblVehicleEF	MHD	1,162.44	958.82
tblVehicleEF	MHD	57.83	8.66
tblVehicleEF	MHD	0.34	0.29
tblVehicleEF	MHD	0.99	1.31
tblVehicleEF	MHD	10.23	1.67
tblVehicleEF	MHD	4.2000e-005	1.1600e-004
tblVehicleEF	MHD	2.8940e-003	6.3200e-003
tblVehicleEF	MHD	8.0800e-004	1.1300e-004
tblVehicleEF	MHD	4.0000e-005	1.1100e-004
tblVehicleEF	MHD	2.7630e-003	6.0400e-003

tblVehicleEF	MHD	7.4300e-004	1.0400e-004
tblVehicleEF	MHD	4.5900e-004	2.1500e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.3600e-004	1.5500e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.01	0.06
tblVehicleEF	MHD	0.22	0.04
tblVehicleEF	MHD	1.2960e-003	5.2700e-004
tblVehicleEF	MHD	0.01	9.1500e-003
tblVehicleEF	MHD	6.3900e-004	8.6000e-005
tblVehicleEF	MHD	4.5900e-004	2.1500e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	3.3600e-004	1.5500e-004
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	0.01	0.06
tblVehicleEF	MHD	0.24	0.05
tblVehicleEF	OBUS	0.01	6.7860e-003
tblVehicleEF	OBUS	3.7210e-003	1.7360e-003
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.24	0.67
tblVehicleEF	OBUS	0.29	0.22
tblVehicleEF	OBUS	3.83	1.34
tblVehicleEF	OBUS	125.90	104.99
tblVehicleEF	OBUS	1,274.07	1,195.47
tblVehicleEF	OBUS	63.49	11.93
tblVehicleEF	OBUS	0.28	0.47
tblVehicleEF	OBUS	0.88	1.49
tblVehicleEF	OBUS	3.03	1.22

tblVehicleEF	OBUS	2.6000e-005	1.5600e-004
tblVehicleEF	OBUS	2.9110e-003	8.0770e-003
tblVehicleEF	OBUS	9.4500e-004	1.4600e-004
tblVehicleEF	OBUS	2.5000e-005	1.4900e-004
tblVehicleEF	OBUS	2.7640e-003	7.7140e-003
tblVehicleEF	OBUS	8.6900e-004	1.3400e-004
tblVehicleEF	OBUS	8.1200e-004	6.9700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	4.5300e-004	3.8500e-004
tblVehicleEF	OBUS	0.04	0.01
tblVehicleEF	OBUS	0.02	0.15
tblVehicleEF	OBUS	0.24	0.07
tblVehicleEF	OBUS	1.2120e-003	9.9600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.0200e-004	1.1800e-004
tblVehicleEF	OBUS	8.1200e-004	6.9700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	4.5300e-004	3.8500e-004
tblVehicleEF	OBUS	0.05	0.02
tblVehicleEF	OBUS	0.02	0.15
tblVehicleEF	OBUS	0.27	0.07
tblVehicleEF	SBUS	0.82	0.16
tblVehicleEF	SBUS	6.7640e-003	5.7190e-003
tblVehicleEF	SBUS	0.05	0.01
tblVehicleEF	SBUS	13.58	5.81
tblVehicleEF	SBUS	0.37	0.52
tblVehicleEF	SBUS	10.81	2.02
tblVehicleEF	SBUS	774.42	372.76

tblVehicleEF	SBUS	809.72	883.04
tblVehicleEF	SBUS	94.79	11.09
tblVehicleEF	SBUS	1.96	2.28
tblVehicleEF	SBUS	0.86	2.37
tblVehicleEF	SBUS	5.09	0.99
tblVehicleEF	SBUS	9.3400e-004	1.7990e-003
tblVehicleEF	SBUS	9.1050e-003	9.6950e-003
tblVehicleEF	SBUS	4.8090e-003	0.01
tblVehicleEF	SBUS	1.9160e-003	1.8900e-004
tblVehicleEF	SBUS	8.9300e-004	1.7210e-003
tblVehicleEF	SBUS	2.2760e-003	2.4240e-003
tblVehicleEF	SBUS	4.5600e-003	0.01
tblVehicleEF	SBUS	1.7620e-003	1.7400e-004
tblVehicleEF	SBUS	3.7070e-003	1.0240e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	1.61	0.71
tblVehicleEF	SBUS	2.0970e-003	5.6900e-004
tblVehicleEF	SBUS	0.04	0.06
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.55	0.08
tblVehicleEF	SBUS	7.8740e-003	3.5870e-003
tblVehicleEF	SBUS	7.9330e-003	8.5400e-003
tblVehicleEF	SBUS	1.1340e-003	1.1000e-004
tblVehicleEF	SBUS	3.7070e-003	1.0240e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	2.35	1.03
tblVehicleEF	SBUS	2.0970e-003	5.6900e-004
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.61	0.09

tblVehicleEF	UBUS	0.25	1.75
tblVehicleEF	UBUS	0.05	8.0630e-003
tblVehicleEF	UBUS	2.66	13.25
tblVehicleEF	UBUS	7.71	0.82
tblVehicleEF	UBUS	1,920.81	1,616.16
tblVehicleEF	UBUS	124.76	7.49
tblVehicleEF	UBUS	3.13	0.67
tblVehicleEF	UBUS	13.14	0.07
tblVehicleEF	UBUS	0.54	0.08
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.05	4.9300e-003
tblVehicleEF	UBUS	1.3970e-003	9.1000e-005
tblVehicleEF	UBUS	0.23	0.03
tblVehicleEF	UBUS	3.0000e-003	7.8010e-003
tblVehicleEF	UBUS	0.05	4.7100e-003
tblVehicleEF	UBUS	1.2850e-003	8.3000e-005
tblVehicleEF	UBUS	2.0810e-003	1.3500e-004
tblVehicleEF	UBUS	0.04	1.6730e-003
tblVehicleEF	UBUS	1.5040e-003	8.4000e-005
tblVehicleEF	UBUS	0.15	0.03
tblVehicleEF	UBUS	9.5820e-003	9.4520e-003
tblVehicleEF	UBUS	0.65	0.04
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	1.3880e-003	7.4000e-005
tblVehicleEF	UBUS	2.0810e-003	1.3500e-004
tblVehicleEF	UBUS	0.04	1.6730e-003
tblVehicleEF	UBUS	1.5040e-003	8.4000e-005
tblVehicleEF	UBUS	0.41	1.79
tblVehicleEF	UBUS	9.5820e-003	9.4520e-003
tblVehicleEF	UBUS	0.71	0.04

tblVehicleTrips	ST_TR	8.19	4.48
tblVehicleTrips	SU_TR	5.95	3.26
tblVehicleTrips	WD_TR	8.17	4.47
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	0.6082	3.0000e-005	3.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Energy	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	354.2782	354.2782	0.0251	8.9900e-003	357.5831
Mobile	0.2401	0.2626	1.8756	6.4100e-003	0.6037	3.1400e-003	0.6069	0.1619	2.9300e-003	0.1649	0.0000	494.8675	494.8675	0.0250	0.0000	495.4920
Waste						0.0000	0.0000		0.0000	0.0000	22.2275	0.0000	22.2275	1.3136	0.0000	55.0677
Water						0.0000	0.0000		0.0000	0.0000	1.7950	1.7320	3.5270	6.5700e-003	3.9800e-003	4.8782
Total	**0.8751**	**0.5060**	**2.0835**	**7.8700e-003**	**0.6037**	**0.0216**	**0.6254**	**0.1619**	**0.0214**	**0.1834**	**24.0225**	**850.8847**	**874.9072**	**1.3702**	**0.0130**	**913.0285**

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	0.6082	3.00E-05	3.54E-03	0		1.00E-05	1.00E-05		1.00E-05	1.00E-05	0	6.92E-03	6.92E-03	2.00E-05	0	7.36E-03
Energy	0.0268	0.2433	0.2044	1.46E-03		0.0185	0.0185		0.0185	0.0185	0	264.9062	264.9062	5.08E-03	4.86E-03	266.4804
Mobile	0.2401	0.2626	1.8756	6.41E-03	0.6037	3.14E-03	0.6069	0.1619	2.93E-03	0.1649	0	494.8675	494.8675	0.025	0	495.492
Waste						0	0		0	0	22.2275	0	22.2275	1.3136	0	55.0677
Water						0	0		0	0	1.795	1.732	3.527	6.57E-03	3.98E-03	4.8782
Total	**0.8751**	**0.506**	**2.0835**	**7.87E-03**	**0.6037**	**0.0216**	**0.6254**	**0.1619**	**0.0214**	**0.1834**	**24.0225**	**761.5127**	**785.5351**	**1.3503**	**8.84E-03**	**821.9257**

	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**	**10.50**	**10.22**	**1.46**	**31.84**	**9.98**

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	0.2401	0.2626	1.8756	6.4100e-003	0.6037	3.1400e-003	0.6069	0.1619	2.9300e-003	0.1649	0.0000	494.8675	494.8675	0.0250	0.0000	495.4920

Unmitigated	0.2401	0.2626	1.8756	6.4100e-003	0.6037	3.1400e-003	0.6069	0.1619	2.9300e-003	0.1649	0.0000	494.8675	494.8675	0.0250	0.0000	495.4920

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	894.00	896.00	652.00	1,633,398	1,633,398
Total	894.00	896.00	652.00	1,633,398	1,633,398

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
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.439373	0.076262	0.240335	0.155302	0.030200	0.007858	0.025976	0.006311	0.002957	0.001430	0.012414	0.000613	0.000969
Hotel	0.439373	0.076262	0.240335	0.155302	0.030200	0.007858	0.025976	0.006311	0.002957	0.001430	0.012414	0.000613	0.000969

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Category	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
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	89.3720	89.3720	0.0200	4.1300e-003	91.1027
NaturalGas Mitigated	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804
NaturalGas Unmitigated	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	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
	kBTU/yr	tons/yr										MT/yr					
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
Hotel	4.96416e+006	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804
Total		**0.0268**	**0.2433**	**0.2044**	**1.4600e-003**		**0.0185**	**0.0185**		**0.0185**	**0.0185**	**0.0000**	**264.9062**	**264.9062**	**5.0800e-003**	**4.8600e-003**	**266.4804**

Mitigated

Land Use	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
	kBTU/yr	tons/yr										MT/yr					
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

Hotel	4.96416e+006	0.0268	0.2433	0.2044	1.4600e-003		0.0185	0.0185		0.0185	0.0185	0.0000	264.9062	264.9062	5.0800e-003	4.8600e-003	266.4804
Total		**0.0268**	**0.2433**	**0.2044**	**1.4600e-003**		**0.0185**	**0.0185**		**0.0185**	**0.0185**	**0.0000**	**264.9062**	**264.9062**	**5.0800e-003**	**4.8600e-003**	**266.4804**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	407463	23.9844	5.3600e-003	1.1100e-003	24.4489
Hotel	1.11085e+006	65.3876	0.0146	3.0200e-003	66.6539
Total		**89.3720**	**0.0200**	**4.1300e-003**	**91.1027**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.6082	3.0000e-005	3.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Unmitigated	0.6082	3.0000e-005	3.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003

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	0.0724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2000e-004	3.0000e-005	3.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Total	**0.6082**	**3.0000e-005**	**3.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.9200e-003**	**6.9200e-003**	**2.0000e-005**	**0.0000**	**7.3600e-003**

Mitigated

SubCategory	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
	tons/yr										MT/yr					
Architectural Coating	0.0724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5355					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.2000e-004	3.0000e-005	3.5400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.9200e-003	6.9200e-003	2.0000e-005	0.0000	7.3600e-003
Total	**0.6082**	**3.0000e-005**	**3.5400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.9200e-003**	**6.9200e-003**	**2.0000e-005**	**0.0000**	**7.3600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Category	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.5270	6.5700e-003	3.9800e-003	4.8782
Unmitigated	3.5270	6.5700e-003	3.9800e-003	4.8782

7.2 Water by Land Use

Unmitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	5.07335 / 0.563706	3.5270	6.5700e-003	3.9800e-003	4.8782
Total		**3.5270**	**6.5700e-003**	**3.9800e-003**	**4.8782**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	5.07335 / 0.563706	3.5270	6.5700e-003	3.9800e-003	4.8782
Total		**3.5270**	**6.5700e-003**	**3.9800e-003**	**4.8782**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.2275	1.3136	0.0000	55.0677

Unmitigated	22.2275	1.3136	0.0000	55.0677

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	109.5	22.2275	1.3136	0.0000	55.0677
Total		**22.2275**	**1.3136**	**0.0000**	**55.0677**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	109.5	22.2275	1.3136	0.0000	55.0677
Total		**22.2275**	**1.3136**	**0.0000**	**55.0677**

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

Attachment 3: EMFAC2017 Emissions and CARB SAFE Off-Model Adjustment Factors

2025 CalEEMod EMFAC2017 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004683	0.002893	0.003934	0.032780626	0.0067	0	0	0.107698	0
A	CH4_RUNEX	0.001363	0.002126	0.00194	0.001955	0.005836	0.005466	0.001409	0.176793218	0.002554	1.520458	0.325332	0.008809	0.005596
A	CH4_STREX	0.039194	0.043831	0.049712	0.053001	0.01034	0.005989	0.009515	2.71062E-06	0.014263	0.012262	0.255563	0.010268	0.020302
A	CO_IDLEX	0	0	0	0	0.182855	0.1381	0.384029	5.289912554	0.629871	0	0	4.01166	0
A	CO_RUNEX	0.459814	0.59677	0.561326	0.552324	0.506204	0.460714	0.192995	0.95486977	0.313628	11.41671	18.30363	0.801605	0.423152
A	CO_STREX	2.020852	2.136313	2.541032	2.634482	0.969751	0.567181	1.056083	0.034767071	1.482052	0.829553	9.271535	1.561601	1.782181
A	CO2_NBIO_IDLEX	0	0	0	0	8.567514	13.28899	61.97233	931.630172	103.5806	0	0	367.5592	0
A	CO2_NBIO_RUNEX	229.9214	271.4768	283.7615	340.6965	751.948	728.507	1043.809	1585.250163	1286.62	1603.69	212.7943	971.8291	1419.687
A	CO2_NBIO_STREX	49.06339	57.9259	60.97454	72.12368	11.12	7.475237	9.616772	0.277750615	12.91272	9.213774	59.79992	8.106055	16.6048
A	NOX_IDLEX	0	0	0	0	0.047555	0.07598	0.337536	5.24170652	0.438709	0	0	3.125748	0
A	NOX_RUNEX	0.025015	0.041725	0.037598	0.037967	0.344829	0.373313	1.296292	3.050611249	1.481153	0.689816	1.148465	4.122785	0.919567
A	NOX_STREX	0.152264	0.170505	0.192946	0.20985	0.256223	0.152836	1.657591	2.398185174	1.210523	0.101927	0.27339	0.73943	0.228798
A	PM10_IDLEX	0	0	0	0	0.000853	0.001414	0.00024	0.003745634	0.000143	0	0	0.003454	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.059938811	0.13034	0.07505	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009799	0.010758	0.012	0.034875228	0.012	0.031203	0.004	0.010097	0.013121
A	PM10_RUNEX	0.001209	0.001433	0.001314	0.001327	0.00705	0.011709	0.006203	0.023065475	0.007657	0.004994	0.002157	0.023255	0.011976
A	PM10_STREX	0.001618	0.001886	0.001686	0.001691	0.000224	0.00012	0.000118	2.1745E-06	0.000144	5.3E-05	0.003101	0.00013	0.000243
A	PM25_IDLEX	0	0	0	0	0.000816	0.001353	0.00023	0.003583599	0.000137	0	0	0.003305	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.025688062	0.05586	0.032164	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.00245	0.002689	0.003	0.008718807	0.003	0.007801	0.001	0.002524	0.00328
A	PM25_RUNEX	0.001113	0.001318	0.00121	0.001223	0.006699	0.011178	0.005928	0.022067495	0.007313	0.004776	0.002013	0.022219	0.011418
A	PM25_STREX	0.001487	0.001734	0.00155	0.001555	0.000206	0.00011	0.000109	1.99937E-06	0.000133	4.87E-05	0.002905	0.000119	0.000223
A	ROG_DIURN	0.027492	0.037209	0.033061	0.037755	0.001071	0.000568	0.000266	4.06911E-06	0.000767	0.000638	1.203046	0.000672	0.24653
A	ROG_HTSK	0.077904	0.08949	0.074582	0.081054	0.046873	0.026124	0.015574	0.000203104	0.012027	0.011777	0.507704	0.008391	0.02438
A	ROG_IDLEX	0	0	0	0	0.019191	0.014728	0.018525	0.357934576	0.047729	0	0	0.484284	0
A	ROG_RESTL	0.028351	0.03682	0.03688	0.042172	0.00069	0.000373	0.000176	2.91203E-06	0.000401	0.000497	0.709809	0.000332	0.110798
A	ROG_RUNEX	0.0051	0.008609	0.007442	0.007667	0.073148	0.093702	0.01325	0.03352922	0.018799	0.022355	2.166523	0.089676	0.0382
A	ROG_RUNLS	0.188007	0.363559	0.293438	0.293782	0.332105	0.170388	0.086234	0.000964723	0.144365	0.080606	1.71071	0.053654	0.556757
A	ROG_STREX	0.175137	0.199158	0.221741	0.246383	0.050847	0.029109	0.04838	1.41663E-05	0.070525	0.06163	1.92856	0.058996	0.078074
A	SO2_IDLEX	0	0	0	0	8.31E-05	0.000127	0.000589	0.00830288	0.000983	0	0	0.003519	0
A	SO2_RUNEX	9.78E-05	0.002507	0.009964	0.003266	0.00734	0.007036	0.009964	0.013432991	0.012364	0.010738	0.002106	0.009351	0.013932
A	SO2_STREX	0	0	9.52E-05	0.000692	0.00011	7.4E-05	9.52E-05	2.74857E-06	0.000128	9.12E-05	0.000592	8.02E-05	0.000164
A	TOG_DIURN	0.027492	0.037209	0.033061	0.037755	0.001071	0.000568	0.000266	4.06911E-06	0.000767	0.000638	1.203046	0.000672	0.24653
A	TOG_HTSK	0.077904	0.08949	0.074582	0.081054	0.046873	0.026124	0.015574	0.000203104	0.012027	0.011777	0.507704	0.008391	0.02438
A	TOG_IDLEX	0	0	0	0	0.026918	0.019711	0.025486	0.423723935	0.060592	0	0	0.700095	0
A	TOG_RESTL	0.028351	0.03682	0.03688	0.042172	0.00069	0.000373	0.000176	2.91203E-06	0.000401	0.000497	0.709809	0.000332	0.110798
A	TOG_RUNEX	0.007412	0.012555	0.010822	0.011113	0.087789	0.108506	0.016558	0.214580098	0.02454	1.552489	2.711034	0.111621	0.048846
A	TOG_RUNLS	0.188007	0.363559	0.293438	0.293782	0.332105	0.170388	0.086234	0.000964723	0.144365	0.080606	1.71071	0.053654	0.556757
A	TOG_STREX	0.191753	0.218053	0.242778	0.269758	0.055671	0.031871	0.05297	1.55103E-05	0.077216	0.067478	2.100085	0.064594	0.085482

2025 CalEEMod EMFAC2017 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.464099	0.07254	0.231585	0.147582	0.028775	0.00722	0.02314	0.006201	0.003128	0.001471	0.012802	0.000563	0.000894

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles						
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust	CO2 Exhaust
NA	1	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: 2025	**1.0018**	**1.0016**	**1.0016**	**1.0074**	**1.0065**	**1.0309**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	3.62798565	0.00031408	549.9945258	0.0046572	72.58873696	0.006284
	HHDT	DSL	1222.30176	0.105816585	111148.4264	0.9411813	10866.32919	0.940715
	HHDT	NG	156.97897	0.013589916	6396.182237	0.0541615	612.2179815	0.053001
			1382.90871		118094.6032		11551.13591	
	LDA	GAS	298068.764	0.200741955	8367076.53	0.9466693	1414410.347	0.95257
	LDA	DSL	3461.64514	0.002331333	97463.8961	0.0110273	16388.31638	0.011037
	LDA	ELEC	10939.48	0.00736747	373896.5594	0.0423035	54036.75333	0.036392
			312469.89		8838436.985		1484835.416	
	LDT1	GAS	48612.8095	0.207151648	1353320.202	0.9796221	230719.5402	0.983155
	LDT1	DSL	14.2087968	6.05473E-05	250.8129942	0.0001816	50.69955574	0.000216
	LDT1	ELEC	777.685173	0.003313916	27900.70738	0.0201964	3902.330029	0.016629
			49404.7035		1381471.723		234672.5698	
	LDT2	GAS	153786.706	0.203522427	4291129.221	0.9729629	732815.4127	0.969813
	LDT2	DSL	1346.43261	0.001781879	39832.4665	0.0090315	6561.873738	0.008684
	LDT2	ELEC	3253.37223	0.004305536	79411.04618	0.0180055	16248.06551	0.021503
			158386.51		4410372.733		755625.3519	
	LHDT1	GAS	9816.60404	0.041103776	301532.7661	0.5502521	146252.7734	0.612385
	LHDT1	DSL	7359.40847	0.030815084	246457.4933	0.4497479	92572.10045	0.387615
			17176.0125	0.071918859	547990.2593		238824.8739	
	LHDT2	GAS	1402.13853	0.024424511	42711.20201	0.3106182	20889.77485	0.363889
	LHDT2	DSL	2903.09236	0.050570333	94792.63886	0.6893818	36517.24974	0.636111
			4305.23088	0.074994844	137503.8409		57407.0246	
	MCY	GAS	19383.581	1	243796.974	1	68862.74135	1
	MDV	GAS	93645.1035	0.199721874	2672490.586	0.9508604	444872.5685	0.948803
	MDV	DSL	2943.4479	0.006277647	89550.18955	0.0318616	14307.32112	0.030514
	MDV	ELEC	1918.57972	0.004091857	48561.75888	0.0172781	9697.66197	0.020683
			98507.1311		2810602.534		468877.5516	
	MH	GAS	1270.24929	7.118013782	12257.86377	0.7198618	127.0757391	0.712086
	MH	DSL	513.798428	2.879139012	4770.214617	0.2801382	51.37984278	0.287914
			1784.04772		17028.07838		178.4555819	
	MHDT	GAS	1108.96495	0.013417608	62186.69591	0.1411148	22188.17076	0.26846
	MHDT	DSL	5843.20383	0.070698195	378495.0077	0.8588852	60461.80142	0.73154
			6952.16878		440681.7036		82649.97217	
	OBUS	GAS	324.478435	0.026118285	16649.406	0.2795209	6492.164523	0.522575
	OBUS	DSL	646.47213	0.052036565	42914.67159	0.7204791	5931.256034	0.477425
			970.950565		59564.07759		12423.42056	
	SBUS	GAS	109.880776	0.043674576	5100.579169	0.4756586	439.5231033	0.174698
	SBUS	DSL	179.930657	0.071517471	5622.613446	0.5243414	2076.374839	0.825302
			289.811433		10723.19262		2515.897942	
	UBUS	GAS	38.3104281	0.024955415	928.1282979	0.0331204	153.2417126	0.099822
	UBUS	DSL	259.417084	0.168984304	20280.89752	0.7237261	1037.668336	0.675937
	UBUS	NG	86.0612155	0.056060281	6813.864589	0.2431535	344.2448621	0.224241
			383.788728		28022.89041		1535.154911	

NOx	Vehicle Cat	Fuel	NOx_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	NOx_IDLEX	Pop Adj	CalEEMod EF (g/trip)	NOx_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	2.784365604	0.004657	0.01296745	0	0.000314	0	0.010668717	0.006284	6.704E-05
	HHDT	DSL	3.176467272	0.941181	2.98963144	46.9390762	0.105817	4.9669327	2.549249886	0.940715	2.3981181
	HHDT	NG	0.886466324	0.054162	0.04801236	20.2189452	0.01359	0.2747738	0	0.053001	0
			CalEEMod HHDT EF		**3.05061125**	**CalEEMod HHDT EF**		**5.2417065**	**CalEEMod HHDT EF**		**2.3981852**
	LDA	GAS	0.025948205	0.946669	0.02456437	0	0.200742	0	0.15955824	0.95257	0.1519905
	LDA	DSL	0.036800465	0.011027	0.00040581	0	0.002331	0	0	0.011037	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0
			CalEEMod LDA EF		**0.02497018**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.1519905**
	LDT1	GAS	0.042389311	0.979622	0.04152551	0	0.207152	0	0.173114788	0.983155	0.1701987
	LDT1	DSL	0.688591129	0.000182	0.00012502	0	6.05E-05	0	0	0.000216	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0
			CalEEMod LDT1 EF		**0.04165052**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.1701987**
	LDT2	GAS	0.038282684	0.972963	0.03724763	0	0.203522	0	0.198594585	0.969813	0.1925996
	LDT2	DSL	0.031266315	0.009032	0.00028238	0	0.001782	0	0	0.008684	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0
			CalEEMod LDT2 EF		**0.03753002**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.1925996**
	LHDT1	GAS	0.116805958	0.550252	0.06427272	0.03353711	0.041104	0.0013785	0.418401826	0.612385	0.256223
	LHDT1	DSL	0.623806805	0.449748	0.28055583	1.49849797	0.030815	0.0461763	0	0.387615	0
			CalEEMod LHDT1 EF		**0.34482855**	**CalEEMod LHDT1 EF**		**0.0475548**	**CalEEMod LHDT1 EF**		**0.256223**
	LHDT2	GAS	0.121504001	0.310618	0.03774136	0.03275123	0.024425	0.0007999	0.420006562	0.363889	0.1528357
	LHDT2	DSL	0.486772383	0.689382	0.335572	1.48663685	0.05057	0.0751797	0	0.636111	0
			CalEEMod LHDT2 EF		**0.37331336**	**CalEEMod LHDT2 EF**		**0.0759797**	**CalEEMod LHDT2 EF**		**0.1528357**
	MCY	GAS	1.148465368	1	1.14846537	0	1	0	0.273389505	1	0.2733895
	MDV	GAS	0.039135559	0.95086	0.03721245	0	0.199722	0	0.220775863	0.948803	0.2094729
	MDV	DSL	0.021549599	0.031862	0.0006866	0	0.006278	0	0	0.030514	0
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0
			CalEEMod MDV EF		**0.03789906**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.2094729**
	MH	GAS	0.168286454	0.719862	0.121143	0	7.118014	0	0.321307009	0.712086	0.2287983
	MH	DSL	2.850109257	0.280138	0.79842437	0	2.879139	0	0	0.287914	0
			CalEEMod MH EF		**0.91956737**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.2287983**
	MHDT	GAS	0.228736771	0.141115	0.03227814	0.08908406	0.013418	0.0011953	0.347067799	0.26846	0.0931736
	MHDT	DSL	1.471691021	0.858885	1.26401369	4.75741291	0.070698	0.3363405	2.138524345	0.73154	1.5644172
			CalEEMod MHDT EF		**1.29629182**	**CalEEMod MHDT EF**		**0.3375358**	**CalEEMod MHDT EF**		**1.6575908**
	OBUS	GAS	0.242419691	0.279521	0.06776138	0.0650925	0.026118	0.0017001	0.295607885	0.522575	0.1544772
	OBUS	DSL	1.961738912	0.720479	1.41339184	8.39812147	0.052037	0.4370094	2.211959052	0.477425	1.0560453
			CalEEMod OBUS EF		**1.48115321**	**CalEEMod OBUS EF**		**0.4387095**	**CalEEMod OBUS EF**		**1.2105225**
	SBUS	GAS	0.465118871	0.475659	0.22123781	0.92502115	0.043675	0.0403999	0.478136001	0.174698	0.0835295
	SBUS	DSL	7.440854269	0.524341	3.90154768	43.1411733	0.071517	3.0853476	0.794740776	0.825302	0.6559009
			CalEEMod SBUS EF		**4.12278549**	**CalEEMod SBUS EF**		**3.1257475**	**CalEEMod SBUS EF**		**0.7394305**
	UBUS	GAS	0.340070738	0.03312	0.01126327	0	0.024955	0	1.021088269	0.099822	0.1019267
	UBUS	DSL	0.780821831	0.723726	0.56510115	0	0.168984	0	0	0.675937	0
	UBUS	NG	0.46658394	0.243154	0.11345153	0	0.05606	0	0	0.224241	0
			CalEEMod UBUS EF		**0.68981594**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.1019267**

PM2.5	Vehicle Ca	Fuel	PM2_5_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	PM2_5_ID	Pop Adj	CalEEMod EF (g/trip)	PM2_5_STREX	trips Adj	CalEEMod EF (g/trip)	PM2_5_PMTW	VMT ADJ	CalEEMod EF (g/mile)	PM2_5_PMBW	VMT ADJ	CalEEMod EF (g/mile)
	HHDT	GAS	0.000943929	0.004657	4.4E-06	0	0.000314	0	0.000318163	0.006284	1.999E-06	0.005000001	0.004657	2.329E-05	0.026460008	0.004657	0.0001232
	HHDT	DSL	0.023232259	0.941181	0.021866	0.031886	0.105817	0.003374	0	0.940715	0	0.008721027	0.941181	0.0082081	0.025639819	0.941181	0.0241317
	HHDT	NG	0.0036434	0.054162	0.000197	0.015415	0.01359	0.000209	0	0.053001	0	0.009000003	0.054162	0.0004875	0.026460008	0.054162	0.0014331
			CalEEMod HHDT EF		**0.022067**	**CalEEMod HHDT EF**		**0.003584**	**CalEEMod HHDT EF**		**1.999E-06**	**CalEEMod HHDT EF**		**0.0087188**	**CalEEMod HHDT EF**		**0.0256881**
	LDA	GAS	0.00112655	0.946669	0.001066	0	0.200742	0	0.001561373	0.95257	0.0014873	0.002000001	0.946669	0.0018933	0.015750005	0.946669	0.01491
	LDA	DSL	0.003460523	0.011027	3.82E-05	0	0.002331	0	0	0.011037	0	0.002000001	0.011027	2.205E-05	0.015750005	0.011027	0.0001737
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0	0.002000001	0.042303	8.461E-05	0.015750005	0.042303	0.0006663
			CalEEMod LDA EF		**0.001105**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.0014873**	**CalEEMod LDA EF**		**0.002**	**CalEEMod LDA EF**		**0.01575**
	LDT1	GAS	0.001318434	0.979622	0.001292	0	0.207152	0	0.001763925	0.983155	0.0017342	0.002000001	0.979622	0.0019592	0.015750005	0.979622	0.0154291
	LDT1	DSL	0.093792004	0.000182	1.7E-05	0	6.05E-05	0	0	0.000216	0	0.002000001	0.000182	3.631E-07	0.015750005	0.000182	2.859E-06
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0	0.002000001	0.020196	4.039E-05	0.015750005	0.020196	0.0003181
			CalEEMod LDT1 EF		**0.001309**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.0017342**	**CalEEMod LDT1 EF**		**0.002**	**CalEEMod LDT1 EF**		**0.01575**
	LDT2	GAS	0.001197432	0.972963	0.001165	0	0.203522	0	0.001598052	0.969813	0.0015498	0.002000001	0.972963	0.0019459	0.015750005	0.972963	0.0153242
	LDT2	DSL	0.003966215	0.009032	3.58E-05	0	0.001782	0	0	0.008684	0	0.002000001	0.009032	1.806E-05	0.015750005	0.009032	0.0001422
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0	0.002000001	0.018006	3.601E-05	0.015750005	0.018006	0.0002836
			CalEEMod LDT2 EF		**0.001201**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.0015498**	**CalEEMod LDT2 EF**		**0.002**	**CalEEMod LDT2 EF**		**0.01575**
	LHDT1	GAS	0.002056176	0.550252	0.001131	0	0.041104	0	0.000336293	0.612385	0.0002059	0.002000001	0.550252	0.0011005	0.032760009	0.550252	0.0180263
	LHDT1	DSL	0.012379686	0.449748	0.005568	0.02649	0.030815	0.000816	0	0.387615	0	0.003000001	0.449748	0.0013492	0.032760009	0.449748	0.0147337
			CalEEMod LHDT1 EF		**0.006699**	**CalEEMod LHDT1 EF**		**0.000816**	**CalEEMod LHDT1 EF**		**0.0002059**	**CalEEMod LHDT1 EF**		**0.0024497**	**CalEEMod LHDT1 EF**		**0.03276**
	LHDT2	GAS	0.001974263	0.310618	0.000613	0	0.024425	0	0.000303369	0.363889	0.0001104	0.002000001	0.310618	0.0006212	0.038220011	0.310618	0.0118718
	LHDT2	DSL	0.015324838	0.689382	0.010565	0.026755	0.05057	0.001353	0	0.636111	0	0.003000001	0.689382	0.0020681	0.038220011	0.689382	0.0263482
			CalEEMod LHDT2 EF		**0.011178**	**CalEEMod LHDT2 EF**		**0.001353**	**CalEEMod LHDT2 EF**		**0.0001104**	**CalEEMod LHDT2 EF**		**0.0026894**	**CalEEMod LHDT2 EF**		**0.03822**
	MCY	GAS	0.0020126	1	0.002013	0	1	0	0.002905397	1	0.0029054	0.001	1	0.001	0.005040001	1	0.00504
	MDV	GAS	0.00118932	0.95086	0.001131	0	0.199722	0	0.001639059	0.948803	0.0015551	0.002000001	0.95086	0.0019017	0.015750005	0.95086	0.0149761
	MDV	DSL	0.002622433	0.031862	8.36E-05	0	0.006278	0	0	0.030514	0	0.002000001	0.031862	6.372E-05	0.015750005	0.031862	0.0005018
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0	0.002000001	0.017278	3.456E-05	0.015750005	0.017278	0.0002721
			CalEEMod MDV EF		**0.001214**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0015551**	**CalEEMod MDV EF**		**0.002**	**CalEEMod MDV EF**		**0.01575**
	MH	GAS	0.00136508	0.719862	0.000983	0	7.118014	0	0.000313431	0.712086	0.0002232	0.003000001	0.719862	0.0021596	0.055860016	0.719862	0.0402115
	MH	DSL	0.037252155	0.280138	0.010436	0	2.879139	0	0	0.287914	0	0.004000001	0.280138	0.0011206	0.055860016	0.280138	0.0156485
			CalEEMod MH EF		**0.011418**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0002232**	**CalEEMod MH EF**		**0.0032801**	**CalEEMod MH EF**		**0.05586**
	MHDT	GAS	0.001256624	0.141115	0.000177	0	0.013418	0	0.000404683	0.26846	0.0001086	0.003000001	0.141115	0.0004233	0.055860016	0.141115	0.0078827
	MHDT	DSL	0.006695099	0.858885	0.00575	0.003254	0.070698	0.00023	0	0.73154	0	0.003000001	0.858885	0.0025767	0.055860016	0.858885	0.0479773
			CalEEMod MHDT EF		**0.005928**	**CalEEMod MHDT EF**		**0.00023**	**CalEEMod MHDT EF**		**0.0001086**	**CalEEMod MHDT EF**		**0.003**	**CalEEMod MHDT EF**		**0.05586**
	OBUS	GAS	0.00111462	0.279521	0.000312	0	0.026118	0	0.000254049	0.522575	0.0001328	0.003000001	0.279521	0.0008386	0.055860016	0.279521	0.015614
	OBUS	DSL	0.009718199	0.720479	0.007002	0.002629	0.052037	0.000137	0	0.477425	0	0.003000001	0.720479	0.0021614	0.055860016	0.720479	0.040246
			CalEEMod OBUS EF		**0.007313**	**CalEEMod OBUS EF**		**0.000137**	**CalEEMod OBUS EF**		**0.0001328**	**CalEEMod OBUS EF**		**0.003**	**CalEEMod OBUS EF**		**0.05586**
	SBUS	GAS	0.001560497	0.475659	0.000742	0	0.043675	0	0.000682696	0.174698	0.0001193	0.002000001	0.475659	0.0009513	0.319200087	0.475659	0.1518303
	SBUS	DSL	0.040960044	0.524341	0.021477	0.046206	0.071517	0.003305	0	0.825302	0	0.003000001	0.524341	0.001573	0.319200091	0.524341	0.1673698
			CalEEMod SBUS EF		**0.022219**	**CalEEMod SBUS EF**		**0.003305**	**CalEEMod SBUS EF**		**0.0001193**	**CalEEMod SBUS EF**		**0.0025243**	**CalEEMod SBUS EF**		**0.3192001**
	UBUS	GAS	0.001339278	0.03312	4.44E-05	0	0.024955	0	0.000488124	0.099822	4.873E-05	0.00276965	0.03312	9.173E-05	0.051796626	0.03312	0.0017155
	UBUS	DSL	0.005513802	0.723726	0.00399	0	0.168984	0	0	0.675937	0	0.0080229	0.723726	0.0058064	0.031247833	0.723726	0.0226149
	UBUS	NG	0.003047336	0.243154	0.000741	0	0.05606	0	0	0.224241	0	0.007824892	0.243154	0.0019026	0.032218074	0.243154	0.0078339
			CalEEMod UBUS EF		**0.004776**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**4.873E-05**	**CalEEMod UBUS EF**		**0.0078008**	**CalEEMod UBUS EF**		**0.0321643**

PM10	Vehicle Cat	Fuel	PM10_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	PM10_IDLEX	Pop Adj	CalEEMod EF (g/trip)	PM10_STREX	trips Adj	CalEEMod EF (g/trip)	PM10_PMTW	VMT ADJ	CalEEMod EF (g/mile)	PM10_PMBW	VMT ADJ	CalEEMod EF (g/mile)
	HHDT	GAS	0.001026609	0.004657	4.781E-06	0	0.000314	0	0.000346031	0.006284	2.175E-06	0.020000006	0.004657	9.314E-05	0.061740018	0.004657	0.0002875
	HHDT	DSL	0.024282719	0.941181	0.0228544	0.03332815	0.105817	0.003527	0	0.940715	0	0.034884108	0.941181	0.0328323	0.059826245	0.941181	0.0563073
	HHDT	NG	0.003808138	0.054162	0.0002063	0.01611219	0.01359	0.000219	0	0.053001	0	0.03600001	0.054162	0.0019498	0.061740018	0.054162	0.0033439
			CalEEMod HHDT EF		**0.0230655**	**CalEEMod HHDT EF**		**0.003746**	**CalEEMod HHDT EF**		**2.175E-06**	**CalEEMod HHDT EF**		**0.0348752**	**CalEEMod HHDT EF**		**0.0599388**
	LDA	GAS	0.001225226	0.946669	0.0011599	0	0.200742	0	0.001698136	0.95257	0.0016176	0.008000002	0.946669	0.0075734	0.036750011	0.946669	0.0347901
	LDA	DSL	0.003616992	0.011027	3.989E-05	0	0.002331	0	0	0.011037	0	0.008000002	0.011027	8.822E-05	0.036750011	0.011027	0.0004053
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0	0.008000002	0.042303	0.0003384	0.036750011	0.042303	0.0015547
			CalEEMod LDA EF		**0.0011998**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.0016176**	**CalEEMod LDA EF**		**0.008**	**CalEEMod LDA EF**		**0.03675**
	LDT1	GAS	0.001433918	0.979622	0.0014047	0	0.207152	0	0.00191843	0.983155	0.0018861	0.008000002	0.979622	0.007837	0.036750011	0.979622	0.0360011
	LDT1	DSL	0.098032862	0.000182	1.78E-05	0	6.05E-05	0	0	0.000216	0	0.008000002	0.000182	1.452E-06	0.036750011	0.000182	6.672E-06
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0	0.008000002	0.020196	0.0001616	0.036750011	0.020196	0.0007422
			CalEEMod LDT1 EF		**0.0014225**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.0018861**	**CalEEMod LDT1 EF**		**0.008**	**CalEEMod LDT1 EF**		**0.03675**
	LDT2	GAS	0.001302317	0.972963	0.0012671	0	0.203522	0	0.001738027	0.969813	0.0016856	0.008000002	0.972963	0.0077837	0.036750011	0.972963	0.0357564
	LDT2	DSL	0.004145549	0.009032	3.744E-05	0	0.001782	0	0	0.008684	0	0.008000002	0.009032	7.225E-05	0.036750011	0.009032	0.0003319
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0	0.008000002	0.018006	0.000144	0.036750011	0.018006	0.0006617
			CalEEMod LDT2 EF		**0.0013045**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.0016856**	**CalEEMod LDT2 EF**		**0.008**	**CalEEMod LDT2 EF**		**0.03675**
	LHDT1	GAS	0.002236279	0.550252	0.0012305	0	0.041104	0	0.00036575	0.612385	0.000224	0.008000002	0.550252	0.004402	0.076440022	0.550252	0.0420613
	LHDT1	DSL	0.012939441	0.449748	0.0058195	0.02768772	0.030815	0.000853	0	0.387615	0	0.012000003	0.449748	0.005397	0.076440022	0.449748	0.0343787
			CalEEMod LHDT1 EF		**0.00705**	**CalEEMod LHDT1 EF**		**0.000853**	**CalEEMod LHDT1 EF**		**0.000224**	**CalEEMod LHDT1 EF**		**0.009799**	**CalEEMod LHDT1 EF**		**0.07644**
	LHDT2	GAS	0.002147191	0.310618	0.000667	0	0.024425	0	0.000329942	0.363889	0.0001201	0.008000002	0.310618	0.0024849	0.089180026	0.310618	0.0277009
	LHDT2	DSL	0.01601776	0.689382	0.0110424	0.02796435	0.05057	0.001414	0	0.636111	0	0.012000003	0.689382	0.0082726	0.089180026	0.689382	0.0614791
			CalEEMod LHDT2 EF		**0.0117093**	**CalEEMod LHDT2 EF**		**0.001414**	**CalEEMod LHDT2 EF**		**0.0001201**	**CalEEMod LHDT2 EF**		**0.0107575**	**CalEEMod LHDT2 EF**		**0.08918**
	MCY	GAS	0.002156869	1	0.0021569	0	1	0	0.003100603	1	0.0031006	0.004000001	1	0.004	0.011760003	1	0.01176
	MDV	GAS	0.001293492	0.95086	0.0012299	0	0.199722	0	0.00178262	0.948803	0.0016914	0.008000002	0.95086	0.0076069	0.036750011	0.95086	0.0349441
	MDV	DSL	0.002741007	0.031862	8.733E-05	0	0.006278	0	0	0.030514	0	0.008000002	0.031862	0.0002549	0.036750011	0.031862	0.0011709
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0	0.008000002	0.017278	0.0001382	0.036750011	0.017278	0.000635
			CalEEMod MDV EF		**0.0013173**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0016914**	**CalEEMod MDV EF**		**0.008**	**CalEEMod MDV EF**		**0.03675**
	MH	GAS	0.001484649	0.719862	0.0010687	0	7.118014	0	0.000340884	0.712086	0.0002427	0.012000003	0.719862	0.0086383	0.130340037	0.719862	0.0938268
	MH	DSL	0.038936532	0.280138	0.0109076	0	2.879139	0	0	0.287914	0	0.016000005	0.280138	0.0044822	0.130340037	0.280138	0.0365132
			CalEEMod MH EF		**0.0119764**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0002427**	**CalEEMod MH EF**		**0.0131206**	**CalEEMod MH EF**		**0.13034**
	MHDT	GAS	0.001366694	0.141115	0.0001929	0	0.013418	0	0.000440129	0.26846	0.0001182	0.012000003	0.141115	0.0016934	0.130340037	0.141115	0.0183929
	MHDT	DSL	0.006997822	0.858885	0.0060103	0.0034012	0.070698	0.00024	0	0.73154	0	0.012000003	0.858885	0.0103066	0.130340037	0.858885	0.1119471
			CalEEMod MHDT EF		**0.0062032**	**CalEEMod MHDT EF**		**0.00024**	**CalEEMod MHDT EF**		**0.0001182**	**CalEEMod MHDT EF**		**0.012**	**CalEEMod MHDT EF**		**0.13034**
	OBUS	GAS	0.00121225	0.279521	0.0003388	0	0.026118	0	0.000276301	0.522575	0.0001444	0.012000003	0.279521	0.0033543	0.130340037	0.279521	0.0364328
	OBUS	DSL	0.010157613	0.720479	0.0073183	0.00274835	0.052037	0.000143	0	0.477425	0	0.012000003	0.720479	0.0086458	0.130340037	0.720479	0.0939073
			CalEEMod OBUS EF		**0.0076572**	**CalEEMod OBUS EF**		**0.000143**	**CalEEMod OBUS EF**		**0.0001444**	**CalEEMod OBUS EF**		**0.012**	**CalEEMod OBUS EF**		**0.13034**
	SBUS	GAS	0.001697183	0.475659	0.0008073	0	0.043675	0	0.000742494	0.174698	0.0001297	0.008000002	0.475659	0.0038053	0.744800204	0.475659	0.3542706
	SBUS	DSL	0.042812075	0.524341	0.0224481	0.04829502	0.071517	0.003454	0	0.825302	0	0.012000003	0.524341	0.0062921	0.744800213	0.524341	0.3905296
			CalEEMod SBUS EF		**0.0232554**	**CalEEMod SBUS EF**		**0.003454**	**CalEEMod SBUS EF**		**0.0001297**	**CalEEMod SBUS EF**		**0.0100974**	**CalEEMod SBUS EF**		**0.7448002**
	UBUS	GAS	0.001456587	0.03312	4.824E-05	0	0.024955	0	0.000530879	0.099822	5.299E-05	0.0110786	0.03312	0.0003669	0.120858794	0.03312	0.0040029
	UBUS	DSL	0.005763112	0.723726	0.0041709	0	0.168984	0	0	0.675937	0	0.0320916	0.723726	0.0232255	0.072911609	0.723726	0.052768
	UBUS	NG	0.003185123	0.243154	0.0007745	0	0.05606	0	0	0.224241	0	0.031299567	0.243154	0.0076106	0.075175505	0.243154	0.0182792
			CalEEMod UBUS EF		**0.0049936**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**5.299E-05**	**CalEEMod UBUS EF**		**0.0312031**	**CalEEMod UBUS EF**		**0.0750501**

CO2	Vehicle Cat	Fuel	CO2_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	CO2_IDLEX	Pop Adj	CalEEMod EF (g/trip)	CO2_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	1866.920753	0.004657	8.6946919	0	0.000314	0	44.1988005	0.006284	0.2777506
	HHDT	DSL	1501.037988	0.941181	1412.7488	8305.35	0.105817	878.84378	0	0.940715	0
	HHDT	NG	3024.410763	0.054162	163.80666	3884.2323	0.01359	52.786391	0	0.053001	0
			CalEEMod HHDT EF		**1585.2502**	**CalEEMod HHDT EF**		**931.63017**	**CalEEMod HHDT EF**		**0.2777506**
	LDA	GAS	233.4349523	0.946669	220.98569	0	0.200742	0	49.9624753	0.95257	47.592778
	LDA	DSL	185.3640439	0.011027	2.0440607	0	0.002331	0	0	0.011037	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0
			CalEEMod LDA EF		**223.02975**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**47.592778**
	LDT1	GAS	268.7478713	0.979622	263.27135	0	0.207152	0	57.1523671	0.983155	56.189643
	LDT1	DSL	375.9876447	0.000182	0.0682624	0	6.05E-05	0	0	0.000216	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0
			CalEEMod LDT1 EF		**263.33961**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**56.189643**
	LDT2	GAS	280.5800204	0.972963	272.99396	0	0.203522	0	60.9879322	0.969813	59.146899
	LDT2	DSL	250.467721	0.009032	2.2621097	0	0.001782	0	0	0.008684	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0
			CalEEMod LDT2 EF		**275.25607**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**59.146899**
	LHDT1	GAS	952.9431721	0.550252	524.35894	115.64542	0.041104	4.7534636	18.158505	0.612385	11.119996
	LHDT1	DSL	506.0370171	0.449748	227.58911	123.77219	0.030815	3.8140504	0	0.387615	0
			CalEEMod LHDT1 EF		**751.94805**	**CalEEMod LHDT1 EF**		**8.567514**	**CalEEMod LHDT1 EF**		**11.119996**
	LHDT2	GAS	1084.491577	0.310618	336.86287	132.50663	0.024425	3.2364097	20.5426389	0.363889	7.4752368
	LHDT2	DSL	568.1091934	0.689382	391.64411	198.78422	0.05057	10.052584	0	0.636111	0
			CalEEMod LHDT2 EF		**728.50698**	**CalEEMod LHDT2 EF**		**13.288994**	**CalEEMod LHDT2 EF**		**7.4752368**
	MCY	GAS	212.7942533	1	212.79425	0	1	0	59.7999212	1	59.799921
	MDV	GAS	336.6840495	0.95086	320.13952	0	0.199722	0	73.736944	0.948803	69.961856
	MDV	DSL	324.687427	0.031862	10.345049	0	0.006278	0	0	0.030514	0
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0
			CalEEMod MDV EF		**330.48457**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**69.961856**
	MH	GAS	1603.760466	0.719862	1154.486	0	7.118014	0	23.318525	0.712086	16.604798
	MH	DSL	946.6804739	0.280138	265.20133	0	2.879139	0	0	0.287914	0
			CalEEMod MH EF		**1419.6873**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**16.604798**
	MHDT	GAS	1624.850232	0.141115	229.29036	507.24984	0.013418	6.8060797	35.8220569	0.26846	9.6167717
	MHDT	DSL	948.3438202	0.858885	814.5185	780.30635	0.070698	55.16625	0	0.73154	0
			CalEEMod MHDT EF		**1043.8089**	**CalEEMod MHDT EF**		**61.97233**	**CalEEMod MHDT EF**		**9.6167717**
	OBUS	GAS	1665.739385	0.279521	465.60901	361.42452	0.026118	9.4397885	24.7098179	0.522575	12.912724
	OBUS	DSL	1139.53493	0.720479	821.01107	1809.128	0.052037	94.140808	0	0.477425	0
			CalEEMod OBUS EF		**1286.6201**	**CalEEMod OBUS EF**		**103.5806**	**CalEEMod OBUS EF**		**12.912724**
	SBUS	GAS	794.6861539	0.475659	377.99933	2384.6574	0.043675	104.1489	46.4003049	0.174698	8.1060546
	SBUS	DSL	1132.525111	0.524341	593.82976	3683.1607	0.071517	263.41034	0	0.825302	0
			CalEEMod SBUS EF		**971.82909**	**CalEEMod SBUS EF**		**367.55924**	**CalEEMod SBUS EF**		**8.1060546**
	UBUS	GAS	1980.978499	0.03312	65.610727	0	0.024955	0	92.3023512	0.099822	9.213774
	UBUS	DSL	1474.52263	0.723726	1067.1505	0	0.168984	0	0	0.675937	0
	UBUS	NG	1936.754461	0.243154	470.92867	0	0.05606	0	0	0.224241	0
			CalEEMod UBUS EF		**1603.6899**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**9.213774**

CH4	Vehicle Cat	Fuel	CH4_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	CH4_IDLEX	Pop Adj	CalEEMod EF (g/trip)	CH4_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.06583087	0.004657	0.0003066	0	0.000314	0	0.00043134	0.006284	2.71E-06
	HHDT	DSL	0.00134528	0.941181	0.0012661	0.1569486	0.105817	0.016608	0	0.940715	0
	HHDT	NG	3.23514749	0.054162	0.1752205	1.1900637	0.01359	0.016173	0	0.053001	0
			CalEEMod HHDT EF		**0.1767932**	**CalEEMod HHDT EF**		**0.032781**	**CalEEMod HHDT EF**		**2.71E-06**
	LDA	GAS	0.00143521	0.946669	0.0013587	0	0.200742	0	0.04114587	0.95257	0.039194
	LDA	DSL	0.00038751	0.011027	4.273E-06	0	0.002331	0	0	0.011037	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0
			CalEEMod LDA EF		**0.0013629**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.039194**
	LDT1	GAS	0.00216906	0.979622	0.0021249	0	0.207152	0	0.0445821	0.983155	0.043831
	LDT1	DSL	0.00586239	0.000182	1.064E-06	0	6.05E-05	0	0	0.000216	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0
			CalEEMod LDT1 EF		**0.0021259**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.043831**
	LDT2	GAS	0.0019881	0.972963	0.0019343	0	0.203522	0	0.0512592	0.969813	0.049712
	LDT2	DSL	0.00058519	0.009032	5.285E-06	0	0.001782	0	0	0.008684	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0
			CalEEMod LDT2 EF		**0.0019396**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.049712**
	LHDT1	GAS	0.00561996	0.550252	0.0030924	0.1101023	0.041104	0.004526	0.01688482	0.612385	0.01034
	LHDT1	DSL	0.0061006	0.449748	0.0027437	0.0050981	0.030815	0.000157	0	0.387615	0
			CalEEMod LHDT1 EF		**0.0058361**	**CalEEMod LHDT1 EF**		**0.004683**	**CalEEMod LHDT1 EF**		**0.01034**
	LHDT2	GAS	0.00444093	0.310618	0.0013794	0.1078841	0.024425	0.002635	0.01645748	0.363889	0.005989
	LHDT2	DSL	0.00592845	0.689382	0.004087	0.0050981	0.05057	0.000258	0	0.636111	0
			CalEEMod LHDT2 EF		**0.0054664**	**CalEEMod LHDT2 EF**		**0.002893**	**CalEEMod LHDT2 EF**		**0.005989**
	MCY	GAS	0.32533204	1	0.325332	0	1	0	0.25556314	1	0.255563
	MDV	GAS	0.00204463	0.95086	0.0019442	0	0.199722	0	0.05586108	0.948803	0.053001
	MDV	DSL	0.00033339	0.031862	1.062E-05	0	0.006278	0	0	0.030514	0
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0
			CalEEMod MDV EF		**0.0019548**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.053001**
	MH	GAS	0.00638631	0.719862	0.0045973	0	7.118014	0	0.02851024	0.712086	0.020302
	MH	DSL	0.00356437	0.280138	0.0009985	0	2.879139	0	0	0.287914	0
			CalEEMod MH EF		**0.0055958**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.020302**
	MHDT	GAS	0.00713738	0.141115	0.0010072	0.2765062	0.013418	0.00371	0.03544139	0.26846	0.009515
	MHDT	DSL	0.00046817	0.858885	0.0004021	0.0031649	0.070698	0.000224	0	0.73154	0
			CalEEMod MHDT EF		**0.0014093**	**CalEEMod MHDT EF**		**0.003934**	**CalEEMod MHDT EF**		**0.009515**
	OBUS	GAS	0.00763888	0.279521	0.0021352	0.2063356	0.026118	0.005389	0.02729344	0.522575	0.014263
	OBUS	DSL	0.00058096	0.720479	0.0004186	0.0251933	0.052037	0.001311	0	0.477425	0
			CalEEMod OBUS EF		**0.0025538**	**CalEEMod OBUS EF**		**0.0067**	**CalEEMod OBUS EF**		**0.014263**
	SBUS	GAS	0.01266412	0.475659	0.0060238	2.4441275	0.043675	0.106746	0.05877693	0.174698	0.010268
	SBUS	DSL	0.00531149	0.524341	0.002785	0.0133031	0.071517	0.000951	0	0.825302	0
			CalEEMod SBUS EF		**0.0088088**	**CalEEMod SBUS EF**		**0.107698**	**CalEEMod SBUS EF**		**0.010268**
	UBUS	GAS	0.00515072	0.03312	0.0001706	0	0.024955	0	0.12283737	0.099822	0.012262
	UBUS	DSL	0.07453071	0.723726	0.0539398	0	0.168984	0	0	0.675937	0
	UBUS	NG	6.03054177	0.243154	1.4663475	0	0.05606	0	0	0.224241	0
			CalEEMod UBUS EF		**1.5204579**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.012262**

N2O	Vehicle Cat	Fuel	N2O_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	N2O_IDLEX	Pop Adj	CalEEMod EF (g/trip)	N2O_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.12435704	0.004657	0.0005792	0	0.000314	0	0.0005196	0.006284	3.265E-06
	HHDT	DSL	0.23594227	0.941181	0.2220644	1.305485	0.105817	0.138142	0	0.940715	0
	HHDT	NG	0.61654592	0.054162	0.0333931	0.791826	0.01359	0.010761	0	0.053001	0
			CalEEMod HHDT EF		**0.2560367**	**CalEEMod HHDT EF**		**0.148903**	**CalEEMod HHDT EF**		**3.265E-06**
	LDA	GAS	0.00336611	0.946669	0.0031866	0	0.200742	0	0.02225121	0.95257	0.0211958
	LDA	DSL	0.02913665	0.011027	0.0003213	0	0.002331	0	0	0.011037	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0
			CalEEMod LDA EF		**0.0035079**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.0211958**
	LDT1	GAS	0.00423441	0.979622	0.0041481	0	0.207152	0	0.02306161	0.983155	0.0226731
	LDT1	DSL	0.05910002	0.000182	1.073E-05	0	6.05E-05	0	0	0.000216	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0
			CalEEMod LDT1 EF		**0.0041589**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.0226731**
	LDT2	GAS	0.00399395	0.972963	0.003886	0	0.203522	0	0.0257114	0.969813	0.0249353
	LDT2	DSL	0.03937004	0.009032	0.0003556	0	0.001782	0	0	0.008684	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0
			CalEEMod LDT2 EF		**0.0042415**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.0249353**
	LHDT1	GAS	0.0077778	0.550252	0.0042798	0.002967	0.041104	0.000122	0.03529386	0.612385	0.0216134
	LHDT1	DSL	0.07954197	0.449748	0.0357738	0.019455	0.030815	0.0006	0	0.387615	0
			CalEEMod LHDT1 EF		**0.0400536**	**CalEEMod LHDT1 EF**		**0.000721**	**CalEEMod LHDT1 EF**		**0.0216134**
	LHDT2	GAS	0.00855281	0.310618	0.0026567	0.002851	0.024425	6.96E-05	0.03472768	0.363889	0.012637
	LHDT2	DSL	0.08929885	0.689382	0.061561	0.031246	0.05057	0.00158	0	0.636111	0
			CalEEMod LHDT2 EF		**0.0642177**	**CalEEMod LHDT2 EF**		**0.00165**	**CalEEMod LHDT2 EF**		**0.012637**
	MCY	GAS	0.06628203	1	0.066282	0	1	0	0.01558722	1	0.0155872
	MDV	GAS	0.00410637	0.031862	0.0001308	0	0.006278	0	0.02665794	0.030514	0.0008134
	MDV	DSL	0.05103634	0.017278	0.0008818	0	0.004092	0	0	0.020683	0
	MDV	ELEC	0	0	0	0	0	0	0	0	0
			CalEEMod MDV EF		**0.0010126**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0008134**
	MH	GAS	0.01481532	0.280138	0.0041503	0	2.879139	0	0.03760711	0.287914	0.0108276
	MH	DSL	0.14880499	0	0	0	0	0	0	0	0
			CalEEMod MH EF		**0.0041503**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0108276**
	MHDT	GAS	0.01406343	0.858885	0.0120789	0.00827	0.070698	0.000585	0.03039984	0.73154	0.0222387
	MHDT	DSL	0.14906644	0	0	0.122653	0	0	0	0	0
			CalEEMod MHDT EF		**0.0120789**	**CalEEMod MHDT EF**		**0.000585**	**CalEEMod MHDT EF**		**0.0222387**
	OBUS	GAS	0.01464812	0.720479	0.0105537	0.006071	0.052037	0.000316	0.02646793	0.477425	0.0126365
	OBUS	DSL	0.17911902	0	0	0.28437	0	0	0	0	0
			CalEEMod OBUS EF		**0.0105537**	**CalEEMod OBUS EF**		**0.000316**	**CalEEMod OBUS EF**		**0.0126365**
	SBUS	GAS	0.02434658	0.524341	0.0127659	0.093166	0.071517	0.006663	0.04685096	0.825302	0.0386662
	SBUS	DSL	0.17801718	0	0	0.578942	0	0	0	0	0
			CalEEMod SBUS EF		**0.0127659**	**CalEEMod SBUS EF**		**0.006663**	**CalEEMod SBUS EF**		**0.0386662**
	UBUS	GAS	0.02458507	0.723726	0.0177929	0	0.168984	0	0.07323988	0.675937	0.0495056
	UBUS	DSL	0.23177442	0.243154	0.0563568	0	0.05606	0	0	0.224241	0
	UBUS	NG	0.39482007	0	0	0	0	0	0	0	0
			CalEEMod UBUS EF		**0.0741496**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.0495056**

			EMFAC2017			EMFAC2017			EMFAC2017			EMFAC2017			EMFAC2017			EMFAC2017			EMFAC2017		
	Vehicle		ROG_RUNEX		CalEEMod	ROG_IDLEX		CalEEMod EF	ROG_STREX		CalEEMod	ROG_HOTSOAK		CalEEMod	ROG_RUNLOSS		CalEEMod	ROG_RESTLOSS		CalEEMod	ROG_DIURN		CalEEMod
ROG	Category	Fuel	(g/mile)	VMT ADJ	EF (g/mile)	(g/veh/day)	Pop Adj	(g/trip)	(g/trip)	trips Adj	EF (g/trip)	(g/trip)	trips Adj	EF (g/trip)	(g/trip)	trips Adj	EF (g/trip)	(g/veh/day)	Pop Adj	EF (g/trip)	(g/veh/day)	Pop Adj	EF (g/trip)
	HHDT	GAS	0.289222323	0.004657	0.00134698	0	0.000314	0	0.0022543	0.006284	1.417E-05	0.032320129	0.006284	0.0002031	0.153517641	0.006284	0.0009647	0.009271595	0.000314	2.912E-06	0.012955632	0.000314	4.069E-06
	HHDT	DSL	0.028963452	0.941181	0.02725986	3.37905949	0.105817	0.357560536	0	0.940715	0	0	0.940715	0	0	0.940715	0	0	0.105817	0	0	0.105817	0
	HHDT	NG	0.090883457	0.054162	0.00492239	0.02752329	0.01359	0.000374039	0	0.053001	0	0	0.053001	0	0	0.053001	0	0	0.01359	0	0	0.01359	0
			CalEEMod HHDT EF		**0.03352922**	**CalEEMod HHDT EF**		**0.357934576**	**CalEEMod HHDT EF**		**1.417E-05**	**CalEEMod HHDT EF**		**0.0002031**	**CalEEMod HHDT EF**		**0.0009647**	**CalEEMod HHDT EF**		**2.912E-06**	**CalEEMod HHDT EF**		**4.069E-06**
	LDA	GAS	0.005281345	0.946669	0.00499969	0	0.200742	0	0.18356337	0.95257	0.174857	0.081465665	0.95257	0.0776018	0.197052653	0.95257	0.1877065	0.140891196	0.200742	0.0282828	0.136290857	0.200742	0.0273593
	LDA	DSL	0.008342847	0.011027	9.1999E-05	0	0.002331	0	0	0.011037	0	0	0.011037	0	0	0.011037	0	0	0.002331	0	0	0.002331	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0	0.004888026	0.036392	0.0001779	0	0.036392	0	0.003127748	0.007367	2.304E-05	0.012002497	0.007367	8.843E-05
			CalEEMod LDA EF		**0.00509169**	**CalEEMod LDA EF**		**0**	**CalEEMod AHDA EF**		**0.174857**	**CalEEMod LDA EF**		**0.0777797**	**CalEEMod LDA EF**		**0.1877065**	**CalEEMod LDA EF**		**0.0283058**	**CalEEMod LDA EF**		**0.0274477**
	LDT1	GAS	0.008750934	0.979622	0.00857261	0	0.207152	0	0.20224628	0.983155	0.1988395	0.090795098	0.983155	0.0892657	0.369197057	0.983155	0.362978	0.177409419	0.207152	0.0367507	0.179145455	0.207152	0.0371103
	LDT1	DSL	0.126213776	0.000182	2.2915E-05	0	6.05E-05	0	0	0.000216	0	0	0.000216	0	0	0.000216	0	0	6.05E-05	0	0	6.05E-05	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0	0.004888026	0.016629	8.128E-05	0	0.016629	0	0.003127748	0.003314	1.037E-05	0.012002497	0.003314	3.978E-05
			CalEEMod LDT1 EF		**0.00859552**	**CalEEMod LDT1 EF**		**0**	**CalEEMod AHDT1 EF**		**0.1988395**	**CalEEMod LDT1 EF**		**0.0893469**	**CalEEMod LDT1 EF**		**0.362978**	**CalEEMod LDT1 EF**		**0.036761**	**CalEEMod LDT1 EF**		**0.0371501**
	LDT2	GAS	0.007519319	0.972963	0.00731602	0	0.203522	0	0.22827746	0.969813	0.2213865	0.076672414	0.969813	0.0743579	0.302087882	0.969813	0.2929688	0.180854566	0.203522	0.036808	0.161932095	0.203522	0.0329568
	LDT2	DSL	0.012598698	0.009032	0.00011379	0	0.001782	0	0	0.008684	0	0	0.008684	0	0	0.008684	0	0	0.001782	0	0	0.001782	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0	0.004888026	0.021503	0.0001051	0	0.021503	0	0.003127748	0.004306	1.347E-05	0.012002497	0.004306	5.168E-05
			CalEEMod LDT2 EF		**0.0074298**	**CalEEMod LDT2 EF**		**0**	**CalEEMod AHDT2 EF**		**0.2213865**	**CalEEMod LDT2 EF**		**0.074463**	**CalEEMod LDT2 EF**		**0.2929688**	**CalEEMod LDT2 EF**		**0.0368214**	**CalEEMod LDT2 EF**		**0.0330085**
	LHDT1	GAS	0.025582773	0.550252	0.01407697	0.38460288	0.041104	0.015808631	0.08303133	0.612385	0.0508471	0.076541649	0.612385	0.046873	0.542314087	0.612385	0.332105	0.016778337	0.041104	0.0006897	0.026051054	0.041104	0.0010708
	LHDT1	DSL	0.131342384	0.449748	0.05907097	0.1097597	0.030815	0.003382254	0	0.387615	0	0	0.387615	0	0	0.387615	0	0	0.030815	0	0	0.030815	0
			CalEEMod LHDT1 EF		**0.07314794**	**CalEEMod LHDT1 EF**		**0.019190885**	**CalEEMod AHHDT1 EF**		**0.0508471**	**CalEEMod LHDT1 EF**		**0.046873**	**CalEEMod LHDT1 EF**		**0.332105**	**CalEEMod LHDT1 EF**		**0.0006897**	**CalEEMod LHDT1 EF**		**0.0010708**
	LHDT2	GAS	0.018388963	0.310618	0.00571195	0.37575118	0.024425	0.009177539	0.07999491	0.363889	0.0291093	0.071790202	0.363889	0.0261237	0.468243116	0.363889	0.1703884	0.015274103	0.024425	0.0003731	0.023273773	0.024425	0.0005685
	LHDT2	DSL	0.127636008	0.689382	0.08798994	0.1097597	0.05057	0.005550585	0	0.636111	0	0	0.636111	0	0	0.636111	0	0	0.05057	0	0	0.05057	0
			CalEEMod LHDT2 EF		**0.09370188**	**CalEEMod LHDT2 EF**		**0.014728124**	**CalEEMod AHHDT2 EF**		**0.0291093**	**CalEEMod LHDT2 EF**		**0.0261237**	**CalEEMod LHDT2 EF**		**0.1703884**	**CalEEMod LHDT2 EF**		**0.0003731**	**CalEEMod LHDT2 EF**		**0.0005685**
	MCY	GAS	2.166523396	1	**2.1665234**	0	1	**0**	1.92856013	1	**1.9285601**	0.507703601	1	**0.5077036**	1.710710363	1	**1.7107104**	0.709808974	1	**0.709809**	1.203045587	1	**1.2030456**
	MDV	GAS	0.00780962	0.95086	0.00742586	0	0.199722	0	0.25926269	0.948803	0.2459893	0.085184347	0.948803	0.0808232	0.3091401	0.948803	0.2933131	0.210750051	0.199722	0.0420914	0.188490107	0.199722	0.0376456
	MDV	DSL	0.007177703	0.031862	0.00022869	0	0.006278	0	0	0.030514	0	0	0.030514	0	0	0.030514	0	0	0.006278	0	0	0.006278	0
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0	0.004888026	0.020683	0.0001011	0	0.020683	0	0.003127748	0.004092	1.28E-05	0.012002497	0.004092	4.911E-05
			CalEEMod MDV EF		**0.00765455**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.2459893**	**CalEEMod MDV EF**		**0.0809243**	**CalEEMod MDV EF**		**0.2933131**	**CalEEMod MDV EF**		**0.0421042**	**CalEEMod MDV EF**		**0.0376947**
	MH	GAS	0.023202651	0.719862	0.0167027	0	7.118014	0	0.10964189	0.712086	0.0780745	0.034237518	0.712086	0.0243801	0.781867422	0.712086	0.5567569	0.015565869	7.118014	0.1107981	0.034634699	7.118014	0.2465303
	MH	DSL	0.076738829	0.280138	0.02149747	0	2.879139	0	0	0.287914	0	0	0.287914	0	0	0.287914	0	0	2.879139	0	0	2.879139	0
			CalEEMod MH EF		**0.03820018**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0780745**	**CalEEMod MH EF**		**0.0243801**	**CalEEMod MH EF**		**0.5567569**	**CalEEMod MH EF**		**0.1107981**	**CalEEMod MH EF**		**0.2465303**
	MHDT	GAS	0.032549255	0.141115	0.00459318	1.02160105	0.013418	0.013707443	0.18021273	0.26846	0.0483798	0.058010972	0.26846	0.0155736	0.321218142	0.26846	0.0862341	0.013081228	0.013418	0.0001755	0.019790032	0.013418	0.0002655
	MHDT	DSL	0.010079528	0.858885	0.00865716	0.06813878	0.070698	0.004817288	0	0.73154	0	0	0.73154	0	0	0.73154	0	0	0.070698	0	0	0.070698	0
			CalEEMod MHDT EF		**0.01325034**	**CalEEMod MHDT EF**		**0.018524731**	**CalEEMod MHDT EF**		**0.0483798**	**CalEEMod MHDT EF**		**0.0155736**	**CalEEMod MHDT EF**		**0.0862341**	**CalEEMod MHDT EF**		**0.0001755**	**CalEEMod MHDT EF**		**0.0002655**
	OBUS	GAS	0.035013264	0.279521	0.00978694	0.7467433	0.026118	0.019503654	0.13495643	0.522575	0.0705248	0.023014625	0.522575	0.0120269	0.276256505	0.522575	0.1443646	0.015346949	0.026118	0.0004008	0.029357536	0.026118	0.0007668
	OBUS	DSL	0.01250795	0.720479	0.00901172	0.54240568	0.052037	0.028224928	0	0.477425	0	0	0.477425	0	0	0.477425	0	0	0.052037	0	0	0.052037	0
			CalEEMod OBUS EF		**0.01879866**	**CalEEMod OBUS EF**		**0.047728582**	**CalEEMod OBUS EF**		**0.0705248**	**CalEEMod OBUS EF**		**0.0120269**	**CalEEMod OBUS EF**		**0.1443646**	**CalEEMod OBUS EF**		**0.0004008**	**CalEEMod OBUS EF**		**0.0007668**
	SBUS	GAS	0.06247084	0.475659	0.02971479	10.6194625	0.043675	0.463800524	0.33770413	0.174698	0.0589963	0.048031896	0.174698	0.0083911	0.307124066	0.174698	0.0536541	0.007594501	0.043675	0.0003317	0.015380405	0.043675	0.0006717
	SBUS	DSL	0.114354938	0.524341	0.05996102	0.28641157	0.071517	0.020483431	0	0.825302	0	0	0.825302	0	0	0.825302	0	0	0.071517	0	0	0.071517	0
			CalEEMod SBUS EF		**0.08967582**	**CalEEMod SBUS EF**		**0.484283955**	**CalEEMod SBUS EF**		**0.0589963**	**CalEEMod SBUS EF**		**0.0083911**	**CalEEMod SBUS EF**		**0.0536541**	**CalEEMod SBUS EF**		**0.0003317**	**CalEEMod SBUS EF**		**0.0006717**
	UBUS	GAS	0.019126678	0.03312	0.00063348	0	0.024955	0	0.61740562	0.099822	0.0616305	0.117975718	0.099822	0.0117765	0.807501919	0.099822	0.0806062	0.019900368	0.024955	0.0004966	0.025555596	0.024955	0.0006378
	UBUS	DSL	0.001064897	0.723726	0.00077069	0	0.168984	0	0	0.675937	0	0	0.675937	0	0	0.675937	0	0	0.168984	0	0	0.168984	0
	UBUS	NG	0.086164543	0.243154	0.02095121	0	0.05606	0	0	0.224241	0	0	0.224241	0	0	0.224241	0	0	0.05606	0	0	0.05606	0
			CalEEMod UBUS EF		**0.02235539**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.0616305**	**CalEEMod UBUS EF**		**0.0117765**	**CalEEMod UBUS EF**		**0.0806062**	**CalEEMod UBUS EF**		**0.0004966**	**CalEEMod UBUS EF**		**0.0006378**

TOG	Vehicle Cat	Fuel	EMFAC2017 TOG_RUNEX (g/mile)	VMT ADJ	CalEEMod EF (g/mile)	EMFAC2017 TOG_IDLEX (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_STREX (g/trip)	trips Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_HOTSOAK (g/trip)	trips Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_RUNLOSS (g/trip)	trips Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_RESTLOSS (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_DIURN (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.422032535	0.004657	0.0019655	0	0.000314	0	0.00246818	0.006284	1.551E-05	0.032320129	0.006284	0.0002031	0.153517641	0.006284	0.0009647	0.009271595	0.000314	2.912E-06	0.01295563	0.00031408	4.069E-06
	HHDT	DSL	0.032972685	0.941181	0.0310333	3.846802014	0.105817	0.4070555	0	0.940715	0	0	0.940715	0	0	0.940715	0	0	0.105817	0	0	0.105816585	0
	HHDT	NG	3.352589566	0.054162	0.1815813	1.226533126	0.01359	0.0166685	0	0.053001	0	0	0.053001	0	0	0.053001	0	0	0.01359	0	0	0.013589916	0
			CalEEMod HHDT EF		**0.2145801**	**CalEEMod HHDT EF**		**0.4237239**	**CalEEMod HHDT EF**		**1.551E-05**	**CalEEMod HHDT EF**		**0.0002031**	**CalEEMod HHDT EF**		**0.0009647**	**CalEEMod HHDT EF**		**2.912E-06**	**CalEEMod HHDT EF**		**4.069E-06**
	LDA	GAS	0.007706526	0.946669	0.0072955	0	0.200742	0	0.20097879	0.95257	0.1914465	0.081465665	0.95257	0.0776018	0.197052653	0.95257	0.1877065	0.140891196	0.200742	0.0282828	0.13629086	0.200741955	0.0273593
	LDA	DSL	0.009497777	0.011027	0.0001047	0	0.002331	0	0	0.011037	0	0	0.011037	0	0	0.011037	0	0	0.002331	0	0	0.002331333	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0	0.004888026	0.036392	0.0001779	0	0.036392	0	0.003127748	0.007367	2.304E-05	0.0120025	0.00736747	8.843E-05
			CalEEMod LDA EF		**0.0074003**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.1914465**	**CalEEMod LDA EF**		**0.0777797**	**CalEEMod LDA EF**		**0.1877065**	**CalEEMod LDA EF**		**0.0283058**	**CalEEMod LDA EF**		**0.0274477**
	LDT1	GAS	0.012769342	0.979622	0.0125091	0	0.207152	0	0.22143422	0.983155	0.2177042	0.090795098	0.983155	0.0892657	0.369197057	0.983155	0.362978	0.177409419	0.207152	0.0367507	0.17914546	0.207151648	0.0371103
	LDT1	DSL	0.143685993	0.000182	2.609E-05	0	6.05E-05	0	0	0.000216	0	0	0.000216	0	0	0.000216	0	0	6.05E-05	0	0	6.05473E-05	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0	0.004888026	0.016629	8.128E-05	0	0.016629	0	0.003127748	0.003314	1.037E-05	0.0120025	0.003313916	3.978E-05
			CalEEMod LDT1 EF		**0.0125352**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.2177042**	**CalEEMod LDT1 EF**		**0.0893469**	**CalEEMod LDT1 EF**		**0.362978**	**CalEEMod LDT1 EF**		**0.036761**	**CalEEMod LDT1 EF**		**0.0371501**
	LDT2	GAS	0.010972172	0.972963	0.0106755	0	0.203522	0	0.24993509	0.969813	0.2423903	0.076672414	0.969813	0.0743579	0.302087882	0.969813	0.2929688	0.180854566	0.203522	0.036808	0.1619321	0.203522427	0.0329568
	LDT2	DSL	0.01434278	0.009032	0.0001295	0	0.001782	0	0	0.008684	0	0	0.008684	0	0	0.008684	0	0	0.001782	0	0	0.001781879	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0	0.004888026	0.021503	0.0001051	0	0.021503	0	0.003127748	0.004306	1.347E-05	0.0120025	0.004305536	5.168E-05
			CalEEMod LDT2 EF		**0.0108051**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.2423903**	**CalEEMod LDT2 EF**		**0.074463**	**CalEEMod LDT2 EF**		**0.2929688**	**CalEEMod LDT2 EF**		**0.0368214**	**CalEEMod LDT2 EF**		**0.0330085**
	LHDT1	GAS	0.037330322	0.550252	0.0205411	0.56121162	0.041104	0.0230679	0.09090885	0.612385	0.0556712	0.076541649	0.612385	0.046873	0.542314087	0.612385	0.332105	0.016778337	0.041104	0.0006897	0.02605105	0.041103776	0.0010708
	LHDT1	DSL	0.149524572	0.449748	0.0672484	0.124954127	0.030815	0.0038505	0	0.387615	0	0	0.387615	0	0	0.387615	0	0	0.030815	0	0	0.030815084	0
			CalEEMod LHDT1 EF		**0.0877895**	**CalEEMod LHDT1 EF**		**0.0269184**	**CalEEMod LHDT1 EF**		**0.0556712**	**CalEEMod LHDT1 EF**		**0.046873**	**CalEEMod LHDT1 EF**		**0.332105**	**CalEEMod LHDT1 EF**		**0.0006897**	**CalEEMod LHDT1 EF**		**0.0010708**
	LHDT2	GAS	0.026833131	0.310618	0.0083349	0.548295245	0.024425	0.0133918	0.08758436	0.363889	0.031871	0.071790202	0.363889	0.0261237	0.468243116	0.363889	0.1703884	0.015274103	0.024425	0.0003731	0.02327377	0.024424511	0.0005685
	LHDT2	DSL	0.14530511	0.689382	0.1001707	0.124954127	0.05057	0.006319	0	0.636111	0	0	0.636111	0	0	0.636111	0	0	0.05057	0	0	0.050570333	0
			CalEEMod LHDT2 EF		**0.1085056**	**CalEEMod LHDT2 EF**		**0.0197108**	**CalEEMod LHDT2 EF**		**0.031871**	**CalEEMod LHDT2 EF**		**0.0261237**	**CalEEMod LHDT2 EF**		**0.1703884**	**CalEEMod LHDT2 EF**		**0.0003731**	**CalEEMod LHDT2 EF**		**0.0005685**
	MCY	GAS	2.711034267	1	2.7110343	0	1	0	2.10008481	1	2.1000848	0.507703601	1	0.5077036	1.710710363	1	1.7107104	0.709808974	1	0.709809	1.20304559	1	1.2030456
	MDV	GAS	0.011394704	0.95086	0.0108348	0	0.199722	0	0.28385984	0.948803	0.2693272	0.085184347	0.948803	0.0808232	0.3091401	0.948803	0.2933131	0.210750051	0.199722	0.0420914	0.18849011	0.199721874	0.0376456
	MDV	DSL	0.008171338	0.031862	0.0002604	0	0.006278	0	0	0.030514	0	0	0.030514	0	0	0.030514	0	0	0.006278	0	0	0.006277647	0
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0	0.004888026	0.020683	0.0001011	0	0.020683	0	0.003127748	0.004092	1.28E-05	0.0120025	0.004091857	4.911E-05
			CalEEMod MDV EF		**0.0110951**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.2693272**	**CalEEMod MDV EF**		**0.0809243**	**CalEEMod MDV EF**		**0.2933131**	**CalEEMod MDV EF**		**0.0421042**	**CalEEMod MDV EF**		**0.0376947**
	MH	GAS	0.033857253	0.719862	0.0243725	0	7.118014	0	0.12004407	0.712086	0.0854817	0.034237518	0.712086	0.0243801	0.781867422	0.712086	0.5567569	0.015565869	7.118014	0.1107981	0.0346347	7.118013782	0.2465303
	MH	DSL	0.087362055	0.280138	0.0244734	0	2.879139	0	0	0.287914	0	0	0.287914	0	0	0.287914	0	0	2.879139	0	0	2.879139012	0
			CalEEMod MH EF		**0.048846**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0854817**	**CalEEMod MH EF**		**0.0243801**	**CalEEMod MH EF**		**0.5567569**	**CalEEMod MH EF**		**0.1107981**	**CalEEMod MH EF**		**0.2465303**
	MHDT	GAS	0.047495796	0.141115	0.0067024	1.490717854	0.013418	0.0200019	0.19731026	0.26846	0.0529698	0.058010972	0.26846	0.0155736	0.321218142	0.26846	0.0862341	0.013081228	0.013418	0.0001755	0.01979003	0.013417608	0.0002655
	MHDT	DSL	0.011474775	0.858885	0.0098555	0.077570809	0.070698	0.0054841	0	0.73154	0	0	0.73154	0	0	0.73154	0	0	0.070698	0	0	0.070698195	0
			CalEEMod MHDT EF		**0.0165579**	**CalEEMod MHDT EF**		**0.025486**	**CalEEMod MHDT EF**		**0.0529698**	**CalEEMod MHDT EF**		**0.0155736**	**CalEEMod MHDT EF**		**0.0862341**	**CalEEMod MHDT EF**		**0.0001755**	**CalEEMod MHDT EF**		**0.0002655**
	OBUS	GAS	0.051091273	0.279521	0.0142811	1.089646066	0.026118	0.0284597	0.14776031	0.522575	0.0772158	0.023014625	0.522575	0.0120269	0.276256505	0.522575	0.1443646	0.015346949	0.026118	0.0004008	0.02935754	0.026118285	0.0007668
	OBUS	DSL	0.014239348	0.720479	0.0102592	0.617487575	0.052037	0.0321319	0	0.477425	0	0	0.477425	0	0	0.477425	0	0	0.052037	0	0	0.052036565	0
			CalEEMod OBUS EF		**0.0245402**	**CalEEMod OBUS EF**		**0.0605916**	**CalEEMod OBUS EF**		**0.0772158**	**CalEEMod OBUS EF**		**0.0120269**	**CalEEMod OBUS EF**		**0.1443646**	**CalEEMod OBUS EF**		**0.0004008**	**CalEEMod OBUS EF**		**0.0007668**
	SBUS	GAS	0.091157303	0.475659	0.0433598	15.49589481	0.043675	0.6767766	0.36974351	0.174698	0.0645936	0.048031896	0.174698	0.0083911	0.307124066	0.174698	0.0536541	0.007594501	0.043675	0.0003317	0.0153804	0.043674576	0.0006717
	SBUS	DSL	0.130184392	0.524341	0.0682611	0.326057773	0.071517	0.0233188	0	0.825302	0	0	0.825302	0	0	0.825302	0	0	0.071517	0	0	0.071517471	0
			CalEEMod SBUS EF		**0.1116208**	**CalEEMod SBUS EF**		**0.7000955**	**CalEEMod SBUS EF**		**0.0645936**	**CalEEMod SBUS EF**		**0.0083911**	**CalEEMod SBUS EF**		**0.0536541**	**CalEEMod SBUS EF**		**0.0003317**	**CalEEMod SBUS EF**		**0.0006717**
	UBUS	GAS	0.027909604	0.03312	0.0009244	0	0.024955	0	0.67598144	0.099822	0.0674776	0.117975718	0.099822	0.0117765	0.807501919	0.099822	0.0806062	0.019900368	0.024955	0.0004966	0.0255556	0.024955415	0.0006378
	UBUS	DSL	0.076064054	0.723726	0.0550495	0	0.168984	0	0	0.675937	0	0	0.675937	0	0	0.675937	0	0	0.168984	0	0	0.168984304	0
	UBUS	NG	6.1546102	0.243154	1.4965152	0	0.05606	0	0	0.224241	0	0	0.224241	0	0	0.224241	0	0	0.05606	0	0	0.056060281	0
			CalEEMod UBUS EF		**1.5524891**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.0674776**	**CalEEMod UBUS EF**		**0.0117765**	**CalEEMod UBUS EF**		**0.0806062**	**CalEEMod UBUS EF**		**0.0004966**	**CalEEMod UBUS EF**		**0.0006378**

CO	Vehicle Category	Fuel	CO_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	CO_IDLEX	Pop Adj	CalEEMod EF (g/trip)	CO_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	26.892823	0.004657	0.1252462	0	0.000314	0	5.532527	0.006284	0.034767
	HHDT	DSL	0.2475232	0.941181	0.2329642	47.41696	0.105817	5.017501	0	0.940715	0
	HHDT	NG	11.016297	0.054162	0.5966593	20.04511	0.01359	0.272411	0	0.053001	0
			CalEEMod HHDT EF		**0.9548698**	**CalEEMod HHDT EF**		**5.289913**	**CalEEMod HHDT EF**		**0.034767**
	LDA	GAS	0.4807161	0.946669	0.4550791	0	0.200742	0	2.107772	0.95257	2.007801
	LDA	DSL	0.1601255	0.011027	0.0017657	0	0.002331	0	0	0.011037	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0
			CalEEMod LDA EF		**0.4568449**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**2.007801**
	LDT1	GAS	0.6051181	0.979622	0.5927871	0	0.207152	0	2.158883	0.983155	2.122517
	LDT1	DSL	0.7097374	0.000182	0.0001289	0	6.05E-05	0	0	0.000216	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0
			CalEEMod LDT1 EF		**0.5929159**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**2.122517**
	LDT2	GAS	0.572111	0.972963	0.5566428	0	0.203522	0	2.603205	0.969813	2.524622
	LDT2	DSL	0.1171515	0.009032	0.0010581	0	0.001782	0	0	0.008684	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0
			CalEEMod LDT2 EF		**0.5577008**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**2.524622**
	LHDT1	GAS	0.4912339	0.550252	0.2703025	3.766601	0.041104	0.154822	1.583565	0.612385	0.969751
	LHDT1	DSL	0.5245193	0.449748	0.2359015	0.909745	0.030815	0.028034	0	0.387615	0
			CalEEMod LHDT1 EF		**0.5062039**	**CalEEMod LHDT1 EF**		**0.182855**	**CalEEMod LHDT1 EF**		**0.969751**
	LHDT2	GAS	0.3478679	0.310618	0.1080541	3.770558	0.024425	0.092094	1.558665	0.363889	0.567181
	LHDT2	DSL	0.5115591	0.689382	0.3526595	0.909745	0.05057	0.046006	0	0.636111	0
			CalEEMod LHDT2 EF		**0.4607136**	**CalEEMod LHDT2 EF**		**0.1381**	**CalEEMod LHDT2 EF**		**0.567181**
	MCY	GAS	18.303631	1	18.303631	0	1	0	9.271535	1	9.271535
	MDV	GAS	0.5719452	0.95086	0.54384	0	0.199722	0	2.758705	0.948803	2.617468
	MDV	DSL	0.1543365	0.031862	0.0049174	0	0.006278	0	0	0.030514	0
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0
			CalEEMod MDV EF		**0.5487574**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**2.617468**
	MH	GAS	0.4938965	0.719862	0.3555372	0	7.118014	0	2.50276	0.712086	1.782181
	MH	DSL	0.2413619	0.280138	0.0676147	0	2.879139	0	0	0.287914	0
			CalEEMod MH EF		**0.4231519**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**1.782181**
	MHDT	GAS	0.7130316	0.141115	0.1006193	15.21971	0.013418	0.204212	3.933864	0.26846	1.056083
	MHDT	DSL	0.1075535	0.858885	0.0923762	2.543446	0.070698	0.179817	0	0.73154	0
			CalEEMod MHDT EF		**0.1929954**	**CalEEMod MHDT EF**		**0.384029**	**CalEEMod MHDT EF**		**1.056083**
	OBUS	GAS	0.7500812	0.279521	0.2096634	5.777467	0.026118	0.150898	2.836058	0.522575	1.482052
	OBUS	DSL	0.1442992	0.720479	0.1039646	9.204561	0.052037	0.478974	0	0.477425	0
			CalEEMod OBUS EF		**0.313628**	**CalEEMod OBUS EF**		**0.629871**	**CalEEMod OBUS EF**		**1.482052**
	SBUS	GAS	1.3537591	0.475659	0.6439272	82.10695	0.043675	3.585986	8.938847	0.174698	1.561601
	SBUS	DSL	0.3007164	0.524341	0.157678	5.952025	0.071517	0.425674	0	0.825302	0
			CalEEMod SBUS EF		**0.8016052**	**CalEEMod SBUS EF**		**4.01166**	**CalEEMod SBUS EF**		**1.561601**
	UBUS	GAS	0.4008258	0.03312	0.0132755	0	0.024955	0	8.31035	0.099822	0.829553
	UBUS	DSL	0.1260539	0.723726	0.0912285	0	0.168984	0	0	0.675937	0
	UBUS	NG	46.522879	0.243154	11.312202	0	0.05606	0	0	0.224241	0
			CalEEMod UBUS EF		**11.416706**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.829553**

SOx	Vehicle Cat	Fuel	SOx_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	SOx_IDLEX	Pop Adj	CalEEMod EF (g/trip)	SOx_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.01847469	0.004657	8.6E-05	0	0.000314	0	0.00043738	0.006284	2.749E-06
	HHDT	DSL	0.01418106	0.941181	0.013347	0.0784648	0.105817	0.0083029	0	0.940715	0
	HHDT	NG	0	0.054162	0	0	0.01359	0	0	0.053001	0
			CalEEMod HHDT EF		**0.013433**	**CalEEMod HHDT EF**		**0.0083029**	**CalEEMod HHDT EF**		**2.749E-06**
	LDA	GAS	0.00231003	0.946669	0.002187	0	0.200742	0	0.00049442	0.95257	0.000471
	LDA	DSL	0.00175236	0.011027	1.93E-05	0	0.002331	0	0	0.011037	0
	LDA	ELEC	0	0.042303	0	0	0.007367	0	0	0.036392	0
			CalEEMod LDA EF		**0.002206**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.000471**
	LDT1	GAS	0.00265948	0.979622	0.002605	0	0.207152	0	0.00056557	0.983155	0.000556
	LDT1	DSL	0.00355444	0.000182	6.45E-07	0	6.05E-05	0	0	0.000216	0
	LDT1	ELEC	0	0.020196	0	0	0.003314	0	0	0.016629	0
			CalEEMod LDT1 EF		**0.002606**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.000556**
	LDT2	GAS	0.00277657	0.972963	0.002701	0	0.203522	0	0.00060353	0.969813	0.0005853
	LDT2	DSL	0.00236782	0.009032	2.14E-05	0	0.001782	0	0	0.008684	0
	LDT2	ELEC	0	0.018006	0	0	0.004306	0	0	0.021503	0
			CalEEMod LDT2 EF		**0.002723**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.0005853**
	LHDT1	GAS	0.00943015	0.550252	0.005189	0.0011444	0.041104	4.704E-05	0.00017969	0.612385	0.00011
	LHDT1	DSL	0.00478387	0.449748	0.002152	0.0011701	0.030815	3.606E-05	0	0.387615	0
			CalEEMod LHDT1 EF		**0.00734**	**CalEEMod LHDT1 EF**		**8.31E-05**	**CalEEMod LHDT1 EF**		**0.00011**
	LHDT2	GAS	0.01073192	0.310618	0.003334	0.0013113	0.024425	3.203E-05	0.00020329	0.363889	7.397E-05
	LHDT2	DSL	0.00537067	0.689382	0.003702	0.0018792	0.05057	9.503E-05	0	0.636111	0
			CalEEMod LHDT2 EF		**0.007036**	**CalEEMod LHDT2 EF**		**0.0001271**	**CalEEMod LHDT2 EF**		**7.397E-05**
	MCY	GAS	0.00210577	1	0.002106	0	1	0	0.00059177	1	0.0005918
	MDV	GAS	0.00333176	0.95086	0.003168	0	0.199722	0	0.00072969	0.948803	0.0006923
	MDV	DSL	0.00306946	0.031862	9.78E-05	0	0.006278	0	0	0.030514	0
	MDV	ELEC	0	0.017278	0	0	0.004092	0	0	0.020683	0
			CalEEMod MDV EF		**0.003266**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0006923**
	MH	GAS	0.01587051	0.719862	0.011425	0	7.118014	0	0.00023076	0.712086	0.0001643
	MH	DSL	0.00894953	0.280138	0.002507	0	2.879139	0	0	0.287914	0
			CalEEMod MH EF		**0.013932**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0001643**
	MHDT	GAS	0.01607921	0.141115	0.002269	0.0050196	0.013418	6.735E-05	0.00035449	0.26846	9.517E-05
	MHDT	DSL	0.00895948	0.858885	0.007695	0.0073719	0.070698	0.0005212	0	0.73154	0
			CalEEMod MHDT EF		**0.009964**	**CalEEMod MHDT EF**		**0.0005885**	**CalEEMod MHDT EF**		**9.517E-05**
	OBUS	GAS	0.01648384	0.279521	0.004608	0.0035766	0.026118	9.341E-05	0.00024452	0.522575	0.0001278
	OBUS	DSL	0.01076576	0.720479	0.007757	0.0170917	0.052037	0.0008894	0	0.477425	0
			CalEEMod OBUS EF		**0.012364**	**CalEEMod OBUS EF**		**0.0009828**	**CalEEMod OBUS EF**		**0.0001278**
	SBUS	GAS	0.00786406	0.475659	0.003741	0.0235981	0.043675	0.0010306	0.00045917	0.174698	8.022E-05
	SBUS	DSL	0.01069954	0.524341	0.00561	0.0347967	0.071517	0.0024886	0	0.825302	0
			CalEEMod SBUS EF		**0.009351**	**CalEEMod SBUS EF**		**0.0035192**	**CalEEMod SBUS EF**		**8.022E-05**
	UBUS	GAS	0.01960339	0.03312	0.000649	0	0.024955	0	0.00091341	0.099822	9.118E-05
	UBUS	DSL	0.01393954	0.723726	0.010088	0	0.168984	0	0	0.675937	0
	UBUS	NG	0	0.243154	0	0	0.05606	0	0	0.224241	0
			CalEEMod UBUS EF		**0.010738**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**9.118E-05**

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: San Mateo
Calendar Year: 2025, 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STRE	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM
San Mateo	2025	HHDT	Aggregate	Aggregate	Gasoline	3.627986	549.9945	72.58874	2.784366	0	0.010669	0.000944	0	0.000318	0.005	0.02646
San Mateo	2025	HHDT	Aggregate	Aggregate	Diesel	1222.302	111148.4	10866.33	3.176467	46.93908	2.54925	0.023232	0.031886	0	0.008721	0.02564
San Mateo	2025	HHDT	Aggregate	Aggregate	Natural Ga	156.979	6396.182	612.218	0.886466	20.21895	0	0.003643	0.015415	0	0.009	0.02646
San Mateo	2025	LDA	Aggregate	Aggregate	Gasoline	298068.8	8367077	1414410	0.025948	0	0.159558	0.001127	0	0.001561	0.002	0.01575
San Mateo	2025	LDA	Aggregate	Aggregate	Diesel	3461.645	97463.9	16388.32	0.0368	0	0	0.003461	0	0	0.002	0.01575
San Mateo	2025	LDA	Aggregate	Aggregate	Electricity	10939.48	373896.6	54036.75	0	0	0	0	0	0	0.002	0.01575
San Mateo	2025	LDT1	Aggregate	Aggregate	Gasoline	48612.81	1353320	230719.5	0.042389	0	0.173115	0.001318	0	0.001764	0.002	0.01575
San Mateo	2025	LDT1	Aggregate	Aggregate	Diesel	14.2088	250.813	50.69956	0.688591	0	0	0.093792	0	0	0.002	0.01575
San Mateo	2025	LDT1	Aggregate	Aggregate	Electricity	777.6852	27900.71	3902.33	0	0	0	0	0	0	0.002	0.01575
San Mateo	2025	LDT2	Aggregate	Aggregate	Gasoline	153786.7	4291129	732815.4	0.038283	0	0.198595	0.001197	0	0.001598	0.002	0.01575
San Mateo	2025	LDT2	Aggregate	Aggregate	Diesel	1346.433	39832.47	6561.874	0.031266	0	0	0.003966	0	0	0.002	0.01575
San Mateo	2025	LDT2	Aggregate	Aggregate	Electricity	3253.372	79411.05	16248.07	0	0	0	0	0	0	0.002	0.01575
San Mateo	2025	LHDT1	Aggregate	Aggregate	Gasoline	9816.604	301532.8	146252.8	0.116806	0.033537	0.418402	0.002056	0	0.000336	0.002	0.03276
San Mateo	2025	LHDT1	Aggregate	Aggregate	Diesel	7359.408	246457.5	92572.1	0.623807	1.498498	0	0.01238	0.02649	0	0.003	0.03276
San Mateo	2025	LHDT2	Aggregate	Aggregate	Gasoline	1402.139	42711.2	20889.77	0.121504	0.032751	0.420007	0.001974	0	0.000303	0.002	0.03822
San Mateo	2025	LHDT2	Aggregate	Aggregate	Diesel	2903.092	94792.64	36517.25	0.486772	1.486637	0	0.015325	0.026755	0	0.003	0.03822
San Mateo	2025	MCY	Aggregate	Aggregate	Gasoline	19383.58	160488.3	38767.16	1.148465	0	0.27339	0.002013	0	0.002905	0.001	0.00504
San Mateo	2025	MDV	Aggregate	Aggregate	Gasoline	93645.1	2672491	444872.6	0.039136	0	0.220776	0.001189	0	0.001639	0.002	0.01575
San Mateo	2025	MDV	Aggregate	Aggregate	Diesel	2943.448	89550.19	14307.32	0.02155	0	0	0.002622	0	0	0.002	0.01575
San Mateo	2025	MDV	Aggregate	Aggregate	Electricity	1918.58	48561.76	9697.662	0	0	0	0	0	0	0.002	0.01575
San Mateo	2025	MH	Aggregate	Aggregate	Gasoline	1270.249	12257.86	127.0757	0.168286	0	0.321307	0.001365	0	0.000313	0.003	0.05586
San Mateo	2025	MH	Aggregate	Aggregate	Diesel	513.7984	4770.215	51.37984	2.850109	0	0	0.037252	0	0	0.004	0.05586
San Mateo	2025	MHDT	Aggregate	Aggregate	Gasoline	1108.965	62186.7	22188.17	0.228737	0.089084	0.347068	0.001257	0	0.000405	0.003	0.05586
San Mateo	2025	MHDT	Aggregate	Aggregate	Diesel	5843.204	378495	60461.8	1.471691	4.757413	2.138524	0.006695	0.003254	0	0.003	0.05586
San Mateo	2025	OBUS	Aggregate	Aggregate	Gasoline	324.4784	16649.41	6492.165	0.24242	0.065092	0.295608	0.001115	0	0.000254	0.003	0.05586
San Mateo	2025	OBUS	Aggregate	Aggregate	Diesel	646.4721	42914.67	5931.256	1.961739	8.398121	2.211959	0.009718	0.002629	0	0.003	0.05586
San Mateo	2025	SBUS	Aggregate	Aggregate	Gasoline	109.8808	5100.579	439.5231	0.465119	0.925021	0.478136	0.00156	0	0.000683	0.002	0.3192
San Mateo	2025	SBUS	Aggregate	Aggregate	Diesel	179.9307	5622.613	2076.375	7.440854	43.14117	0.794741	0.04096	0.046206	0	0.003	0.3192
San Mateo	2025	UBUS	Aggregate	Aggregate	Gasoline	38.31043	928.1283	153.2417	0.340071	0	1.021088	0.001339	0	0.000488	0.00277	0.051797
San Mateo	2025	UBUS	Aggregate	Aggregate	Diesel	259.4171	20280.9	1037.668	0.780822	0	0	0.005514	0	0	0.008023	0.031248
San Mateo	2025	UBUS	Aggregate	Aggregate	Natural Ga	86.06122	6813.865	344.2449	0.466584	0	0	0.003047	0	0	0.007825	0.032218

Vehicle Ca	Fuel	PM10_RUN	PM10_IDL	PM10_STR	PM10_PMT	PM10_PMI	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNE	N2O_IDLEX	N2O_STRE
HHDT	Gasoline	0.001027	0	0.000346	0.02	0.06174	1866.921	0	44.1988	0.065831	0	0.000431	0.124357	0	0.00052
HHDT	Diesel	0.024283	0.033328	0	0.034884	0.059826	1501.038	8305.35	0	0.001345	0.156949	0	0.235942	1.305485	0
HHDT	Natural Ga	0.003808	0.016112	0	0.036	0.06174	3024.411	3884.232	0	3.235147	1.190064	0	0.616546	0.791826	0
LDA	Gasoline	0.001225	0	0.001698	0.008	0.03675	233.435	0	49.96248	0.001435	0	0.041146	0.003366	0	0.022251
LDA	Diesel	0.003617	0	0	0.008	0.03675	185.364	0	0	0.000388	0	0	0.029137	0	0
LDA	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0
LDT1	Gasoline	0.001434	0	0.001918	0.008	0.03675	268.7479	0	57.15237	0.002169	0	0.044582	0.004234	0	0.023062
LDT1	Diesel	0.098033	0	0	0.008	0.03675	375.9876	0	0	0.005862	0	0	0.0591	0	0
LDT1	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0
LDT2	Gasoline	0.001302	0	0.001738	0.008	0.03675	280.58	0	60.98793	0.001988	0	0.051259	0.003994	0	0.025711
LDT2	Diesel	0.004146	0	0	0.008	0.03675	250.4677	0	0	0.000585	0	0	0.03937	0	0
LDT2	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0
LHDT1	Gasoline	0.002236	0	0.000366	0.008	0.07644	952.9432	115.6454	18.15851	0.00562	0.110102	0.016885	0.007778	0.002967	0.035294
LHDT1	Diesel	0.012939	0.027688	0	0.012	0.07644	506.037	123.7722	0	0.006101	0.005098	0	0.079542	0.019455	0
LHDT2	Gasoline	0.002147	0	0.00033	0.008	0.08918	1084.492	132.5066	20.54264	0.004441	0.107884	0.016457	0.008553	0.002851	0.034728
LHDT2	Diesel	0.016018	0.027964	0	0.012	0.08918	568.1092	198.7842	0	0.005928	0.005098	0	0.089299	0.031246	0
MCY	Gasoline	0.002157	0	0.003101	0.004	0.01176	212.7943	0	59.79992	0.325332	0	0.255563	0.066282	0	0.015587
MDV	Gasoline	0.001293	0	0.001783	0.008	0.03675	336.684	0	73.73694	0.002045	0	0.055861	0.004106	0	0.026658
MDV	Diesel	0.002741	0	0	0.008	0.03675	324.6874	0	0	0.000333	0	0	0.051036	0	0
MDV	Electricity	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0
MH	Gasoline	0.001485	0	0.000341	0.012	0.13034	1603.76	0	23.31853	0.006386	0	0.02851	0.014815	0	0.037607
MH	Diesel	0.038937	0	0	0.016	0.13034	946.6805	0	0	0.003564	0	0	0.148805	0	0
MHDT	Gasoline	0.001367	0	0.00044	0.012	0.13034	1624.85	507.2498	35.82206	0.007137	0.276506	0.035441	0.014063	0.00827	0.0304
MHDT	Diesel	0.006998	0.003401	0	0.012	0.13034	948.3438	780.3063	0	0.000468	0.003165	0	0.149066	0.122653	0
OBUS	Gasoline	0.001212	0	0.000276	0.012	0.13034	1665.739	361.4245	24.70982	0.007639	0.206336	0.027293	0.014648	0.006071	0.026468
OBUS	Diesel	0.010158	0.002748	0	0.012	0.13034	1139.535	1809.128	0	0.000581	0.025193	0	0.179119	0.28437	0
SBUS	Gasoline	0.001697	0	0.000742	0.008	0.7448	794.6862	2384.657	46.4003	0.012664	2.444127	0.058777	0.024347	0.093166	0.046851
SBUS	Diesel	0.042812	0.048295	0	0.012	0.7448	1132.525	3683.161	0	0.005311	0.013303	0	0.178017	0.578942	0
UBUS	Gasoline	0.001457	0	0.000531	0.011079	0.120859	1980.978	0	92.30235	0.005151	0	0.122837	0.024585	0	0.07324
UBUS	Diesel	0.005763	0	0	0.032092	0.072912	1474.523	0	0	0.074531	0	0	0.231774	0	0
UBUS	Natural Ga	0.003185	0	0	0.0313	0.075176	1936.754	0	0	6.030542	0	0	0.39482	0	0

Vehicle Ca	Fuel	ROG_RUNE	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_REST	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_REST	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
HHDT	Gasoline	0.289222	0	0.002254	0.03232	0.153518	0.009272	0.012956	0.422033	0	0.002468	0.03232	0.153518	0.009272	0.012956	26.89282	0	5.532527	0.018475	0	0.000437
HHDT	Diesel	0.028963	3.379059	0	0	0	0	0	0.032973	3.846802	0	0	0	0	0	0.247523	47.41696	0	0.014181	0.078465	0
HHDT	Natural Ga	0.090883	0.027523	0	0	0	0	0	3.35259	1.226533	0	0	0	0	0	11.0163	20.04511	0	0	0	0
LDA	Gasoline	0.005281	0	0.183563	0.081466	0.197053	0.140891	0.136291	0.007707	0	0.200979	0.081466	0.197053	0.140891	0.136291	0.480716	0	2.107772	0.00231	0	0.000494
LDA	Diesel	0.008343	0	0	0	0	0	0	0.009498	0	0	0	0	0	0	0.160126	0	0	0.001752	0	0
LDA	Electricity	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
LDT1	Gasoline	0.008751	0	0.202246	0.090795	0.369197	0.177409	0.179145	0.012769	0	0.221434	0.090795	0.369197	0.177409	0.179145	0.605118	0	2.158883	0.002659	0	0.000566
LDT1	Diesel	0.126214	0	0	0	0	0	0	0.143686	0	0	0	0	0	0	0.709737	0	0	0.003554	0	0
LDT1	Electricity	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
LDT2	Gasoline	0.007519	0	0.228277	0.076672	0.302088	0.180855	0.161932	0.010972	0	0.249935	0.076672	0.302088	0.180855	0.161932	0.572111	0	2.603205	0.002777	0	0.000604
LDT2	Diesel	0.012599	0	0	0	0	0	0	0.014343	0	0	0	0	0	0	0.117152	0	0	0.002368	0	0
LDT2	Electricity	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
LHDT1	Gasoline	0.025583	0.384603	0.083031	0.076542	0.542314	0.016778	0.026051	0.03733	0.561212	0.090909	0.076542	0.542314	0.016778	0.026051	0.491234	3.766601	1.583565	0.00943	0.001144	0.00018
LHDT1	Diesel	0.131342	0.10976	0	0	0	0	0	0.149525	0.124954	0	0	0	0	0	0.524519	0.909745	0	0.004784	0.00117	0
LHDT2	Gasoline	0.018389	0.375751	0.079995	0.07179	0.468243	0.015274	0.023274	0.026833	0.548295	0.087584	0.07179	0.468243	0.015274	0.023274	0.347868	3.770558	1.558665	0.010732	0.001311	0.000203
LHDT2	Diesel	0.127636	0.10976	0	0	0	0	0	0.145305	0.124954	0	0	0	0	0	0.511559	0.909745	0	0.005371	0.001879	0
MCY	Gasoline	2.166523	0	1.92856	0.507704	1.71071	0.709809	1.203046	2.711034	0	2.100085	0.507704	1.71071	0.709809	1.203046	18.30363	0	9.271535	0.002106	0	0.000592
MDV	Gasoline	0.00781	0	0.259263	0.085184	0.30914	0.21075	0.18849	0.011395	0	0.28386	0.085184	0.30914	0.21075	0.18849	0.571945	0	2.758705	0.003332	0	0.00073
MDV	Diesel	0.007178	0	0	0	0	0	0	0.008171	0	0	0	0	0	0	0.154336	0	0	0.003069	0	0
MDV	Electricity	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
MH	Gasoline	0.023203	0	0.109642	0.034238	0.781867	0.015566	0.034635	0.033857	0	0.120044	0.034238	0.781867	0.015566	0.034635	0.493897	0	2.50276	0.015871	0	0.000231
MH	Diesel	0.076739	0	0	0	0	0	0	0.087362	0	0	0	0	0	0	0.241362	0	0	0.00895	0	0
MHDT	Gasoline	0.032549	1.021601	0.180213	0.058011	0.321218	0.013081	0.01979	0.047496	1.490718	0.19731	0.058011	0.321218	0.013081	0.01979	0.713032	15.21971	3.933864	0.016079	0.00502	0.000354
MHDT	Diesel	0.01008	0.068139	0	0	0	0	0	0.011475	0.077571	0	0	0	0	0	0.107554	2.543446	0	0.008959	0.007372	0
OBUS	Gasoline	0.035013	0.746743	0.134956	0.023015	0.276257	0.015347	0.029358	0.051091	1.089646	0.14776	0.023015	0.276257	0.015347	0.029358	0.750081	5.777467	2.836058	0.016484	0.003577	0.000245
OBUS	Diesel	0.012508	0.542406	0	0	0	0	0	0.014239	0.617488	0	0	0	0	0	0.144299	9.204561	0	0.010766	0.017092	0
SBUS	Gasoline	0.062471	10.61946	0.337704	0.048032	0.307124	0.007595	0.01538	0.091157	15.49589	0.369744	0.048032	0.307124	0.007595	0.01538	1.353759	82.10695	8.938847	0.007864	0.023598	0.000459
SBUS	Diesel	0.114355	0.286412	0	0	0	0	0	0.130184	0.326058	0	0	0	0	0	0.300716	5.952025	0	0.0107	0.034797	0
UBUS	Gasoline	0.019127	0	0.617406	0.117976	0.807502	0.0199	0.025556	0.02791	0	0.675981	0.117976	0.807502	0.0199	0.025556	0.400826	0	8.31035	0.019603	0	0.000913
UBUS	Diesel	0.001065	0	0	0	0	0	0	0.076064	0	0	0	0	0	0	0.126054	0	0	0.01394	0	0
UBUS	Natural Ga	0.086165	0	0	0	0	0	0	6.15461	0	0	0	0	0	0	46.52288	0	0	0	0	0

2030 CalEEMod EMFAC2017 Emission Factors Input

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.003986	0.002442	0.003901	0.035131351	0.006786	0	0	0.158711	0
A	CH4_RUNEX	0.000852	0.001199	0.001311	0.00124	0.004485	0.004916	0.000937	0.194137316	0.001736	1.753545	0.321443	0.005719	0.004067
A	CH4_STREX	0.027995	0.030375	0.036629	0.037086	0.007391	0.004131	0.008528	2.75285E-06	0.013378	0.008063	0.251027	0.013855	0.018813
A	CO_IDLEX	0	0	0	0	0.17763	0.133247	0.380682	5.462542355	0.673868	0	0	5.80684	0
A	CO_RUNEX	0.38385	0.449439	0.477534	0.458815	0.395104	0.439535	0.137795	1.060042122	0.215989	13.24814	17.75932	0.518437	0.217504
A	CO_STREX	1.729372	1.837412	2.255504	2.243412	0.858889	0.486179	0.872262	0.044453299	1.342846	0.821747	9.386142	2.016593	1.589632
A	CO2_NBIO_IDLEX	0	0	0	0	8.079577	12.61932	55.53125	860.0795257	104.9894	0	0	372.7606	0
A	CO2_NBIO_RUNEX	211.7346	252.6221	258.0227	309.5606	689.792	670.1618	958.8152	1405.743927	1195.474	1616.163	212.5811	883.0362	1315.392
A	CO2_NBIO_STREX	44.87769	53.59628	55.03331	64.68695	9.940355	6.489172	8.663679	0.34937093	11.93019	7.489838	58.78275	11.08551	15.05823
A	NOX_IDLEX	0	0	0	0	0.040506	0.063426	0.285781	5.005792808	0.4738	0	0	2.284358	0
A	NOX_RUNEX	0.018181	0.025489	0.025605	0.024058	0.183135	0.213543	1.305825	2.726806679	1.491679	0.672477	1.144949	2.365155	0.842357
A	NOX_STREX	0.12348	0.136613	0.146271	0.15042	0.202777	0.117445	1.670496	2.401347627	1.221337	0.066175	0.273196	0.990806	0.220861
A	PM10_IDLEX	0	0	0	0	0.000916	0.001474	0.000116	0.002738041	0.000156	0	0	0.001799	0
A	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.08918	0.13034	0.060218687	0.13034	0.07505	0.01176	0.7448	0.13034
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009894	0.010825	0.012	0.035029144	0.012	0.031203	0.004	0.009695	0.013156
A	PM10_RUNEX	0.000873	0.001004	0.000996	0.000971	0.005896	0.012009	0.00632	0.021830157	0.008077	0.00493	0.002218	0.014432	0.009129
A	PM10_STREX	0.001229	0.001391	0.001314	0.001284	0.000201	0.000107	0.000113	3.44186E-06	0.000146	9.08E-05	0.003013	0.000189	0.000223
A	PM25_IDLEX	0	0	0	0	0.000876	0.00141	0.000111	0.002619594	0.000149	0	0	0.001721	0
A	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.03822	0.05586	0.025808009	0.05586	0.032164	0.00504	0.3192	0.05586
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002474	0.002706	0.003	0.008757286	0.003	0.007801	0.001	0.002424	0.003289
A	PM25_RUNEX	0.000803	0.000924	0.000917	0.000895	0.005597	0.011466	0.00604	0.020885574	0.007714	0.004714	0.002068	0.013773	0.008697
A	PM25_STREX	0.00113	0.001279	0.001208	0.001181	0.000185	9.87E-05	0.000104	3.16466E-06	0.000134	8.34E-05	0.002814	0.000174	0.000205
A	ROG_DIURN	0.020899	0.026166	0.029262	0.034946	0.000855	0.000423	0.000215	6.30401E-06	0.000697	0.000135	1.211607	0.001024	0.162772
A	ROG_HTSK	0.060613	0.065951	0.062747	0.06946	0.038129	0.018293	0.012334	0.00032247	0.011675	0.001673	0.490116	0.011684	0.014309
A	ROG_IDLEX	0	0	0	0	0.016705	0.013194	0.017988	0.358082866	0.050724	0	0	0.707161	0
A	ROG_RESTL	0.022062	0.027928	0.033593	0.039866	0.00059	0.000304	0.000155	4.76063E-06	0.000385	8.4E-05	0.713444	0.000569	0.082497
A	ROG_RUNEX	0.002935	0.004439	0.0048	0.00456	0.066593	0.091611	0.01069	0.030162406	0.014725	0.025667	2.134664	0.057034	0.030394
A	ROG_RUNLS	0.167086	0.27842	0.260943	0.256642	0.291514	0.109021	0.06354	0.001590977	0.145084	0.009452	1.403908	0.077014	0.251023
A	ROG_STREX	0.120212	0.129657	0.157885	0.163786	0.034932	0.019233	0.041593	1.43663E-05	0.065349	0.038467	1.8899	0.078938	0.069343
A	SO2_IDLEX	0	0	0	0	7.83E-05	0.000121	0.000527	0.007595194	0.000996	0	0	0.003587	0
A	SO2_RUNEX	9.16E-05	0.002421	0.009151	0.002858	0.006728	0.006467	0.009151	0.01166111	0.011484	0.010159	0.002104	0.008536	0.012904
A	SO2_STREX	0	0	8.57E-05	0.000598	9.84E-05	6.42E-05	8.57E-05	3.45731E-06	0.000118	7.41E-05	0.000582	0.00011	0.000149
A	TOG_DIURN	0.020899	0.026166	0.029262	0.034946	0.000855	0.000423	0.000215	6.30401E-06	0.000697	0.000135	1.211607	0.001024	0.162772
A	TOG_HTSK	0.060613	0.065951	0.062747	0.06946	0.038129	0.018293	0.012334	0.00032247	0.011675	0.001673	0.490116	0.011684	0.014309
A	TOG_IDLEX	0	0	0	0	0.023206	0.017394	0.024835	0.426245447	0.06396	0	0	1.026146	0
A	TOG_RESTL	0.022062	0.027928	0.033593	0.039866	0.00059	0.000304	0.000155	4.76063E-06	0.000385	8.4E-05	0.713444	0.000569	0.082497
A	TOG_RUNEX	0.004264	0.006476	0.006966	0.006594	0.078009	0.105237	0.01288	0.228314045	0.018506	1.790343	2.681801	0.071055	0.037597
A	TOG_RUNLS	0.167086	0.27842	0.260943	0.256642	0.291514	0.109021	0.06354	0.001590977	0.145084	0.009452	1.403908	0.077014	0.251023
A	TOG_STREX	0.131617	0.141959	0.172864	0.179325	0.038246	0.021057	0.045539	1.57293E-05	0.071549	0.042116	2.05874	0.086427	0.075922

2030 CalEEMod EMFAC2017 Fleet Mix Input

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.439373	0.076262	0.240335	0.155302	0.0302	0.007858	0.025976	0.006311	0.002957	0.00143	0.012414	0.000613	0.000969

Adjustment Factors for EMFAC2017 Gasoline Light Duty Vehicles						
Year	NOx Exhaust	TOG Evaporative	TOG Exhaust	PM Exhaust	CO Exhaust	CO2 Exhaust
NA	1	1	1	1	1	1
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.0010	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.0020	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.0120	1.0554
2029	1.0040	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.0770
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.0210	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.1080
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.0090	1.0270	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.0240	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272
Enter Year: 2030	**1.0047**	**1.0051**	**1.0037**	**1.0142**	**1.0156**	**1.0702**

*PM Exhaust off model factor is only applied to the PM Exhaust emissions not start/idle

The off-model adjustment factors need to be applied only to emissions from gasoline light duty vehicles (LDA, LDT1, LDT2 and MDV). Please note that the adjustment factors are by calendar year and includes all model years.

Enter NA in the date field if adjustments do not apply

Adjustment Factors	Vehicle Category	Fuel	Population	Pop Fract	VMT (miles/day)	VMT Fract	Trips/day	Trip Fract
	HHDT	GAS	5.11341375	0.000432056	649.1126937	0.0052371	102.3091822	0.008645
	HHDT	DSL	1199.06677	0.101314614	115689.7458	0.9333897	11004.89832	0.929854
	HHDT	NG	186.634521	0.015769601	7606.951366	0.0613732	727.8746337	0.061501
			1390.81471		123945.8099		11835.08213	
	LDA	GAS	317953.087	0.198697455	8058428.343	0.9338992	1505411.271	0.940772
	LDA	DSL	3763.41118	0.002351857	97608.43146	0.0113119	17969.64479	0.01123
	LDA	ELEC	15717.8764	0.009822525	472761.9224	0.0547888	76806.10137	0.047998
			337434.375		8628798.697		1600187.017	
	LDT1	GAS	59176.873	0.206694909	1450561.416	0.9685283	278726.91	0.973546
	LDT1	DSL	7.82437974	2.73292E-05	191.2431	0.0001277	36.37997827	0.000127
	LDT1	ELEC	1531.7035	0.005349984	46943.85057	0.031344	7537.293411	0.026327
			60716.4009		1497696.51		286300.5833	
	LDT2	GAS	184911.872	0.203063564	4550706.907	0.964152	873045.336	0.958747
	LDT2	DSL	1781.75114	0.001956655	45196.59866	0.0095757	8528.608635	0.009366
	LDT2	ELEC	5929.2225	0.006511259	124002.7851	0.0262723	29036.84116	0.031887
			192622.845		4719906.29		910610.7858	
	LHDT1	GAS	11350.2906	0.039056649	312263.6811	0.5264943	169102.4187	0.581886
	LHDT1	DSL	9659.8333	0.033239741	280836.1734	0.4735057	121508.5509	0.418114
			21010.1239	0.07229639	593099.8544		290610.9696	
	LHDT2	GAS	1659.18343	0.022561789	45317.16311	0.2936412	24719.36092	0.336137
	LHDT2	DSL	3881.16502	0.052776579	109011.1956	0.7063588	48820.1734	0.663863
			5540.34845	0.075338367	154328.3588		73539.53431	
	MCY	GAS	23623.442	1	243796.974	1	68862.74135	1
	MDV	GAS	113553.236	0.197949737	2864103.375	0.9390635	535566.8373	0.933618
	MDV	DSL	3880.47553	0.006764573	101136.2145	0.0331599	18546.09041	0.03233
	MDV	ELEC	3956.99748	0.006897968	84717.33968	0.0277766	19533.88701	0.034052
			121390.709		3049956.929		573646.8147	
	MH	GAS	1577.32379	6.963065239	13531.83326	0.7109347	157.7954718	0.696585
	MH	DSL	687.317449	3.034149535	5502.030163	0.2890653	68.73174492	0.303415
			2264.64124		19033.86342		226.5272167	
	MHDT	GAS	1367.62302	0.013232797	69688.29159	0.136607	27363.4014	0.264762
	MHDT	DSL	7287.64843	0.070513565	440448.8293	0.863393	75987.61318	0.735238
			8655.27146		510137.1209		103351.0146	
	OBUS	GAS	348.085934	0.025879076	15996.19922	0.2754381	6964.503372	0.517789
	OBUS	DSL	699.713329	0.052021449	42079.28348	0.7245619	6485.974175	0.482211
			1047.79926		58075.4827		13450.47755	
	SBUS	GAS	164.200577	0.064770809	6933.107719	0.5761416	656.8023065	0.259083
	SBUS	DSL	162.766185	0.064204997	5100.580225	0.4238584	1878.299213	0.740917
			326.966762		12033.68794		2535.10152	
	UBUS	GAS	38.3973743	0.024943885	930.2346997	0.0331204	153.5894971	0.099776
	UBUS	DSL	246.741882	0.160289638	19341.24799	0.6886318	986.9675296	0.641159
	UBUS	NG	99.6982883	0.064766477	7815.006107	0.2782479	398.7931531	0.259066
			384.837545		28086.4888		1539.35018	

NOx	Vehicle Cat	Fuel	NOx_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	NOx_IDLEX	Pop Adj	CalEEMod EF (g/trip)	NOx_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	2.873063859	0.005237	0.01504643	0	0.000432	0	0.007414405	0.008645	6.409E-05
	HHDT	DSL	2.865625222	0.93339	2.67474515	46.4473289	0.101315	4.7057932	2.582430752	0.929854	2.4012835
	HHDT	NG	0.603114997	0.061373	0.0370151	19.0239203	0.01577	0.2999996	0	0.061501	0
			CalEEMod HHDT EF		**2.72680668**	**CalEEMod HHDT EF**		**5.0057928**	**CalEEMod HHDT EF**		**2.4013476**
	LDA	GAS	0.0191806	0.933899	0.01791275	0	0.198697	0	0.130639993	0.940772	0.1229025
	LDA	DSL	0.01618151	0.011312	0.00018304	0	0.002352	0	0	0.01123	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0
			CalEEMod LDA EF		**0.01809579**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.1229025**
	LDT1	GAS	0.026182629	0.968528	0.02535862	0	0.206695	0	0.139668819	0.973546	0.1359741
	LDT1	DSL	0.090224752	0.000128	1.1521E-05	0	2.73E-05	0	0	0.000127	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0
			CalEEMod LDT1 EF		**0.02537014**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.1359741**
	LDT2	GAS	0.026152312	0.964152	0.0252148	0	0.203064	0	0.151851132	0.958747	0.1455868
	LDT2	DSL	0.028200319	0.009576	0.00027004	0	0.001957	0	0	0.009366	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0
			CalEEMod LDT2 EF		**0.02548484**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.1455868**
	LHDT1	GAS	0.069725342	0.526494	0.03670999	0.02913345	0.039057	0.0011379	0.348481866	0.581886	0.2027767
	LHDT1	DSL	0.309236716	0.473506	0.14642535	1.18437449	0.03324	0.0393683	0	0.418114	0
			CalEEMod LHDT1 EF		**0.18313535**	**CalEEMod LHDT1 EF**		**0.0405062**	**CalEEMod LHDT1 EF**		**0.2027767**
	LHDT2	GAS	0.07160005	0.293641	0.02102472	0.02857241	0.022562	0.0006446	0.349395386	0.336137	0.1174447
	LHDT2	DSL	0.272550644	0.706359	0.19251855	1.18956449	0.052777	0.0627811	0	0.663863	0
			CalEEMod LHDT2 EF		**0.21354327**	**CalEEMod LHDT2 EF**		**0.0634258**	**CalEEMod LHDT2 EF**		**0.1174447**
	MCY	GAS	1.14494861	1	1.14494861	0	1	0	0.273196091	1	0.2731961
	MDV	GAS	0.025017744	0.939064	0.02349325	0	0.19795	0	0.160361405	0.933618	0.1497163
	MDV	DSL	0.013638075	0.03316	0.00045224	0	0.006765	0	0	0.03233	0
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0
			CalEEMod MDV EF		**0.02394549**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.1497163**
	MH	GAS	0.116834743	0.710935	0.08306187	0	6.963065	0	0.317062269	0.696585	0.2208608
	MH	DSL	2.626726028	0.289065	0.75929545	0	3.03415	0	0	0.303415	0
			CalEEMod MH EF		**0.84235732**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.2208608**
	MHDT	GAS	0.125655461	0.136607	0.01716541	0.08940155	0.013233	0.001183	0.328960831	0.264762	0.0870963
	MHDT	DSL	1.49255232	0.863393	1.28865925	4.03607085	0.070514	0.2845977	2.153588004	0.735238	1.5834002
			CalEEMod MHDT EF		**1.30582467**	**CalEEMod MHDT EF**		**0.2857808**	**CalEEMod MHDT EF**		**1.6704964**
	OBUS	GAS	0.156982081	0.275438	0.04323884	0.06521629	0.025879	0.0016877	0.294935837	0.517789	0.1527144
	OBUS	DSL	1.999056442	0.724562	1.44844018	9.07533586	0.052021	0.4721121	2.216087969	0.482211	1.068623
			CalEEMod OBUS EF		**1.49167902**	**CalEEMod OBUS EF**		**0.4737999**	**CalEEMod OBUS EF**		**1.2213374**
	SBUS	GAS	0.271643151	0.576142	0.15650491	0.9265304	0.064771	0.0600121	0.464164744	0.259083	0.1202573
	SBUS	DSL	5.210819848	0.423858	2.20864998	34.6444279	0.064205	2.2243454	1.174960942	0.740917	0.8705483
			CalEEMod SBUS EF		**2.36515489**	**CalEEMod SBUS EF**		**2.2843575**	**CalEEMod SBUS EF**		**0.9908056**
	UBUS	GAS	0.165650353	0.03312	0.0054864	0	0.024944	0	0.663242247	0.099776	0.0661754
	UBUS	DSL	0.777948712	0.688632	0.53572018	0	0.16029	0	0	0.641159	0
	UBUS	NG	0.471774153	0.278248	0.13127016	0	0.064766	0	0	0.259066	0
			CalEEMod UBUS EF		**0.67247675**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.0661754**

PM2.5	Vehicle Cat	Fuel	PM2_5_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	PM2_5_ID	Pop Adj	CalEEMod EF (g/trip)	PM2_5_STREX	trips Adj	CalEEMod EF (g/trip)	PM2_5_PMTW	VMT ADJ	CalEEMod EF (g/mile)	PM2_5_PMBW	VMT ADJ	CalEEMod EF (g/mile)
	HHDT	GAS	0.001039306	0.005237	5.44E-06	0	0.000432	0	0.000366087	0.008645	3.165E-06	0.005000001	0.005237	2.619E-05	0.026460008	0.005237	0.0001386
	HHDT	DSL	0.022163561	0.93339	0.020687	0.024174	0.101315	0.002449	0	0.929854	0	0.008762408	0.93339	0.0081787	0.02576148	0.93339	0.0240455
	HHDT	NG	0.003142917	0.061373	0.000193	0.010803	0.01577	0.00017	0	0.061501	0	0.009000003	0.061373	0.0005524	0.026460008	0.061373	0.0016239
			CalEEMod HHDT EF		**0.020886**	**CalEEMod HHDT EF**		**0.00262**	**CalEEMod HHDT EF**		**3.165E-06**	**CalEEMod HHDT EF**		**0.0087573**	**CalEEMod HHDT EF**		**0.025808**
	LDA	GAS	0.000827572	0.933899	0.000773	0	0.198697	0	0.001201297	0.940772	0.0011301	0.002000001	0.933899	0.0018678	0.015750005	0.933899	0.0147089
	LDA	DSL	0.001680785	0.011312	1.9E-05	0	0.002352	0	0	0.01123	0	0.002000001	0.011312	2.262E-05	0.015750005	0.011312	0.0001782
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0	0.002000001	0.054789	0.0001096	0.015750005	0.054789	0.0008629
			CalEEMod LDA EF		**0.000792**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.0011301**	**CalEEMod LDA EF**		**0.002**	**CalEEMod LDA EF**		**0.01575**
	LDT1	GAS	0.000938978	0.968528	0.000909	0	0.206695	0	0.001313478	0.973546	0.0012787	0.002000001	0.968528	0.0019371	0.015750005	0.968528	0.0152543
	LDT1	DSL	0.009077876	0.000128	1.16E-06	0	2.73E-05	0	0	0.000127	0	0.002000001	0.000128	2.554E-07	0.015750005	0.000128	2.011E-06
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0	0.002000001	0.031344	6.269E-05	0.015750005	0.031344	0.0004937
			CalEEMod LDT1 EF		**0.000911**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.0012787**	**CalEEMod LDT1 EF**		**0.002**	**CalEEMod LDT1 EF**		**0.01575**
	LDT2	GAS	0.000899774	0.964152	0.000868	0	0.203064	0	0.001260158	0.958747	0.0012082	0.002000001	0.964152	0.0019283	0.015750005	0.964152	0.0151854
	LDT2	DSL	0.003822356	0.009576	3.66E-05	0	0.001957	0	0	0.009366	0	0.002000001	0.009576	1.915E-05	0.015750005	0.009576	0.0001508
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0	0.002000001	0.026272	5.254E-05	0.015750005	0.026272	0.0004138
			CalEEMod LDT2 EF		**0.000904**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.0012082**	**CalEEMod LDT2 EF**		**0.002**	**CalEEMod LDT2 EF**		**0.01575**
	LHDT1	GAS	0.002051228	0.526494	0.00108	0	0.039057	0	0.000317168	0.581886	0.0001846	0.002000001	0.526494	0.001053	0.032760009	0.526494	0.017248
	LHDT1	DSL	0.009538984	0.473506	0.004517	0.026356	0.03324	0.000876	0	0.418114	0	0.003000001	0.473506	0.0014205	0.032760009	0.473506	0.0155121
			CalEEMod LHDT1 EF		**0.005597**	**CalEEMod LHDT1 EF**		**0.000876**	**CalEEMod LHDT1 EF**		**0.0001846**	**CalEEMod LHDT1 EF**		**0.0024735**	**CalEEMod LHDT1 EF**		**0.03276**
	LHDT2	GAS	0.00198296	0.293641	0.000582	0	0.022562	0	0.000293513	0.336137	9.866E-05	0.002000001	0.293641	0.0005873	0.038220011	0.293641	0.011223
	LHDT2	DSL	0.015408445	0.706359	0.010884	0.026717	0.052777	0.00141	0	0.663863	0	0.003000001	0.706359	0.0021191	0.038220011	0.706359	0.026997
			CalEEMod LHDT2 EF		**0.011466**	**CalEEMod LHDT2 EF**		**0.00141**	**CalEEMod LHDT2 EF**		**9.866E-05**	**CalEEMod LHDT2 EF**		**0.0027064**	**CalEEMod LHDT2 EF**		**0.03822**
	MCY	GAS	0.002067617	1	0.002068	0	1	0	0.002814338	1	0.0028143	0.001	1	0.001	0.005040001	1	0.00504
	MDV	GAS	0.000880394	0.939064	0.000827	0	0.19795	0	0.00126474	0.933618	0.0011808	0.002000001	0.939064	0.0018781	0.015750005	0.939064	0.0147903
	MDV	DSL	0.001671451	0.03316	5.54E-05	0	0.006765	0	0	0.03233	0	0.002000001	0.03316	6.632E-05	0.015750005	0.03316	0.0005223
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0	0.002000001	0.027777	5.555E-05	0.015750005	0.027777	0.0004375
			CalEEMod MDV EF		**0.000882**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0011808**	**CalEEMod MDV EF**		**0.002**	**CalEEMod MDV EF**		**0.01575**
	MH	GAS	0.001299621	0.710935	0.000924	0	6.963065	0	0.000293919	0.696585	0.0002047	0.003000001	0.710935	0.0021328	0.055860016	0.710935	0.0397128
	MH	DSL	0.026889359	0.289065	0.007773	0	3.03415	0	0	0.303415	0	0.004000001	0.289065	0.0011563	0.055860016	0.289065	0.0161472
			CalEEMod MH EF		**0.008697**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0002047**	**CalEEMod MH EF**		**0.0032891**	**CalEEMod MH EF**		**0.05586**
	MHDT	GAS	0.001274662	0.136607	0.000174	0	0.013233	0	0.000392485	0.264762	0.0001039	0.003000001	0.136607	0.0004098	0.055860016	0.136607	0.0076309
	MHDT	DSL	0.006793882	0.863393	0.005866	0.00157	0.070514	0.000111	0	0.735238	0	0.003000001	0.863393	0.0025902	0.055860016	0.863393	0.0482291
			CalEEMod MHDT EF		**0.00604**	**CalEEMod MHDT EF**		**0.000111**	**CalEEMod MHDT EF**		**0.0001039**	**CalEEMod MHDT EF**		**0.003**	**CalEEMod MHDT EF**		**0.05586**
	OBUS	GAS	0.001206465	0.275438	0.000332	0	0.025879	0	0.000258658	0.517789	0.0001339	0.003000001	0.275438	0.0008263	0.055860016	0.275438	0.015386
	OBUS	DSL	0.010188463	0.724562	0.007382	0.002867	0.052021	0.000149	0	0.482211	0	0.003000001	0.724562	0.0021737	0.055860016	0.724562	0.040474
			CalEEMod OBUS EF		**0.007714**	**CalEEMod OBUS EF**		**0.000149**	**CalEEMod OBUS EF**		**0.0001339**	**CalEEMod OBUS EF**		**0.003**	**CalEEMod OBUS EF**		**0.05586**
	SBUS	GAS	0.001477164	0.576142	0.000851	0	0.064771	0	0.000672151	0.259083	0.0001741	0.002000001	0.576142	0.0011523	0.319200087	0.576142	0.1839044
	SBUS	DSL	0.030485845	0.423858	0.012922	0.026808	0.064205	0.001721	0	0.740917	0	0.003000001	0.423858	0.0012716	0.319200091	0.423858	0.1352957
			CalEEMod SBUS EF		**0.013773**	**CalEEMod SBUS EF**		**0.001721**	**CalEEMod SBUS EF**		**0.0001741**	**CalEEMod SBUS EF**		**0.0024239**	**CalEEMod SBUS EF**		**0.3192001**
	UBUS	GAS	0.002175475	0.03312	7.21E-05	0	0.024944	0	0.000836372	0.099776	8.345E-05	0.00276965	0.03312	9.173E-05	0.051796626	0.03312	0.0017155
	UBUS	DSL	0.005496326	0.688632	0.003785	0	0.16029	0	0	0.641159	0	0.007973104	0.688632	0.0054905	0.031491831	0.688632	0.0216863
	UBUS	NG	0.003078365	0.278248	0.000857	0	0.064766	0	0	0.259066	0	0.007973104	0.278248	0.0022185	0.031491831	0.278248	0.0087625
			CalEEMod UBUS EF		**0.004714**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**8.345E-05**	**CalEEMod UBUS EF**		**0.0078008**	**CalEEMod UBUS EF**		**0.0321643**

PM10	Vehicle Cat	Fuel	PM10_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	PM10_IDLEX	Pop Adj	CalEEMod EF (g/trip)	PM10_STREX	trips Adj	CalEEMod EF (g/trip)	PM10_PMTW	VMT ADJ	CalEEMod EF (g/mile)	PM10_PMBW	VMT ADJ	CalEEMod EF (g/mile)
	HHDT	GAS	0.00113034	0.005237	5.92E-06	0	0.000432	0	0.000398153	0.008645	3.442E-06	0.020000006	0.005237	0.0001047	0.061740018	0.005237	0.0003233
	HHDT	DSL	0.023165699	0.93339	0.0216226	0.02526756	0.101315	0.00256	0	0.929854	0	0.035049632	0.93339	0.032715	0.060110119	0.93339	0.0561062
	HHDT	NG	0.003285026	0.061373	0.0002016	0.01129181	0.01577	0.000178	0	0.061501	0	0.03600001	0.061373	0.0022094	0.061740018	0.061373	0.0037892
			CalEEMod HHDT EF		**0.0218302**	**CalEEMod HHDT EF**		**0.002738**	**CalEEMod HHDT EF**		**3.442E-06**	**CalEEMod HHDT EF**		**0.0350291**	**CalEEMod HHDT EF**		**0.0602187**
	LDA	GAS	0.00090006	0.933899	0.0008406	0	0.198697	0	0.00130652	0.940772	0.0012291	0.008000002	0.933899	0.0074712	0.036750011	0.933899	0.0343208
	LDA	DSL	0.001756782	0.011312	1.987E-05	0	0.002352	0	0	0.01123	0	0.008000002	0.011312	9.05E-05	0.036750011	0.011312	0.0004157
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0	0.008000002	0.054789	0.0004383	0.036750011	0.054789	0.0020135
			CalEEMod LDA EF		**0.0008604**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.0012291**	**CalEEMod LDA EF**		**0.008**	**CalEEMod LDA EF**		**0.03675**
	LDT1	GAS	0.001021225	0.968528	0.0009891	0	0.206695	0	0.001428527	0.973546	0.0013907	0.008000002	0.968528	0.0077482	0.036750011	0.968528	0.0355934
	LDT1	DSL	0.009488337	0.000128	1.212E-06	0	2.73E-05	0	0	0.000127	0	0.008000002	0.000128	1.022E-06	0.036750011	0.000128	4.693E-06
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0	0.008000002	0.031344	0.0002508	0.036750011	0.031344	0.0011519
			CalEEMod LDT1 EF		**0.0009903**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.0013907**	**CalEEMod LDT1 EF**		**0.008**	**CalEEMod LDT1 EF**		**0.03675**
	LDT2	GAS	0.000978586	0.964152	0.0009435	0	0.203064	0	0.001370537	0.958747	0.001314	0.008000002	0.964152	0.0077132	0.036750011	0.964152	0.0354326
	LDT2	DSL	0.003995186	0.009576	3.826E-05	0	0.001957	0	0	0.009366	0	0.008000002	0.009576	7.661E-05	0.036750011	0.009576	0.0003519
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0	0.008000002	0.026272	0.0002102	0.036750011	0.026272	0.0009655
			CalEEMod LDT2 EF		**0.0009818**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.001314**	**CalEEMod LDT2 EF**		**0.008**	**CalEEMod LDT2 EF**		**0.03675**
	LHDT1	GAS	0.002230898	0.526494	0.0011746	0	0.039057	0	0.000344949	0.581886	0.0002007	0.008000002	0.526494	0.004212	0.076440022	0.526494	0.0402452
	LHDT1	DSL	0.009970295	0.473506	0.004721	0.02754815	0.03324	0.000916	0	0.418114	0	0.012000003	0.473506	0.0056821	0.076440022	0.473506	0.0361948
			CalEEMod LHDT1 EF		**0.0058955**	**CalEEMod LHDT1 EF**		**0.000916**	**CalEEMod LHDT1 EF**		**0.0002007**	**CalEEMod LHDT1 EF**		**0.009894**	**CalEEMod LHDT1 EF**		**0.07644**
	LHDT2	GAS	0.00215665	0.293641	0.0006333	0	0.022562	0	0.000319222	0.336137	0.0001073	0.008000002	0.293641	0.0023491	0.089180026	0.293641	0.0261869
	LHDT2	DSL	0.016105146	0.706359	0.011376	0.02792473	0.052777	0.001474	0	0.663863	0	0.012000003	0.706359	0.0084763	0.089180026	0.706359	0.0629931
			CalEEMod LHDT2 EF		**0.0120093**	**CalEEMod LHDT2 EF**		**0.001474**	**CalEEMod LHDT2 EF**		**0.0001073**	**CalEEMod LHDT2 EF**		**0.0108254**	**CalEEMod LHDT2 EF**		**0.08918**
	MCY	GAS	0.002217551	1	0.0022176	0	1	0	0.003012569	1	0.0030126	0.004000001	1	0.004	0.011760003	1	0.01176
	MDV	GAS	0.000957509	0.939064	0.0008992	0	0.19795	0	0.00137552	0.933618	0.0012842	0.008000002	0.939064	0.0075125	0.036750011	0.939064	0.0345106
	MDV	DSL	0.001747027	0.03316	5.793E-05	0	0.006765	0	0	0.03233	0	0.008000002	0.03316	0.0002653	0.036750011	0.03316	0.0012186
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0	0.008000002	0.027777	0.0002222	0.036750011	0.027777	0.0010208
			CalEEMod MDV EF		**0.0009571**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0012842**	**CalEEMod MDV EF**		**0.008**	**CalEEMod MDV EF**		**0.03675**
	MH	GAS	0.001413457	0.710935	0.0010049	0	6.963065	0	0.000319663	0.696585	0.0002227	0.012000003	0.710935	0.0085312	0.130340037	0.710935	0.0926633
	MH	DSL	0.028105176	0.289065	0.0081242	0	3.03415	0	0	0.303415	0	0.016000005	0.289065	0.004625	0.130340037	0.289065	0.0376768
			CalEEMod MH EF		**0.0091291**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0002227**	**CalEEMod MH EF**		**0.0131563**	**CalEEMod MH EF**		**0.13034**
	MHDT	GAS	0.001386311	0.136607	0.0001894	0	0.013233	0	0.000426864	0.264762	0.000113	0.012000003	0.136607	0.0016393	0.130340037	0.136607	0.0178054
	MHDT	DSL	0.007101071	0.863393	0.006131	0.00164127	0.070514	0.000116	0	0.735238	0	0.012000003	0.863393	0.0103607	0.130340037	0.863393	0.1125347
			CalEEMod MHDT EF		**0.0063204**	**CalEEMod MHDT EF**		**0.000116**	**CalEEMod MHDT EF**		**0.000113**	**CalEEMod MHDT EF**		**0.012**	**CalEEMod MHDT EF**		**0.13034**
	OBUS	GAS	0.001312141	0.275438	0.0003614	0	0.025879	0	0.000281314	0.517789	0.0001457	0.012000003	0.275438	0.0033053	0.130340037	0.275438	0.0359006
	OBUS	DSL	0.01064914	0.724562	0.007716	0.00299707	0.052021	0.000156	0	0.482211	0	0.012000003	0.724562	0.0086947	0.130340037	0.724562	0.0944394
			CalEEMod OBUS EF		**0.0080774**	**CalEEMod OBUS EF**		**0.000156**	**CalEEMod OBUS EF**		**0.0001457**	**CalEEMod OBUS EF**		**0.012**	**CalEEMod OBUS EF**		**0.13034**
	SBUS	GAS	0.00160655	0.576142	0.0009256	0	0.064771	0	0.000731025	0.259083	0.0001894	0.008000002	0.576142	0.0046091	0.744800204	0.576142	0.4291103
	SBUS	DSL	0.03186428	0.423858	0.0135059	0.02802066	0.064205	0.001799	0	0.740917	0	0.012000003	0.423858	0.0050863	0.744800213	0.423858	0.3156899
			CalEEMod SBUS EF		**0.0144315**	**CalEEMod SBUS EF**		**0.001799**	**CalEEMod SBUS EF**		**0.0001894**	**CalEEMod SBUS EF**		**0.0096954**	**CalEEMod SBUS EF**		**0.7448002**
	UBUS	GAS	0.002366027	0.03312	7.836E-05	0	0.024944	0	0.000909631	0.099776	9.076E-05	0.0110786	0.03312	0.0003669	0.120858794	0.03312	0.0040029
	UBUS	DSL	0.005744846	0.688632	0.0039561	0	0.16029	0	0	0.641159	0	0.031892417	0.688632	0.0219621	0.07348094	0.688632	0.0506013
	UBUS	NG	0.003217555	0.278248	0.0008953	0	0.064766	0	0	0.259066	0	0.031892417	0.278248	0.008874	0.07348094	0.278248	0.0204459
			CalEEMod UBUS EF		**0.0049297**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**9.076E-05**	**CalEEMod UBUS EF**		**0.0312031**	**CalEEMod UBUS EF**		**0.0750501**

CO2	Vehicle Cat	Fuel	CO2_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	CO2_IDLEX	Pop Adj	CalEEMod EF (g/trip)	CO2_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	1700.945441	0.005237	8.9079678	0	0.000432	0	40.4150786	0.008645	0.3493709
	HHDT	DSL	1312.394173	0.93339	1224.9752	7935.0505	0.101315	803.93658	0	0.929854	0
	HHDT	NG	2800.256629	0.061373	171.86072	3560.2008	0.01577	56.142946	0	0.061501	0
			CalEEMod HHDT EF		**1405.7439**	**CalEEMod HHDT EF**		**860.07953**	**CalEEMod HHDT EF**		**0.3493709**
	LDA	GAS	209.8182011	0.933899	195.94905	0	0.198697	0	44.5739549	0.940772	41.933932
	LDA	DSL	167.6824317	0.011312	1.8968132	0	0.002352	0	0	0.01123	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0
			CalEEMod LDA EF		**197.84587**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**41.933932**
	LDT1	GAS	243.6797509	0.968528	236.01073	0	0.206695	0	51.4414304	0.973546	50.080621
	LDT1	DSL	317.8496802	0.000128	0.0405867	0	2.73E-05	0	0	0.000127	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0
			CalEEMod LDT1 EF		**236.05132**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**50.080621**
	LDT2	GAS	247.8203259	0.964152	238.93645	0	0.203064	0	53.6360337	0.958747	51.423385
	LDT2	DSL	225.6910637	0.009576	2.1611591	0	0.001957	0	0	0.009366	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0
			CalEEMod LDT2 EF		**241.09761**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**51.423385**
	LHDT1	GAS	886.9278779	0.526494	466.96245	108.69109	0.039057	4.2451098	17.0829974	0.581886	9.9403549
	LHDT1	DSL	470.5951889	0.473506	222.82951	115.35792	0.03324	3.8344674	0	0.418114	0
			CalEEMod LHDT1 EF		**689.79197**	**CalEEMod LHDT1 EF**		**8.0795772**	**CalEEMod LHDT1 EF**		**9.9403549**
	LHDT2	GAS	1009.386783	0.293641	296.39754	124.3141	0.022562	2.8047485	19.3051373	0.336137	6.4891716
	LHDT2	DSL	529.1422417	0.706359	373.76428	185.96455	0.052777	9.8145729	0	0.663863	0
			CalEEMod LHDT2 EF		**670.16182**	**CalEEMod LHDT2 EF**		**12.619321**	**CalEEMod LHDT2 EF**		**6.4891716**
	MCY	GAS	212.5811132	1	212.58111	0	1	0	58.7827541	1	58.782754
	MDV	GAS	297.7099827	0.939064	279.56859	0	0.19795	0	64.741483	0.933618	60.443796
	MDV	DSL	292.1091414	0.03316	9.6863049	0	0.006765	0	0	0.03233	0
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0
			CalEEMod MDV EF		**289.2549**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**60.443796**
	MH	GAS	1490.083462	0.710935	1059.352	0	6.963065	0	21.6172195	0.696585	15.058232
	MH	DSL	885.7521699	0.289065	256.04025	0	3.03415	0	0	0.303415	0
			CalEEMod MH EF		**1315.3922**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**15.058232**
	MHDT	GAS	1507.168376	0.136607	205.88972	474.18024	0.013233	6.2747309	32.7225397	0.264762	8.6636787
	MHDT	DSL	872.0541867	0.863393	752.9255	698.53962	0.070514	49.256519	0	0.735238	0
			CalEEMod MHDT EF		**958.81522**	**CalEEMod MHDT EF**		**55.53125**	**CalEEMod MHDT EF**		**8.6636787**
	OBUS	GAS	1533.30316	0.275438	422.33007	339.27984	0.025879	8.7802488	23.0406646	0.517789	11.930192
	OBUS	DSL	1067.050337	0.724562	773.14404	1849.4139	0.052021	96.209192	0	0.482211	0
			CalEEMod OBUS EF		**1195.4741**	**CalEEMod OBUS EF**		**104.98944**	**CalEEMod OBUS EF**		**11.930192**
	SBUS	GAS	750.9709362	0.576142	432.66557	2266.2964	0.064771	146.78985	42.7874488	0.259083	11.085511
	SBUS	DSL	1062.549739	0.423858	450.37068	3519.5189	0.064205	225.9707	0	0.740917	0
			CalEEMod SBUS EF		**883.03624**	**CalEEMod SBUS EF**		**372.76055**	**CalEEMod SBUS EF**		**11.085511**
	UBUS	GAS	1578.36898	0.03312	52.276153	0	0.024944	0	75.0668744	0.099776	7.489838
	UBUS	DSL	1481.111529	0.688632	1019.9404	0	0.16029	0	0	0.641159	0
	UBUS	NG	1954.896948	0.278248	543.94594	0	0.064766	0	0	0.259066	0
			CalEEMod UBUS EF		**1616.1625**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**7.489838**

CH4	Vehicle Cat	Fuel	CH4_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	CH4_IDLEX	Pop Adj	CalEEMod EF (g/trip)	CH4_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.0675686	0.005237	0.0003539	0	0.000432	0	0.00031845	0.008645	2.75E-06
	HHDT	DSL	0.00121746	0.93339	0.0011364	0.1640023	0.101315	0.016616	0	0.929854	0
	HHDT	NG	3.13894469	0.061373	0.1926471	1.1741277	0.01577	0.018516	0	0.061501	0
			CalEEMod HHDT EF		**0.1941373**	**CalEEMod HHDT EF**		**0.035131**	**CalEEMod HHDT EF**		**2.75E-06**
	LDA	GAS	0.00090901	0.933899	0.0008489	0	0.198697	0	0.02975744	0.940772	0.027995
	LDA	DSL	0.00025099	0.011312	2.839E-06	0	0.002352	0	0	0.01123	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0
			CalEEMod LDA EF		**0.0008518**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.027995**
	LDT1	GAS	0.00123765	0.968528	0.0011987	0	0.206695	0	0.03120012	0.973546	0.030375
	LDT1	DSL	0.00096253	0.000128	1.229E-07	0	2.73E-05	0	0	0.000127	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0
			CalEEMod LDT1 EF		**0.0011988**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.030375**
	LDT2	GAS	0.00135368	0.964152	0.0013051	0	0.203064	0	0.038205	0.958747	0.036629
	LDT2	DSL	0.00057531	0.009576	5.509E-06	0	0.001957	0	0	0.009366	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0
			CalEEMod LDT2 EF		**0.0013107**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.036629**
	LHDT1	GAS	0.00324784	0.526494	0.00171	0.0977162	0.039057	0.003816	0.01270208	0.581886	0.007391
	LHDT1	DSL	0.00586052	0.473506	0.002775	0.0050981	0.03324	0.000169	0	0.418114	0
			CalEEMod LHDT1 EF		**0.004485**	**CalEEMod LHDT1 EF**		**0.003986**	**CalEEMod LHDT1 EF**		**0.007391**
	LHDT2	GAS	0.00271552	0.293641	0.0007974	0.0962913	0.022562	0.002173	0.01229042	0.336137	0.004131
	LHDT2	DSL	0.00583056	0.706359	0.0041185	0.0050981	0.052777	0.000269	0	0.663863	0
			CalEEMod LHDT2 EF		**0.0049159**	**CalEEMod LHDT2 EF**		**0.002442**	**CalEEMod LHDT2 EF**		**0.004131**
	MCY	GAS	0.32144339	1	0.3214434	0	1	0	0.25102712	1	0.251027
	MDV	GAS	0.00131091	0.939064	0.001231	0	0.19795	0	0.0397227	0.933618	0.037086
	MDV	DSL	0.00025983	0.03316	8.616E-06	0	0.006765	0	0	0.03233	0
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0
			CalEEMod MDV EF		**0.0012396**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.037086**
	MH	GAS	0.00434502	0.710935	0.003089	0	6.963065	0	0.02700706	0.696585	0.018813
	MH	DSL	0.00338345	0.289065	0.000978	0	3.03415	0	0	0.303415	0
			CalEEMod MH EF		**0.0040671**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.018813**
	MHDT	GAS	0.00398193	0.136607	0.000544	0.2793011	0.013233	0.003696	0.03221059	0.264762	0.008528
	MHDT	DSL	0.00045581	0.863393	0.0003935	0.0029032	0.070514	0.000205	0	0.735238	0
			CalEEMod MHDT EF		**0.0009375**	**CalEEMod MHDT EF**		**0.003901**	**CalEEMod MHDT EF**		**0.008528**
	OBUS	GAS	0.00473388	0.275438	0.0013039	0.2059387	0.025879	0.00533	0.02583727	0.517789	0.013378
	OBUS	DSL	0.00059568	0.724562	0.0004316	0.0279916	0.052021	0.001456	0	0.482211	0
			CalEEMod OBUS EF		**0.0017355**	**CalEEMod OBUS EF**		**0.006786**	**CalEEMod OBUS EF**		**0.013378**
	SBUS	GAS	0.00686862	0.576142	0.0039573	2.4375027	0.064771	0.157879	0.05347676	0.259083	0.013855
	SBUS	DSL	0.004157	0.423858	0.001762	0.0129504	0.064205	0.000831	0	0.740917	0
			CalEEMod SBUS EF		**0.0057193**	**CalEEMod SBUS EF**		**0.158711**	**CalEEMod SBUS EF**		**0.013855**
	UBUS	GAS	0.00519209	0.03312	0.000172	0	0.024944	0	0.08080673	0.099776	0.008063
	UBUS	DSL	0.07417178	0.688632	0.051077	0	0.16029	0	0	0.641159	0
	UBUS	NG	6.11790997	0.278248	1.7022955	0	0.064766	0	0	0.259066	0
			CalEEMod UBUS EF		**1.7535445**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.008063**

N2O	Vehicle Cat	Fuel	N2O_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	N2O_IDLEX	Pop Adj	CalEEMod EF (g/trip)	N2O_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.12733669	0.005237	0.0006669	0	0.000432	0	0.00036198	0.008645	3.129E-06
	HHDT	DSL	0.20629009	0.93339	0.192549	1.247279	0.101315	0.126368	0	0.929854	0
	HHDT	NG	0.57085063	0.061373	0.0350349	0.72577	0.01577	0.011445	0	0.061501	0
			CalEEMod HHDT EF		**0.2282509**	**CalEEMod HHDT EF**		**0.137813**	**CalEEMod HHDT EF**		**3.129E-06**
	LDA	GAS	0.00285202	0.933899	0.0026635	0	0.198697	0	0.01920129	0.940772	0.018064
	LDA	DSL	0.02635734	0.011312	0.0002982	0	0.002352	0	0	0.01123	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0
			CalEEMod LDA EF		**0.0029617**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.018064**
	LDT1	GAS	0.00327547	0.968528	0.0031724	0	0.206695	0	0.02013564	0.973546	0.019603
	LDT1	DSL	0.04996154	0.000128	6.38E-06	0	2.73E-05	0	0	0.000127	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0
			CalEEMod LDT1 EF		**0.0031788**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.019603**
	LDT2	GAS	0.00320351	0.964152	0.0030887	0	0.203064	0	0.02135116	0.958747	0.0204704
	LDT2	DSL	0.03547549	0.009576	0.0003397	0	0.001957	0	0	0.009366	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0
			CalEEMod LDT2 EF		**0.0034284**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.0204704**
	LHDT1	GAS	0.0052264	0.526494	0.0027517	0.002684	0.039057	0.000105	0.03087163	0.581886	0.0179638
	LHDT1	DSL	0.07397101	0.473506	0.0350257	0.018133	0.03324	0.000603	0	0.418114	0
			CalEEMod LHDT1 EF		**0.0377774**	**CalEEMod LHDT1 EF**		**0.000708**	**CalEEMod LHDT1 EF**		**0.0179638**
	LHDT2	GAS	0.00572086	0.293641	0.0016799	0.00261	0.022562	5.89E-05	0.03054165	0.336137	0.0102662
	LHDT2	DSL	0.08317379	0.706359	0.0587505	0.029231	0.052777	0.001543	0	0.663863	0
			CalEEMod LHDT2 EF		**0.0604304**	**CalEEMod LHDT2 EF**		**0.001602**	**CalEEMod LHDT2 EF**		**0.0102662**
	MCY	GAS	0.06599593	1	0.0659959	0	1	0	0.01558733	1	0.0155873
	MDV	GAS	0.0031768	0.03316	0.0001053	0	0.006765	0	0.02179614	0.03233	0.0007047
	MDV	DSL	0.04591549	0.027777	0.0012754	0	0.006898	0	0	0.034052	0
	MDV	ELEC	0	0	0	0	0	0	0	0	0
			CalEEMod MDV EF		**0.0013807**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0007047**
	MH	GAS	0.01266746	0.289065	0.0036617	0	3.03415	0	0.03795598	0.303415	0.0115164
	MH	DSL	0.13922791	0	0	0	0	0	0	0	0
			CalEEMod MH EF		**0.0036617**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0115164**
	MHDT	GAS	0.00997527	0.863393	0.0086126	0.008491	0.070514	0.000599	0.03039802	0.735238	0.0223498
	MHDT	DSL	0.13707477	0	0	0.109801	0	0	0	0	0
			CalEEMod MHDT EF		**0.0086126**	**CalEEMod MHDT EF**		**0.000599**	**CalEEMod MHDT EF**		**0.0223498**
	OBUS	GAS	0.01126079	0.724562	0.0081591	0.00608	0.052021	0.000316	0.02651742	0.482211	0.012787
	OBUS	DSL	0.16772545	0	0	0.290702	0	0	0	0	0
			CalEEMod OBUS EF		**0.0081591**	**CalEEMod OBUS EF**		**0.000316**	**CalEEMod OBUS EF**		**0.012787**
	SBUS	GAS	0.01688696	0.423858	0.0071577	0.095975	0.064205	0.006162	0.0466083	0.740917	0.0345329
	SBUS	DSL	0.16701802	0	0	0.553219	0	0	0	0	0
			CalEEMod SBUS EF		**0.0071577**	**CalEEMod SBUS EF**		**0.006162**	**CalEEMod SBUS EF**		**0.0345329**
	UBUS	GAS	0.01451974	0.688632	0.0099988	0	0.16029	0	0.05737435	0.641159	0.0367861
	UBUS	DSL	0.23281011	0.278248	0.0647789	0	0.064766	0	0	0.259066	0
	UBUS	NG	0.39851853	0	0	0	0	0	0	0	0
			CalEEMod UBUS EF		**0.0747777**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.0367861**

ROG	Vehicle Category	Fuel	EMFAC2017 ROG_RUNEX (g/mile)	VMT ADJ	CalEEMod EF (g/mile)	EMFAC2017 ROG_IDLEX (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)	EMFAC2017 ROG_STREX (g/trip)	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.296556959	0.005237	0.00155309	0	0.000432	0	0.00166189	0.008645	1.437E-05
	HHDT	DSL	0.02621157	0.93339	0.02446561	3.53092368	0.101315	0.357734168	0	0.929854	0
	HHDT	NG	0.067516536	0.061373	0.00414371	0.02211199	0.01577	0.000348697	0	0.061501	0
			CalEEMod HHDT EF		**0.03016241**	**CalEEMod HHDT EF**		**0.358082866**	**CalEEMod HHDT EF**		**1.437E-05**
	LDA	GAS	0.003066192	0.933899	0.00286351	0	0.198697	0	0.12730952	0.940772	0.1197692
	LDA	DSL	0.005403566	0.011312	6.1125E-05	0	0.002352	0	0	0.01123	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0
			CalEEMod LDA EF		**0.00292464**	**CalEEMod LDA EF**		**0**	**CalEEMod AHDA EF**		**0.1197692**
	LDT1	GAS	0.004563309	0.968528	0.00441969	0	0.206695	0	0.13268953	0.973546	0.1291794
	LDT1	DSL	0.020722628	0.000128	2.6461E-06	0	2.73E-05	0	0	0.000127	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0
			CalEEMod LDT1 EF		**0.00442234**	**CalEEMod LDT1 EF**		**0**	**CalEEMod AHDT1 EF**		**0.1291794**
	LDT2	GAS	0.004836984	0.964152	0.00466359	0	0.203064	0	0.1640711	0.958747	0.1573027
	LDT2	DSL	0.01238611	0.009576	0.00011861	0	0.001957	0	0	0.009366	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0
			CalEEMod LDT2 EF		**0.00478219**	**CalEEMod LDT2 EF**		**0**	**CalEEMod AHDT2 EF**		**0.1573027**
	LHDT1	GAS	0.013009395	0.526494	0.00684937	0.33430967	0.039057	0.013057016	0.06003272	0.581886	0.0349322
	LHDT1	DSL	0.126173617	0.473506	0.05974393	0.1097597	0.03324	0.003648384	0	0.418114	0
			CalEEMod LHDT1 EF		**0.0665933**	**CalEEMod LHDT1 EF**		**0.0167054**	**CalEEMod AHHDT1 EF**		**0.0349322**
	LHDT2	GAS	0.010021704	0.293641	0.00294279	0.32802861	0.022562	0.007400912	0.05721664	0.336137	0.0192326
	LHDT2	DSL	0.125528601	0.706359	0.08866823	0.1097597	0.052777	0.005792742	0	0.663863	0
			CalEEMod LHDT2 EF		**0.09161102**	**CalEEMod LHDT2 EF**		**0.013193654**	**CalEEMod AHHDT2 EF**		**0.0192326**
	MCY	GAS	2.134664383	1	**2.13466438**	0	1	**0**	1.88989979	1	**1.8898998**
	MDV	GAS	0.004640026	0.939064	0.00435728	0	0.19795	0	0.17478438	0.933618	0.1631818
	MDV	DSL	0.005594018	0.03316	0.0001855	0	0.006765	0	0	0.03233	0
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0
			CalEEMod MDV EF		**0.00454278**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.1631818**
	MH	GAS	0.013133924	0.710935	0.00933736	0	6.963065	0	0.09954755	0.696585	0.0693433
	MH	DSL	0.072843657	0.289065	0.02105658	0	3.03415	0	0	0.303415	0
			CalEEMod MH EF		**0.03039394**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.0693433**
	MHDT	GAS	0.01622694	0.136607	0.00221671	1.02630765	0.013233	0.013580921	0.15709676	0.264762	0.0415932
	MHDT	DSL	0.009813384	0.863393	0.00847281	0.06250565	0.070514	0.004407496	0	0.735238	0
			CalEEMod MHDT EF		**0.01068952**	**CalEEMod MHDT EF**		**0.017988418**	**CalEEMod MHDT EF**		**0.0415932**
	OBUS	GAS	0.01972237	0.275438	0.00543229	0.74861464	0.025879	0.019373455	0.12620798	0.517789	0.065349
	OBUS	DSL	0.012824908	0.724562	0.00929244	0.6026509	0.052021	0.031350773	0	0.482211	0
			CalEEMod OBUS EF		**0.01472473**	**CalEEMod OBUS EF**		**0.050724228**	**CalEEMod OBUS EF**		**0.065349**
	SBUS	GAS	0.033149427	0.576142	0.01909876	10.6415181	0.064771	0.689259741	0.30468098	0.259083	0.0789377
	SBUS	DSL	0.089499089	0.423858	0.03793494	0.27881944	0.064205	0.017901602	0	0.740917	0
			CalEEMod SBUS EF		**0.05703371**	**CalEEMod SBUS EF**		**0.707161342**	**CalEEMod SBUS EF**		**0.0789377**
	UBUS	GAS	0.018570922	0.03312	0.00061508	0	0.024944	0	0.38553447	0.099776	0.0384669
	UBUS	DSL	0.001059768	0.688632	0.00072979	0	0.16029	0	0	0.641159	0
	UBUS	NG	0.087412862	0.278248	0.02432244	0	0.064766	0	0	0.259066	0
			CalEEMod UBUS EF		**0.02566731**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.0384669**

Vehicle Category	Fuel	EMFAC2017 ROG_HOTSOAK (g/trip)	trips Adj	CalEEMod EF (g/trip)	EMFAC2017 ROG_RUNLOSS (g/trip)	trips Adj	CalEEMod EF (g/trip)	EMFAC2017 ROG_RESTLOSS (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)	EMFAC2017 ROG_DIURN (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)
HHDT	GAS	0.037303154	0.008645	0.0003225	0.184043573	0.008645	0.001591	0.011018549	0.000432	4.761E-06	0.014590747	0.000432	6.304E-06
HHDT	DSL	0	0.929854	0	0	0.929854	0	0	0.101315	0	0	0.101315	0
HHDT	NG	0	0.061501	0	0	0.061501	0	0	0.01577	0	0	0.01577	0
		CalEEMod HHDT EF		**0.0003225**	**CalEEMod HHDT EF**		**0.001591**	**CalEEMod HHDT EF**		**4.761E-06**	**CalEEMod HHDT EF**		**6.304E-06**
LDA	GAS	0.063852454	0.940772	0.0600706	0.176704146	0.940772	0.1662383	0.110313991	0.198697	0.0219191	0.104053182	0.198697	0.0206751
LDA	DSL	0	0.01123	0	0	0.01123	0	0	0.002352	0	0	0.002352	0
LDA	ELEC	0.004888026	0.047998	0.0002346	0	0.047998	0	0.003127748	0.009823	3.072E-05	0.012002497	0.009823	0.0001179
		CalEEMod LDA EF		**0.0603052**	**CalEEMod LDA EF**		**0.1662383**	**CalEEMod LDA EF**		**0.0219498**	**CalEEMod LDA EF**		**0.020793**
LDT1	GAS	0.067267087	0.973546	0.0654876	0.284534436	0.973546	0.2770075	0.134350348	0.206695	0.0277695	0.125638113	0.206695	0.0259688
LDT1	DSL	0	0.000127	0	0	0.000127	0	0	2.73E-05	0	0	2.73E-05	0
LDT1	ELEC	0.004888026	0.026327	0.0001287	0	0.026327	0	0.003127748	0.00535	1.673E-05	0.012002497	0.00535	6.421E-05
		CalEEMod LDT1 EF		**0.0656163**	**CalEEMod LDT1 EF**		**0.2770075**	**CalEEMod LDT1 EF**		**0.0277863**	**CalEEMod LDT1 EF**		**0.026033**
LDT2	GAS	0.064952158	0.958747	0.0622727	0.270790098	0.958747	0.2596192	0.16448998	0.203064	0.0334019	0.142984799	0.203064	0.029035
LDT2	DSL	0	0.009366	0	0	0.009366	0	0	0.001957	0	0	0.001957	0
LDT2	ELEC	0.004888026	0.031887	0.0001559	0	0.031887	0	0.003127748	0.006511	2.037E-05	0.012002497	0.006511	7.815E-05
		CalEEMod LDT2 EF		**0.0624286**	**CalEEMod LDT2 EF**		**0.2596192**	**CalEEMod LDT2 EF**		**0.0334223**	**CalEEMod LDT2 EF**		**0.0291132**
LHDT1	GAS	0.065527388	0.581886	0.0381295	0.500981271	0.581886	0.2915139	0.015113897	0.039057	0.0005903	0.021887445	0.039057	0.0008549
LHDT1	DSL	0	0.418114	0	0	0.418114	0	0	0.03324	0	0	0.03324	0
		CalEEMod LHDT1 EF		**0.0381295**	**CalEEMod LHDT1 EF**		**0.2915139**	**CalEEMod LHDT1 EF**		**0.0005903**	**CalEEMod LHDT1 EF**		**0.0008549**
LHDT2	GAS	0.054422361	0.336137	0.0182934	0.324333712	0.336137	0.1090206	0.01345768	0.022562	0.0003036	0.018733054	0.022562	0.0004227
LHDT2	DSL	0	0.663863	0	0	0.663863	0	0	0.052777	0	0	0.052777	0
		CalEEMod LHDT2 EF		**0.0182934**	**CalEEMod LHDT2 EF**		**0.1090206**	**CalEEMod LHDT2 EF**		**0.0003036**	**CalEEMod LHDT2 EF**		**0.0004227**
MCY	GAS	0.490116455	1	**0.4901165**	1.403908347	1	**1.4039083**	0.713444006	1	**0.713444**	1.211606727	1	**1.2116067**
MDV	GAS	0.073842996	0.933618	0.0689411	0.273495014	0.933618	0.2553398	0.200264871	0.19795	0.0396424	0.175226854	0.19795	0.0346861
MDV	DSL	0	0.03233	0	0	0.03233	0	0	0.006765	0	0	0.006765	0
MDV	ELEC	0.004888026	0.034052	0.0001664	0	0.034052	0	0.003127748	0.006898	2.158E-05	0.012002497	0.006898	8.279E-05
		CalEEMod MDV EF		**0.0691076**	**CalEEMod MDV EF**		**0.2553398**	**CalEEMod MDV EF**		**0.039664**	**CalEEMod MDV EF**		**0.0347689**
MH	GAS	0.020542091	0.696585	0.0143093	0.360361623	0.696585	0.2510225	0.011847796	6.963065	0.082497	0.023376543	6.963065	0.1627724
MH	DSL	0	0.303415	0	0	0.303415	0	0	3.03415	0	0	3.03415	0
		CalEEMod MH EF		**0.0143093**	**CalEEMod MH EF**		**0.2510225**	**CalEEMod MH EF**		**0.082497**	**CalEEMod MH EF**		**0.1627724**
MHDT	GAS	0.046584676	0.264762	0.0123338	0.239990338	0.264762	0.0635403	0.0117115	0.013233	0.000155	0.016220977	0.013233	0.0002146
MHDT	DSL	0	0.735238	0	0	0.735238	0	0	0.070514	0	0	0.070514	0
		CalEEMod MHDT EF		**0.0123338**	**CalEEMod MHDT EF**		**0.0635403**	**CalEEMod MHDT EF**		**0.000155**	**CalEEMod MHDT EF**		**0.0002146**
OBUS	GAS	0.022547089	0.517789	0.0116746	0.280199222	0.517789	0.145084	0.014882798	0.025879	0.0003852	0.026925595	0.025879	0.0006968
OBUS	DSL	0	0.482211	0	0	0.482211	0	0	0.052021	0	0	0.052021	0
		CalEEMod OBUS EF		**0.0116746**	**CalEEMod OBUS EF**		**0.145084**	**CalEEMod OBUS EF**		**0.0003852**	**CalEEMod OBUS EF**		**0.0006968**
SBUS	GAS	0.045096488	0.259083	0.0116837	0.297256037	0.259083	0.0770141	0.008790838	0.064771	0.0005694	0.015812655	0.064771	0.0010242
SBUS	DSL	0	0.740917	0	0	0.740917	0	0	0.064205	0	0	0.064205	0
		CalEEMod SBUS EF		**0.0116837**	**CalEEMod SBUS EF**		**0.0770141**	**CalEEMod SBUS EF**		**0.0005694**	**CalEEMod SBUS EF**		**0.0010242**
UBUS	GAS	0.016766903	0.099776	0.0016729	0.094737063	0.099776	0.0094524	0.003366933	0.024944	8.398E-05	0.005428249	0.024944	0.0001354
UBUS	DSL	0	0.641159	0	0	0.641159	0	0	0.16029	0	0	0.16029	0
UBUS	NG	0	0.259066	0	0	0.259066	0	0	0.064766	0	0	0.064766	0
		CalEEMod UBUS EF		**0.0016729**	**CalEEMod UBUS EF**		**0.0094524**	**CalEEMod UBUS EF**		**8.398E-05**	**CalEEMod UBUS EF**		**0.0001354**

TOG	Vehicle Cat	Fuel	EMFAC2017 TOG_RUNEX (g/mile)	VMT ADJ	CalEEMod EF (g/mile)	EMFAC2017 TOG_IDLEX (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.432735218	0.005237	0.0022663	0	0.000432	0
	HHDT	DSL	0.029839877	0.93339	0.0278522	4.019687831	0.101315	0.4072531
	HHDT	NG	3.229349873	0.061373	0.1981955	1.204363239	0.01577	0.0189923
			CalEEMod HHDT EF		**0.228314**	**CalEEMod HHDT EF**		**0.4262454**
	LDA	GAS	0.004474181	0.933899	0.0041784	0	0.198697	0
	LDA	DSL	0.006151601	0.011312	6.959E-05	0	0.002352	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0
			CalEEMod LDA EF		**0.004248**	**CalEEMod LDA EF**		**0**
	LDT1	GAS	0.00665877	0.968528	0.0064492	0	0.206695	0
	LDT1	DSL	0.023591334	0.000128	3.012E-06	0	2.73E-05	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0
			CalEEMod LDT1 EF		**0.0064522**	**CalEEMod LDT1 EF**		**0**
	LDT2	GAS	0.007058116	0.964152	0.0068051	0	0.203064	0
	LDT2	DSL	0.014100763	0.009576	0.000135	0	0.001957	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0
			CalEEMod LDT2 EF		**0.0069401**	**CalEEMod LDT2 EF**		**0**
	LHDT1	GAS	0.018983278	0.526494	0.0099946	0.487823892	0.039057	0.0190528
	LHDT1	DSL	0.143640274	0.473506	0.0680145	0.124954127	0.03324	0.0041534
			CalEEMod LHDT1 EF		**0.0780091**	**CalEEMod LHDT1 EF**		**0.0232062**
	LHDT2	GAS	0.014623647	0.293641	0.0042941	0.478658579	0.022562	0.0107994
	LHDT2	DSL	0.142905967	0.706359	0.1009429	0.124954127	0.052777	0.0065947
			CalEEMod LHDT2 EF		**0.105237**	**CalEEMod LHDT2 EF**		**0.017394**
	MCY	GAS	2.681801076	1	2.6818011	0	1	0
	MDV	GAS	0.006770715	0.939064	0.0063581	0	0.19795	0
	MDV	DSL	0.006368417	0.03316	0.0002112	0	0.006765	0
	MDV	ELEC	0	0.027777	0	0	0.006898	0
			CalEEMod MDV EF		**0.0065693**	**CalEEMod MDV EF**		**0**
	MH	GAS	0.019164991	0.710935	0.0136251	0	6.963065	0
	MH	DSL	0.082927661	0.289065	0.0239715	0	3.03415	0
			CalEEMod MH EF		**0.0375966**	**CalEEMod MH EF**		**0**
	MHDT	GAS	0.023678312	0.136607	0.0032346	1.497585719	0.013233	0.0198172
	MHDT	DSL	0.011171791	0.863393	0.0096456	0.071157929	0.070514	0.0050176
			CalEEMod MHDT EF		**0.0128803**	**CalEEMod MHDT EF**		**0.0248348**
	OBUS	GAS	0.028778836	0.275438	0.0079268	1.092376721	0.025879	0.0282697
	OBUS	DSL	0.014600182	0.724562	0.0105787	0.686072173	0.052021	0.0356905
			CalEEMod OBUS EF		**0.0185055**	**CalEEMod OBUS EF**		**0.0639602**
	SBUS	GAS	0.048371566	0.576142	0.0278689	15.5280783	0.064771	1.0057662
	SBUS	DSL	0.101887901	0.423858	0.043186	0.317414712	0.064205	0.0203796
			CalEEMod SBUS EF		**0.0710549**	**CalEEMod SBUS EF**		**1.0261458**
	UBUS	GAS	0.027098646	0.03312	0.0008975	0	0.024944	0
	UBUS	DSL	0.075697741	0.688632	0.0521279	0	0.16029	0
	UBUS	NG	6.243775859	0.278248	1.7373174	0	0.064766	0
			CalEEMod UBUS EF		**1.7903428**	**CalEEMod UBUS EF**		**0**

Vehicle Cat	Fuel	EMFAC2017 TOG_STREX (g/trip)	trips Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_HOTSOAK (g/trip)	trips Adj	CalEEMod EF (g/trip)
HHDT	GAS	0.00181956	0.008645	1.573E-05	0.037303154	0.008645	0.0003225
HHDT	DSL	0	0.929854	0	0	0.929854	0
HHDT	NG	0	0.061501	0	0	0.061501	0
		CalEEMod HHDT EF		**1.573E-05**	**CalEEMod HHDT EF**		**0.0003225**
LDA	GAS	0.1393879	0.940772	0.1311322	0.063852454	0.940772	0.0600706
LDA	DSL	0	0.01123	0	0	0.01123	0
LDA	ELEC	0	0.047998	0	0.004888026	0.047998	0.0002346
		CalEEMod LDA EF		**0.1311322**	**CalEEMod LDA EF**		**0.0603052**
LDT1	GAS	0.14527833	0.973546	0.1414352	0.067267087	0.973546	0.0654876
LDT1	DSL	0	0.000127	0	0	0.000127	0
LDT1	ELEC	0	0.026327	0	0.004888026	0.026327	0.0001287
		CalEEMod LDT1 EF		**0.1414352**	**CalEEMod LDT1 EF**		**0.0656163**
LDT2	GAS	0.1796372	0.958747	0.1722266	0.064952158	0.958747	0.0622727
LDT2	DSL	0	0.009366	0	0	0.009366	0
LDT2	ELEC	0	0.031887	0	0.004888026	0.031887	0.0001559
		CalEEMod LDT2 EF		**0.1722266**	**CalEEMod LDT2 EF**		**0.0624286**
LHDT1	GAS	0.06572827	0.581886	0.0382464	0.065527388	0.581886	0.0381295
LHDT1	DSL	0	0.418114	0	0	0.418114	0
		CalEEMod LHDT1 EF		**0.0382464**	**CalEEMod LHDT1 EF**		**0.0381295**
LHDT2	GAS	0.06264502	0.336137	0.0210573	0.054422361	0.336137	0.0182934
LHDT2	DSL	0	0.663863	0	0	0.663863	0
		CalEEMod LHDT2 EF		**0.0210573**	**CalEEMod LHDT2 EF**		**0.0182934**
MCY	GAS	2.05873976	1	2.0587398	0.490116455	1	0.4901165
MDV	GAS	0.19136689	0.933618	0.1786635	0.073842996	0.933618	0.0689411
MDV	DSL	0	0.03233	0	0	0.03233	0
MDV	ELEC	0	0.034052	0	0.004888026	0.034052	0.0001664
		CalEEMod MDV EF		**0.1786635**	**CalEEMod MDV EF**		**0.0691076**
MH	GAS	0.10899203	0.696585	0.0759222	0.020542091	0.696585	0.0143093
MH	DSL	0	0.303415	0	0	0.303415	0
		CalEEMod MH EF		**0.0759222**	**CalEEMod MH EF**		**0.0143093**
MHDT	GAS	0.17200117	0.264762	0.0455393	0.046584676	0.264762	0.0123338
MHDT	DSL	0	0.735238	0	0	0.735238	0
		CalEEMod MHDT EF		**0.0455393**	**CalEEMod MHDT EF**		**0.0123338**
OBUS	GAS	0.13818185	0.517789	0.071549	0.022547089	0.517789	0.0116746
OBUS	DSL	0	0.482211	0	0	0.482211	0
		CalEEMod OBUS EF		**0.071549**	**CalEEMod OBUS EF**		**0.0116746**
SBUS	GAS	0.33358732	0.259083	0.0864269	0.045096488	0.259083	0.0116837
SBUS	DSL	0	0.740917	0	0	0.740917	0
		CalEEMod SBUS EF		**0.0864269**	**CalEEMod SBUS EF**		**0.0116837**
UBUS	GAS	0.42211172	0.099776	0.0421164	0.016766903	0.099776	0.0016729
UBUS	DSL	0	0.641159	0	0	0.641159	0
UBUS	NG	0	0.259066	0	0	0.259066	0
		CalEEMod UBUS EF		**0.0421164**	**CalEEMod UBUS EF**		**0.0016729**

Vehicle Cat	Fuel	EMFAC2017 TOG_RUNLOSS (g/trip)	trips Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_RESTLOSS (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)	EMFAC2017 TOG_DIURN (g/veh/day)	Pop Adj	CalEEMod EF (g/trip)
HHDT	GAS	0.184043573	0.008645	0.001591	0.011018549	0.000432	4.761E-06	0.01459075	0.000432056	6.304E-06
HHDT	DSL	0	0.929854	0	0	0.101315	0	0	0.101314614	0
HHDT	NG	0	0.061501	0	0	0.01577	0	0	0.015769601	0
		CalEEMod HHDT EF		**0.001591**	**CalEEMod HHDT EF**		**4.761E-06**	**CalEEMod HHDT EF**		**6.304E-06**
LDA	GAS	0.176704146	0.940772	0.1662383	0.110313991	0.198697	0.0219191	0.10405318	0.198697455	0.0206751
LDA	DSL	0	0.01123	0	0	0.002352	0	0	0.002351857	0
LDA	ELEC	0	0.047998	0	0.003127748	0.009823	3.072E-05	0.0120025	0.009822525	0.0001179
		CalEEMod LDA EF		**0.1662383**	**CalEEMod LDA EF**		**0.0219498**	**CalEEMod LDA EF**		**0.020793**
LDT1	GAS	0.284534436	0.973546	0.2770075	0.134350348	0.206695	0.0277695	0.12563811	0.206694909	0.0259688
LDT1	DSL	0	0.000127	0	0	2.73E-05	0	0	2.73292E-05	0
LDT1	ELEC	0	0.026327	0	0.003127748	0.00535	1.673E-05	0.0120025	0.005349984	6.421E-05
		CalEEMod LDT1 EF		**0.2770075**	**CalEEMod LDT1 EF**		**0.0277863**	**CalEEMod LDT1 EF**		**0.026033**
LDT2	GAS	0.270790098	0.958747	0.2596192	0.16448998	0.203064	0.0334019	0.1429848	0.203063564	0.029035
LDT2	DSL	0	0.009366	0	0	0.001957	0	0	0.001956655	0
LDT2	ELEC	0	0.031887	0	0.003127748	0.006511	2.037E-05	0.0120025	0.006511259	7.815E-05
		CalEEMod LDT2 EF		**0.2596192**	**CalEEMod LDT2 EF**		**0.0334223**	**CalEEMod LDT2 EF**		**0.0291132**
LHDT1	GAS	0.500981271	0.581886	0.2915139	0.015113897	0.039057	0.0005903	0.02188744	0.039056649	0.0008549
LHDT1	DSL	0	0.418114	0	0	0.03324	0	0	0.033239741	0
		CalEEMod LHDT1 EF		**0.2915139**	**CalEEMod LHDT1 EF**		**0.0005903**	**CalEEMod LHDT1 EF**		**0.0008549**
LHDT2	GAS	0.324333712	0.336137	0.1090206	0.01345768	0.022562	0.0003036	0.01873305	0.022561789	0.0004227
LHDT2	DSL	0	0.663863	0	0	0.052777	0	0	0.052776579	0
		CalEEMod LHDT2 EF		**0.1090206**	**CalEEMod LHDT2 EF**		**0.0003036**	**CalEEMod LHDT2 EF**		**0.0004227**
MCY	GAS	1.403908347	1	1.4039083	0.713444006	1	0.713444	1.21160673	1	1.2116067
MDV	GAS	0.273495014	0.933618	0.2553398	0.200264871	0.19795	0.0396424	0.17522685	0.197949737	0.0346861
MDV	DSL	0	0.03233	0	0	0.006765	0	0	0.006764573	0
MDV	ELEC	0	0.034052	0	0.003127748	0.006898	2.158E-05	0.0120025	0.006897968	8.279E-05
		CalEEMod MDV EF		**0.2553398**	**CalEEMod MDV EF**		**0.039664**	**CalEEMod MDV EF**		**0.0347689**
MH	GAS	0.360361623	0.696585	0.2510225	0.011847796	6.963065	0.082497	0.02337654	6.963065239	0.1627724
MH	DSL	0	0.303415	0	0	3.03415	0	0	3.034149535	0
		CalEEMod MH EF		**0.2510225**	**CalEEMod MH EF**		**0.082497**	**CalEEMod MH EF**		**0.1627724**
MHDT	GAS	0.239990338	0.264762	0.0635403	0.0117115	0.013233	0.000155	0.01622098	0.013232797	0.0002146
MHDT	DSL	0	0.735238	0	0	0.070514	0	0	0.070513565	0
		CalEEMod MHDT EF		**0.0635403**	**CalEEMod MHDT EF**		**0.000155**	**CalEEMod MHDT EF**		**0.0002146**
OBUS	GAS	0.280199222	0.517789	0.145084	0.014882798	0.025879	0.0003852	0.02692559	0.025879076	0.0006968
OBUS	DSL	0	0.482211	0	0	0.052021	0	0	0.052021449	0
		CalEEMod OBUS EF		**0.145084**	**CalEEMod OBUS EF**		**0.0003852**	**CalEEMod OBUS EF**		**0.0006968**
SBUS	GAS	0.297256037	0.259083	0.0770141	0.008790838	0.064771	0.0005694	0.01581266	0.064770809	0.0010242
SBUS	DSL	0	0.740917	0	0	0.064205	0	0	0.064204997	0
		CalEEMod SBUS EF		**0.0770141**	**CalEEMod SBUS EF**		**0.0005694**	**CalEEMod SBUS EF**		**0.0010242**
UBUS	GAS	0.094737063	0.099776	0.0094524	0.003366933	0.024944	8.398E-05	0.00542825	0.024943885	0.0001354
UBUS	DSL	0	0.641159	0	0	0.16029	0	0	0.160289638	0
UBUS	NG	0	0.259066	0	0	0.064766	0	0	0.064766477	0
		CalEEMod UBUS EF		**0.0094524**	**CalEEMod UBUS EF**		**8.398E-05**	**CalEEMod UBUS EF**		**0.0001354**

CO	Vehicle Category	Fuel	CO_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	CO_IDLEX	Pop Adj	CalEEMod EF (g/trip)	CO_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	28.369021	0.005237	0.1485705	0	0.000432	0	5.142338	0.008645	0.044453
	HHDT	DSL	0.2456157	0.93339	0.2292551	50.64307	0.101315	5.130883	0	0.929854	0
	HHDT	NG	11.115869	0.061373	0.6822165	21.03157	0.01577	0.331659	0	0.061501	0
			CalEEMod HHDT EF		**1.0600421**	**CalEEMod HHDT EF**		**5.462542**	**CalEEMod HHDT EF**		**0.044453**
	LDA	GAS	0.4030525	0.933899	0.3764105	0	0.198697	0	1.810012	0.940772	1.702809
	LDA	DSL	0.1364473	0.011312	0.0015435	0	0.002352	0	0	0.01123	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0
			CalEEMod LDA EF		**0.3779539**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**1.702809**
	LDT1	GAS	0.4568904	0.968528	0.4425113	0	0.206695	0	1.858349	0.973546	1.809189
	LDT1	DSL	0.1869468	0.000128	2.387E-05	0	2.73E-05	0	0	0.000127	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0
			CalEEMod LDT1 EF		**0.4425352**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**1.809189**
	LDT2	GAS	0.4864569	0.964152	0.4690184	0	0.203064	0	2.316418	0.958747	2.220859
	LDT2	DSL	0.123286	0.009576	0.0011806	0	0.001957	0	0	0.009366	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0
			CalEEMod LDT2 EF		**0.470199**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**2.220859**
	LHDT1	GAS	0.2690469	0.526494	0.1416517	3.773768	0.039057	0.147391	1.476043	0.581886	0.858889
	LHDT1	DSL	0.5352675	0.473506	0.2534522	0.909745	0.03324	0.03024	0	0.418114	0
			CalEEMod LHDT1 EF		**0.3951039**	**CalEEMod LHDT1 EF**		**0.17763**	**CalEEMod LHDT1 EF**		**0.858889**
	LHDT2	GAS	0.2066915	0.293641	0.0606931	3.777799	0.022562	0.085234	1.446373	0.336137	0.486179
	LHDT2	DSL	0.5363309	0.706359	0.378842	0.909745	0.052777	0.048013	0	0.663863	0
			CalEEMod LHDT2 EF		**0.4395352**	**CalEEMod LHDT2 EF**		**0.133247**	**CalEEMod LHDT2 EF**		**0.486179**
	MCY	GAS	17.759317	1	17.759317	0	1	0	9.386142	1	9.386142
	MDV	GAS	0.4759193	0.939064	0.4469184	0	0.19795	0	2.366014	0.933618	2.208953
	MDV	DSL	0.1462179	0.03316	0.0048486	0	0.006765	0	0	0.03233	0
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0
			CalEEMod MDV EF		**0.451767**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**2.208953**
	MH	GAS	0.2166684	0.710935	0.1540371	0	6.963065	0	2.282036	0.696585	1.589632
	MH	DSL	0.2195583	0.289065	0.0634667	0	3.03415	0	0	0.303415	0
			CalEEMod MH EF		**0.2175038**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**1.589632**
	MHDT	GAS	0.3205247	0.136607	0.0437859	15.27445	0.013233	0.202124	3.294517	0.264762	0.872262
	MHDT	DSL	0.1088829	0.863393	0.0940088	2.532261	0.070514	0.178559	0	0.735238	0
			CalEEMod MHDT EF		**0.1377947**	**CalEEMod MHDT EF**		**0.380682**	**CalEEMod MHDT EF**		**0.872262**
	OBUS	GAS	0.3974373	0.275438	0.1094694	5.788695	0.025879	0.149806	2.593425	0.517789	1.342846
	OBUS	DSL	0.1470123	0.724562	0.1065195	10.07397	0.052021	0.524062	0	0.482211	0
			CalEEMod OBUS EF		**0.2159889**	**CalEEMod OBUS EF**		**0.673868**	**CalEEMod OBUS EF**		**1.342846**
	SBUS	GAS	0.7088557	0.576142	0.4084012	82.24088	0.064771	5.326808	7.783571	0.259083	2.016593
	SBUS	DSL	0.2596046	0.423858	0.1100356	7.476546	0.064205	0.480032	0	0.740917	0
			CalEEMod SBUS EF		**0.5184368**	**CalEEMod SBUS EF**		**5.80684**	**CalEEMod SBUS EF**		**2.016593**
	UBUS	GAS	0.2619894	0.03312	0.0086772	0	0.024944	0	8.235956	0.099776	0.821747
	UBUS	DSL	0.1253873	0.688632	0.0863457	0	0.16029	0	0	0.641159	0
	UBUS	NG	47.271219	0.278248	13.153117	0	0.064766	0	0	0.259066	0
			CalEEMod UBUS EF		**13.24814**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**0.821747**

SOx	Vehicle Cat	Fuel	SOx_RUNEX	VMT ADJ	CalEEMod EF (g/mile)	SOx_IDLEX	Pop Adj	CalEEMod EF (g/trip)	SOx_STREX	trips Adj	CalEEMod EF (g/trip)
	HHDT	GAS	0.01683223	0.005237	8.82E-05	0	0.000432	0	0.00039994	0.008645	3.457E-06
	HHDT	DSL	0.01239885	0.93339	0.011573	0.0749664	0.101315	0.0075952	0	0.929854	0
	HHDT	NG	0	0.061373	0	0	0.01577	0	0	0.061501	0
			CalEEMod HHDT EF		**0.011661**	**CalEEMod HHDT EF**		**0.0075952**	**CalEEMod HHDT EF**		**3.457E-06**
	LDA	GAS	0.00207632	0.933899	0.001939	0	0.198697	0	0.0004411	0.940772	0.000415
	LDA	DSL	0.0015852	0.011312	1.79E-05	0	0.002352	0	0	0.01123	0
	LDA	ELEC	0	0.054789	0	0	0.009823	0	0	0.047998	0
			CalEEMod LDA EF		**0.001957**	**CalEEMod LDA EF**		**0**	**CalEEMod LDA EF**		**0.000415**
	LDT1	GAS	0.00241141	0.968528	0.002336	0	0.206695	0	0.00050905	0.973546	0.0004956
	LDT1	DSL	0.00300482	0.000128	3.84E-07	0	2.73E-05	0	0	0.000127	0
	LDT1	ELEC	0	0.031344	0	0	0.00535	0	0	0.026327	0
			CalEEMod LDT1 EF		**0.002336**	**CalEEMod LDT1 EF**		**0**	**CalEEMod LDT1 EF**		**0.0004956**
	LDT2	GAS	0.00245238	0.964152	0.002364	0	0.203064	0	0.00053077	0.958747	0.0005089
	LDT2	DSL	0.00213359	0.009576	2.04E-05	0	0.001957	0	0	0.009366	0
	LDT2	ELEC	0	0.026272	0	0	0.006511	0	0	0.031887	0
			CalEEMod LDT2 EF		**0.002385**	**CalEEMod LDT2 EF**		**0**	**CalEEMod LDT2 EF**		**0.0005089**
	LHDT1	GAS	0.00877687	0.526494	0.004621	0.0010756	0.039057	4.201E-05	0.00016905	0.581886	9.837E-05
	LHDT1	DSL	0.00444882	0.473506	0.002107	0.0010905	0.03324	3.625E-05	0	0.418114	0
			CalEEMod LHDT1 EF		**0.006728**	**CalEEMod LHDT1 EF**		**7.826E-05**	**CalEEMod LHDT1 EF**		**9.837E-05**
	LHDT2	GAS	0.0099887	0.293641	0.002933	0.0012302	0.022562	2.776E-05	0.00019104	0.336137	6.422E-05
	LHDT2	DSL	0.0050023	0.706359	0.003533	0.001758	0.052777	9.278E-05	0	0.663863	0
			CalEEMod LHDT2 EF		**0.006467**	**CalEEMod LHDT2 EF**		**0.0001205**	**CalEEMod LHDT2 EF**		**6.422E-05**
	MCY	GAS	0.00210366	1	0.002104	0	1	0	0.0005817	1	0.0005817
	MDV	GAS	0.00294608	0.939064	0.002767	0	0.19795	0	0.00064067	0.933618	0.0005981
	MDV	DSL	0.00276148	0.03316	9.16E-05	0	0.006765	0	0	0.03233	0
	MDV	ELEC	0	0.027777	0	0	0.006898	0	0	0.034052	0
			CalEEMod MDV EF		**0.002858**	**CalEEMod MDV EF**		**0**	**CalEEMod MDV EF**		**0.0005981**
	MH	GAS	0.01474558	0.710935	0.010483	0	6.963065	0	0.00021392	0.696585	0.000149
	MH	DSL	0.00837354	0.289065	0.002421	0	3.03415	0	0	0.303415	0
			CalEEMod MH EF		**0.012904**	**CalEEMod MH EF**		**0**	**CalEEMod MH EF**		**0.000149**
	MHDT	GAS	0.01491465	0.136607	0.002037	0.0046924	0.013233	6.209E-05	0.00032382	0.264762	8.573E-05
	MHDT	DSL	0.00823874	0.863393	0.007113	0.0065995	0.070514	0.0004654	0	0.735238	0
			CalEEMod MHDT EF		**0.009151**	**CalEEMod MHDT EF**		**0.0005274**	**CalEEMod MHDT EF**		**8.573E-05**
	OBUS	GAS	0.01517328	0.275438	0.004179	0.0033574	0.025879	8.689E-05	0.00022801	0.517789	0.0001181
	OBUS	DSL	0.01008096	0.724562	0.007304	0.0174723	0.052021	0.0009089	0	0.482211	0
			CalEEMod OBUS EF		**0.011484**	**CalEEMod OBUS EF**		**0.0009958**	**CalEEMod OBUS EF**		**0.0001181**
	SBUS	GAS	0.00743147	0.576142	0.004282	0.0224268	0.064771	0.0014526	0.00042342	0.259083	0.0001097
	SBUS	DSL	0.01003844	0.423858	0.004255	0.0332507	0.064205	0.0021349	0	0.740917	0
			CalEEMod SBUS EF		**0.008536**	**CalEEMod SBUS EF**		**0.0035875**	**CalEEMod SBUS EF**		**0.0001097**
	UBUS	GAS	0.01561924	0.03312	0.000517	0	0.024944	0	0.00074285	0.099776	7.412E-05
	UBUS	DSL	0.01400183	0.688632	0.009642	0	0.16029	0	0	0.641159	0
	UBUS	NG	0	0.278248	0	0	0.064766	0	0	0.259066	0
			CalEEMod UBUS EF		**0.010159**	**CalEEMod UBUS EF**		**0**	**CalEEMod UBUS EF**		**7.412E-05**

Source: EMFAC2017 (v1.0.2) Emission Rates
Region Type: County
Region: San Mateo
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX, RESTLOSS and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	VMT	Trips	NOx_RUNE	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STF	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLI	PM10_STR	PM10_PMT	PM10_PMI	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNE	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_REST	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_REST	TOG_DIUR	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
San Mateo	2030	HHDT	Aggregate	Aggregate	Gasoline	5.113414	649.1127	102.3092	2.873064	0	0.007414	0.001039	0	0.000366	0.005	0.02646	0.00113	0	0.000398	0.02	0.06174	1700.945	0	40.41508	0.067569	0	0.000318	0.127337	0	0.000362	0.296557	0	0.001662	0.037303	0.184044	0.011019	0.014591	0.432735	0	0.00182	0.037303	0.184044	0.011019	0.014591	28.36902	0	5.142338	0.016832	0	0.0004
San Mateo	2030	HHDT	Aggregate	Aggregate	Diesel	1199.067	115689.7	11004.9	2.865625	46.44733	2.582431	0.022164	0.024174	0	0.008762	0.025761	0.023166	0.025268	0	0.03505	0.06011	1312.394	7935.051	0	0.001217	0.164002	0	0.20629	1.247279	0	0.026212	3.530924	0	0	0	0	0	0.02984	4.019688	0	0	0	0	0	0.245616	50.64307	0	0.012399	0.074966	0
San Mateo	2030	HHDT	Aggregate	Aggregate	Natural Ga	186.6345	7606.951	727.8746	0.603115	19.02392	0	0.003143	0.010803	0	0.009	0.02646	0.003285	0.011292	0	0.036	0.06174	2800.257	3560.201	0	3.138945	1.174128	0	0.570851	0.72577	0	0.067517	0.022112	0	0	0	0	0	3.22935	1.204363	0	0	0	0	0	11.11587	21.03157	0	0	0	0
San Mateo	2030	LDA	Aggregate	Aggregate	Gasoline	317953.1	8058428	1505411	0.019181	0	0.13064	0.000828	0	0.001201	0.002	0.01575	0.0009	0	0.001307	0.008	0.03675	209.8182	0	44.57395	0.000909	0	0.029757	0.002852	0	0.019201	0.003066	0	0.12731	0.063852	0.176704	0.110314	0.104053	0.004474	0	0.139388	0.063852	0.176704	0.110314	0.104053	0.403053	0	1.810012	0.002076	0	0.000441
San Mateo	2030	LDA	Aggregate	Aggregate	Diesel	3763.411	97608.43	17969.64	0.016182	0	0	0.001681	0	0	0.002	0.01575	0.001757	0	0	0.008	0.03675	167.6824	0	0	0.000251	0	0	0.026357	0	0	0.005404	0	0	0	0	0	0	0.006152	0	0	0	0	0	0	0.136447	0	0	0.001585	0	0
San Mateo	2030	LDA	Aggregate	Aggregate	Electricity	15717.88	472761.9	76806.1	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
San Mateo	2030	LDT1	Aggregate	Aggregate	Gasoline	59176.87	1450561	278726.9	0.026183	0	0.139669	0.000939	0	0.001313	0.002	0.01575	0.001021	0	0.001429	0.008	0.03675	243.6798	0	51.44143	0.001238	0	0.0312	0.003275	0	0.020136	0.004563	0	0.13269	0.067267	0.284534	0.13435	0.125638	0.006659	0	0.145278	0.067267	0.284534	0.13435	0.125638	0.45689	0	1.858349	0.002411	0	0.000509
San Mateo	2030	LDT1	Aggregate	Aggregate	Diesel	7.82438	191.2431	36.37998	0.090225	0	0	0.009078	0	0	0.002	0.01575	0.009488	0	0	0.008	0.03675	317.8497	0	0	0.000963	0	0	0.049962	0	0	0.020723	0	0	0	0	0	0	0.023591	0	0	0	0	0	0	0.186947	0	0	0.003005	0	0
San Mateo	2030	LDT1	Aggregate	Aggregate	Electricity	1531.704	46943.85	7537.293	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
San Mateo	2030	LDT2	Aggregate	Aggregate	Gasoline	184911.9	4550707	873045.3	0.026152	0	0.151851	0.0009	0	0.00126	0.002	0.01575	0.000979	0	0.001371	0.008	0.03675	247.8203	0	53.63603	0.001354	0	0.038205	0.003204	0	0.021351	0.004837	0	0.164071	0.064952	0.27079	0.16449	0.142985	0.007058	0	0.179637	0.064952	0.27079	0.16449	0.142985	0.486457	0	2.316418	0.002452	0	0.000531
San Mateo	2030	LDT2	Aggregate	Aggregate	Diesel	1781.751	45196.6	8528.609	0.0282	0	0	0.003822	0	0	0.002	0.01575	0.003995	0	0	0.008	0.03675	225.6911	0	0	0.000575	0	0	0.035475	0	0	0.012386	0	0	0	0	0	0	0.014101	0	0	0	0	0	0	0.123286	0	0	0.002134	0	0
San Mateo	2030	LDT2	Aggregate	Aggregate	Electricity	5929.222	124002.8	29036.84	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
San Mateo	2030	LHDT1	Aggregate	Aggregate	Gasoline	11350.29	312263.7	169102.4	0.069725	0.029133	0.348482	0.002051	0	0.000317	0.002	0.03276	0.002231	0	0.000345	0.008	0.07644	886.9279	108.6911	17.083	0.003248	0.097716	0.012702	0.005226	0.002684	0.030872	0.013009	0.33431	0.060033	0.065527	0.500981	0.015114	0.021887	0.018983	0.487824	0.065728	0.065527	0.500981	0.015114	0.021887	0.269047	3.773768	1.476043	0.008777	0.001076	0.000169
San Mateo	2030	LHDT1	Aggregate	Aggregate	Diesel	9659.833	280836.2	121508.6	0.309237	1.184374	0	0.009539	0.026356	0	0.003	0.03276	0.00997	0.027548	0	0.012	0.07644	470.5952	115.3579	0	0.005861	0.005098	0	0.073971	0.018133	0	0.126174	0.10976	0	0	0	0	0	0.14364	0.124954	0	0	0	0	0	0.535268	0.909745	0	0.004449	0.001091	0
San Mateo	2030	LHDT2	Aggregate	Aggregate	Gasoline	1659.183	45317.16	24719.36	0.0716	0.028572	0.349395	0.001983	0	0.000294	0.002	0.03822	0.002157	0	0.000319	0.008	0.08918	1009.387	124.3141	19.30514	0.002716	0.096291	0.01229	0.005721	0.00261	0.030542	0.010022	0.328029	0.057217	0.054422	0.324334	0.013458	0.018733	0.014624	0.478659	0.062645	0.054422	0.324334	0.013458	0.018733	0.206691	3.777799	1.446373	0.009989	0.00123	0.000191
San Mateo	2030	LHDT2	Aggregate	Aggregate	Diesel	3881.165	109011.2	48820.17	0.272551	1.189564	0	0.015408	0.026717	0	0.003	0.03822	0.016105	0.027925	0	0.012	0.08918	529.1422	185.9646	0	0.005831	0.005098	0	0.083174	0.029231	0	0.125529	0.10976	0	0	0	0	0	0.142906	0.124954	0	0	0	0	0	0.536331	0.909745	0	0.005002	0.001758	0
San Mateo	2030	MCY	Aggregate	Aggregate	Gasoline	23623.44	172244	47246.88	1.144949	0	0.273196	0.002068	0	0.002814	0.001	0.00504	0.002218	0	0.003013	0.004	0.01176	212.5811	0	58.78275	0.321443	0	0.251027	0.065996	0	0.015587	2.134664	0	1.8899	0.490116	1.403908	0.713444	1.211607	2.681801	0	2.05874	0.490116	1.403908	0.713444	1.211607	17.75932	0	9.386142	0.002104	0	0.000582
San Mateo	2030	MDV	Aggregate	Aggregate	Gasoline	113553.2	2864103	535566.8	0.025018	0	0.160361	0.00088	0	0.001265	0.002	0.01575	0.000958	0	0.001376	0.008	0.03675	297.71	0	64.74148	0.001311	0	0.039723	0.003177	0	0.021796	0.00464	0	0.174784	0.073843	0.273495	0.200265	0.175227	0.006771	0	0.191367	0.073843	0.273495	0.200265	0.175227	0.475919	0	2.366014	0.002946	0	0.000641
San Mateo	2030	MDV	Aggregate	Aggregate	Diesel	3880.476	101136.2	18546.09	0.013638	0	0	0.001671	0	0	0.002	0.01575	0.001747	0	0	0.008	0.03675	292.1091	0	0	0.00026	0	0	0.045915	0	0	0.005594	0	0	0	0	0	0	0.006368	0	0	0	0	0	0	0.146218	0	0	0.002761	0	0
San Mateo	2030	MDV	Aggregate	Aggregate	Electricity	3956.997	84717.34	19533.89	0	0	0	0	0	0	0.002	0.01575	0	0	0	0.008	0.03675	0	0	0	0	0	0	0	0	0	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0.004888	0	0.003128	0.012002	0	0	0	0	0	0
San Mateo	2030	MH	Aggregate	Aggregate	Gasoline	1577.324	13531.83	157.7955	0.116835	0	0.317062	0.0013	0	0.000294	0.003	0.05586	0.001413	0	0.00032	0.012	0.13034	1490.083	0	21.61722	0.004345	0	0.027007	0.012667	0	0.037956	0.013134	0	0.099548	0.020542	0.360362	0.011848	0.023377	0.019165	0	0.108992	0.020542	0.360362	0.011848	0.023377	0.216668	0	2.282036	0.014746	0	0.000214
San Mateo	2030	MH	Aggregate	Aggregate	Diesel	687.3174	5502.03	68.73174	2.626726	0	0	0.026889	0	0	0.004	0.05586	0.028105	0	0	0.016	0.13034	885.7522	0	0	0.003383	0	0	0.139228	0	0	0.072844	0	0	0	0	0	0	0.082928	0	0	0	0	0	0	0.219558	0	0	0.008374	0	0
San Mateo	2030	MHDT	Aggregate	Aggregate	Gasoline	1367.623	69688.29	27363.4	0.125655	0.089402	0.328961	0.001275	0	0.000392	0.003	0.05586	0.001386	0	0.000427	0.012	0.13034	1507.168	474.1802	32.72254	0.003982	0.279301	0.032211	0.009975	0.008491	0.030398	0.016227	1.026308	0.157097	0.046585	0.23999	0.011712	0.016221	0.023678	1.497586	0.172001	0.046585	0.23999	0.011712	0.016221	0.320525	15.27445	3.294517	0.014915	0.004692	0.000324
San Mateo	2030	MHDT	Aggregate	Aggregate	Diesel	7287.648	440448.8	75987.61	1.492552	4.036071	2.153588	0.006794	0.00157	0	0.003	0.05586	0.007101	0.001641	0	0.012	0.13034	872.0542	698.5396	0	0.000456	0.002903	0	0.137075	0.109801	0	0.009813	0.062506	0	0	0	0	0	0.011172	0.071158	0	0	0	0	0	0.108883	2.532261	0	0.008239	0.006599	0
San Mateo	2030	OBUS	Aggregate	Aggregate	Gasoline	348.0859	15996.2	6964.503	0.156982	0.065216	0.294936	0.001206	0	0.000259	0.003	0.05586	0.001312	0	0.000281	0.012	0.13034	1533.303	339.2798	23.04066	0.004734	0.205939	0.025837	0.011261	0.00608	0.026517	0.019722	0.748615	0.126208	0.022547	0.280199	0.014883	0.026926	0.028779	1.092377	0.138182	0.022547	0.280199	0.014883	0.026926	0.397437	5.788695	2.593425	0.015173	0.003357	0.000228
San Mateo	2030	OBUS	Aggregate	Aggregate	Diesel	699.7133	42079.28	6485.974	1.999056	9.075336	2.216088	0.010188	0.002867	0	0.003	0.05586	0.010649	0.002997	0	0.012	0.13034	1067.05	1849.414	0	0.000596	0.027992	0	0.167725	0.290702	0	0.012825	0.602651	0	0	0	0	0	0.0146	0.686072	0	0	0	0	0	0.147012	10.07397	0	0.010081	0.017472	0
San Mateo	2030	SBUS	Aggregate	Aggregate	Gasoline	164.2006	6933.108	656.8023	0.271643	0.92653	0.464165	0.001477	0	0.000672	0.002	0.3192	0.001607	0	0.000731	0.008	0.7448	750.9709	2266.296	42.78745	0.006869	2.437503	0.053477	0.016887	0.095975	0.046608	0.033149	10.64152	0.304681	0.045096	0.297256	0.008791	0.015813	0.048372	15.52808	0.333587	0.045096	0.297256	0.008791	0.015813	0.708856	82.24088	7.783571	0.007431	0.022427	0.000423
San Mateo	2030	SBUS	Aggregate	Aggregate	Diesel	162.7662	5100.58	1878.299	5.21082	34.64443	1.174961	0.030486	0.026808	0	0.003	0.3192	0.031864	0.028021	0	0.012	0.7448	1062.55	3519.519	0	0.004157	0.01295	0	0.167018	0.553219	0	0.089499	0.278819	0	0	0	0	0	0.101888	0.317415	0	0	0	0	0	0.259605	7.476546	0	0.010038	0.033251	0
San Mateo	2030	UBUS	Aggregate	Aggregate	Gasoline	38.39737	930.2347	153.5895	0.16565	0	0.663242	0.002175	0	0.000836	0.00277	0.051797	0.002366	0	0.00091	0.011079	0.120859	1578.369	0	75.06687	0.005192	0	0.080807	0.01452	0	0.057374	0.018571	0	0.385534	0.016767	0.094737	0.003367	0.005428	0.027099	0	0.422112	0.016767	0.094737	0.003367	0.005428	0.261989	0	8.235956	0.015619	0	0.000743
San Mateo	2030	UBUS	Aggregate	Aggregate	Diesel	246.7419	19341.25	986.9675	0.777949	0	0	0.005496	0	0	0.007973	0.031492	0.005745	0	0	0.031892	0.073481	1481.112	0	0	0.074172	0	0	0.23281	0	0	0.00106	0	0	0	0	0	0	0.075698	0	0	0	0	0	0	0.125387	0	0	0.014002	0	0
San Mateo	2030	UBUS	Aggregate	Aggregate	Natural Ga	99.69829	7815.006	398.7932	0.471774	0	0	0.003078	0	0	0.007973	0.031492	0.003218	0	0	0.031892	0.073481	1954.897	0	0	6.11791	0	0	0.398519	0	0	0.087413	0	0	0	0	0	0	6.243776	0	0	0	0	0	0	47.27122	0	0	0	0	0

Attachment 4: Construction Health Risk Calculations

RESIDENTIAL HEALTH RISK CALCULATIONS

Anton Residential Impacts, Millbrae, California

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.1418	DPM	283.6	0.06475	8.16E-03	26,951	**3.03E-07**
2022	Construction	0.0650	DPM	130.0	0.02968	3.74E-03	26,951	**1.39E-07**
2023	Construction	0.0614	DPM	122.8	0.02804	3.53E-03	26,951	**1.31E-07**
2024	Construction	0.0178	DPM	35.6	0.00813	1.02E-03	26,951	**3.80E-08**
Total		***0.2860***		***413.6***	***0.0944***	***0.0119***		

Operation Hours

hr/day = 12 (7am - 7pm)*

days/yr = 365

hours/year = 4380

*Project Applicant Construction Hour Schedule

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	FUG	0.2717	543.4	0.12406	1.56E-02	26,951	**5.80E-07**
2022	Construction	FUG	0.0126	25.2	0.00575	7.25E-04	26,951	**2.69E-08**
2023	Construction	FUG	0.0138	27.6	0.00630	7.94E-04	26,951	**2.95E-08**
2024	Construction	FUG	0.0016	3.2	0.00073	9.21E-05	26,951	**3.42E-09**
Total			***0.2997***	***568.6***	***0.1298***	***0.0164***		

Operation Hours

hr/day = 12 (7am - 7pm)*

days/yr = 365

hours/year = 4380

*Project Applicant Construction Hour Schedule

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.0062	DPM	12.4	0.00284	3.57E-04	26,951	**1.33E-08**
2022	Construction	0.0261	DPM	52.2	0.01192	1.50E-03	26,951	**5.57E-08**
2023	Construction	0.0271	DPM	54.2	0.01237	1.56E-03	26,951	**5.79E-08**
2024	Construction	0.0040	DPM	8.1	0.00184	2.32E-04	26,951	**8.62E-09**
Total		***0.0635***		***127***	***0.0290***	***0.0037***		

Operation Hours

hr/day =	12	(7am - 7pm)*
days/yr =	365	
hours/year =	4380	

*Project Applicant Construction Hour Schedule

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	FUG	0.0619	123.8	0.02826	3.56E-03	26,951	**1.32E-07**
2022	Construction	FUG	0.0126	25.2	0.00575	7.25E-04	26,951	**2.69E-08**
2023	Construction	FUG	0.0138	27.6	0.00630	7.94E-04	26,951	**2.95E-08**
2024	Construction	FUG	0.0016	3.2	0.00073	9.21E-05	26,951	**3.42E-09**
Total			***0.0899***	***180***	***0.0411***	***0.0052***		

Operation Hours

hr/day =	12	(7am - 7pm)*
days/yr =	365	
hours/year =	4380	

*Project Applicant Construction Hour Schedule

Anton Residential Impacts, Millbrae, California
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Location - Unmitigated

Emissions Year	Maximum Concentrations Exhaust PM10/DPM (μg/m^3)	Fugitive PM2.5 (μg/m^3)	Cancer Risk (per million) Child	Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration (μg/m^3)
2021	0.0962	0.2697	17.11	0.28	0.019	0.37
2022	0.0441	0.0125	7.25	0.13	0.009	0.06
2023	0.0416	0.0137	1.19	0.12	0.008	0.06
2024	0.0121	0.0016	0.31	0.03	0.002	0.01
Total	-	-	**25.9**	**0.6**	-	-
Maximum	0.0962	0.2697	**-**	**-**	**0.019**	**0.37**

Maximum Impacts at Construction MEI Location - With Mitigation

Emissions Year	Maximum Concentrations Exhaust PM10/DPM (μg/m^3)	Fugitive PM2.5 (μg/m^3)	Cancer Risk (per million) Child	Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration (μg/m^3)
2021	0.0042	0.0614	0.75	0.01	0.001	0.07
2022	0.0177	0.0125	2.91	0.05	0.004	0.03
2023	0.0184	0.0137	0.52	0.05	0.004	0.03
2024	0.0027	0.0016	0.07	0.01	0.001	0.00
Total	-	-	**4.3**	**0.1**	-	-
Maximum	0.0184	0.0614	**-**	**-**	**0.004**	**0.07**

Anton Residential Impacts, Millbrae, California
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Off-Site Receptors-1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2021	0.0962	10	1.31	2021	0.0962	-	-			
1	1	0 - 1	2021	0.0962	10	15.80	2021	0.0962	1	0.28	0.019	0.2697	0.366
2	1	1 - 2	2022	0.0441	10	7.25	2022	0.0441	1	0.13	0.009	0.0125	0.057
3	1	2 - 3	2023	0.0416	3	1.19	2023	0.0416	1	0.12	0.008	0.0137	0.055
4	1	3 - 4	2024	0.0121	3	0.31	2024	0.0121	1	0.03	0.002	0.0016	0.014
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00	**0.019**	**0.270**	**0.366**
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**25.9**				**0.56**			

* Third trimester of pregnancy

Anton Residential Impacts, Millbrae, California
Maximum DPM Cancer Risk Calculations From Construction - Mitigated Emissions
Impacts at Off-Site Receptors-1.5 meter

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2021	0.0042	10	0.06	2021	0.0042	-	-			
1	1	0 - 1	2021	0.0042	10	0.69	2021	0.0042	1	0.01	0.001	0.0614	0.066
2	1	1 - 2	2022	0.0177	10	2.91	2022	0.0177	1	0.05	0.004	0.0125	0.030
3	1	2 - 3	2023	0.0184	3	0.52	2023	0.0184	1	0.05	0.004	0.0137	0.032
4	1	3 - 4	2024	0.0027	3	0.07	2024	0.0027	1	0.01	0.001	0.0016	0.004
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00	0.004	0.061	0.066
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**4.3**				**0.12**			

* Third trimester of pregnancy

Millbrae Nursey School, Millbrae, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction of Residences
Preschool - 1.5 meters - Child Exposure

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	861	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Child - Exposure Information: DPM Conc (ug/m3) Year	Annual	Age* Sensitivity Factor	Child Cancer Risk (per million)
1	1	2021	0.0733	3	2.9
2	1	2022	0.0336	3	1.3
3	1	2023	0.0317	3	1.2
4	1	2024	0.0092	3	0.4
TOTAL					**5.8**

* Students assumed to be from 2 to 5 years old

	Maximum	
HI	**Fugitive PM2.5**	**Total PM2.5**
0.015	0.19645	0.270
0.007	0.00911	0.043
0.006	0.00999	0.042
0.002	0.00116	0.010
0.01	**0.20**	**0.27**

RESIDENTIAL PLUS HOTEL HEALTH RISK CALCULATIONS

Anton Residential Plus Hotel Impacts, Millbrae, California

DPM Emissions and Modeling Emission Rates - Unmitigated

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.1418	DPM	283.6	0.06475	8.16E-03	26,951	**3.03E-07**
2022	Construction	0.0975	DPM	195.0	0.04452	5.61E-03	26,951	**2.08E-07**
2023	Construction	0.1269	DPM	253.8	0.05795	7.30E-03	26,951	**2.71E-07**
2024	Construction	0.0683	DPM	136.6	0.03119	3.93E-03	26,951	**1.46E-07**
Total		***0.4345***		***478.6***	***0.1093***	***0.0138***		

Operation Hours

hr/day =	12	(7am - 7pm)*
days/yr =	365	
hours/year =	4380	

*Project Applicant Construction Hour Schedule

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	FUG	0.2717	543.4	0.12406	1.56E-02	26,951	**5.80E-07**
2022	Construction	FUG	0.0708	141.6	0.03233	4.07E-03	26,951	**1.51E-07**
2023	Construction	FUG	0.1582	316.4	0.07224	9.10E-03	26,951	**3.38E-07**
2024	Construction	FUG	0.0047	9.3	0.00213	2.68E-04	26,951	**9.95E-09**
Total			***0.5054***	***685.0***	***0.1564***	***0.0197***		

Operation Hours

hr/day =	12	(7am - 7pm)*
days/yr =	365	
hours/year =	4380	

*Project Applicant Construction Hour Schedule

DPM Construction Emissions and Modeling Emission Rates - With Mitigation

Emissions Model Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2021	Construction	0.0062	DPM	12.4	0.00284	3.57E-04	26,951	**1.33E-08**
2022	Construction	0.0278	DPM	55.6	0.01269	1.60E-03	26,951	**5.93E-08**
2023	Construction	0.0401	DPM	80.2	0.01831	2.31E-03	26,951	**8.56E-08**
2024	Construction	0.0199	DPM	39.9	0.00911	1.15E-03	26,951	**4.26E-08**
Total		***0.0940***		***68.0***	***0.0155***	***0.0020***		

Operation Hours

hr/day =	12	(7am - 7pm)*
days/yr =	365	
hours/year =	4380	

*Project Applicant Construction Hour Schedule

PM2.5 Fugitive Dust Construction Emissions for Modeling - With Mitigation

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2021	Construction	FUG	0.0619	123.8	0.02826	3.56E-03	26,951	**1.32E-07**
2022	Construction	FUG	0.0258	51.6	0.01178	1.48E-03	26,951	**5.51E-08**
2023	Construction	FUG	0.0481	96.2	0.02196	2.77E-03	26,951	**1.03E-07**
2024	Construction	FUG	0.0047	9.3	0.00213	2.68E-04	26,951	**9.95E-09**
Total			***0.1405***	***175.4***	***0.0400***	***0.0050***		

Operation Hours

hr/day =	12	(7am - 7pm)*
days/yr =	365	
hours/year =	4380	

*Project Applicant Construction Hour Schedule

Anton Residential & Hotel Impacts, Millbrae, California
Construction Health Impacts Summary

Maximum Impacts at Construction MEI Location - Unmitigated

Emissions Year	Maximum Concentrations Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million) Child	Cancer Risk (per million) Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2021	0.0962	0.2697	17.11	0.28	0.019	0.37
2022	0.0661	0.0702	10.85	0.19	0.013	0.14
2023	0.0861	0.1572	2.45	0.25	0.017	0.24
2024	0.0464	0.0046	1.20	0.13	0.009	0.05
Total	-	-	**31.6**	**0.8**	-	-
Maximum	0.0962	0.2697	**-**	**-**	**0.019**	**0.37**

Maximum Impacts at Construction MEI Location - With Mitigation

Emissions Year	Maximum Concentrations Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million) Child	Cancer Risk (per million) Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2021	0.0042	0.0614	0.75	0.01	0.001	0.07
2022	0.0188	0.0256	3.09	0.05	0.004	0.04
2023	0.0272	0.0479	0.78	0.08	0.005	0.08
2024	0.0135	0.0046	0.35	0.04	0.003	0.02
Total	-	-	**3.8**	**0.1**	-	-
Maximum	0.0272	0.0614	**-**	**-**	**0.005**	**0.08**

Anton Residential Plus Hotel Impacts, Millbrae, California
Maximum DPM Cancer Risk Calculations From Construction - Unmitigated Emissions
Impacts at Off-Site Receptors-1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult
	Exposure				Age	Cancer	Modeled		Age	Cancer
Exposure	Duration		DPM Conc (ug/m3)		Sensitivity	Risk	DPM Conc (ug/m3)		Sensitivity	Risk
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)
0	0.25	-0.25 - 0*	2021	0.0962	10	1.31	2021	0.0962	-	-
1	1	0 - 1	2021	0.0962	10	15.80	2021	0.0962	1	0.28
2	1	1 - 2	2022	0.0661	10	10.85	2022	0.0661	1	0.19
3	1	2 - 3	2023	0.0861	3	2.45	2023	0.0861	1	0.25
4	1	3 - 4	2024	0.0464	3	1.20	2024	0.0464	1	0.13
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00
Total Increased Cancer Risk						**31.6**				**0.85**

* Third trimester of pregnancy

Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.019	0.2697	0.366
0.013	0.0702	0.136
0.017	0.1572	0.243
0.009	0.0046	0.051
0.019	**0.270**	**0.366**

Anton Residential Plus Hotel Impacts, Millbrae, California
Maximum DPM Cancer Risk Calculations From Construction - Mitigated Emissions
Impacts at Off-Site Receptors-1.5 meter

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	631	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Exposure Year	Exposure Duration (years)	Age	Infant/Child - Exposure Information DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	Adult - Exposure Information Modeled DPM Conc (ug/m3) Year	Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)		Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2021	0.0042	10	0.06	2021	0.0042	-	-				
1	1	0 - 1	2021	0.0042	10	0.69	2021	0.0042	1	0.01		0.001	0.0614	0.066
2	1	1 - 2	2022	0.0188	10	3.09	2022	0.0188	1	0.05		0.004	0.0256	0.044
3	1	2 - 3	2023	0.0272	3	0.78	2023	0.0272	1	0.08		0.005	0.0479	0.075
4	1	3 - 4	2024	0.0135	3	0.35	2024	0.0135	1	0.04		0.003	0.0046	0.018
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00				
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00		**0.005**	**0.061**	**0.075**
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00				
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00				
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00				
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00				
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00				
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00				
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00				
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00				
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00				
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00				
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00				
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00				
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00				
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00				
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00				
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00				
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00				
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00				
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00				
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00				
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00				
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00				
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00				
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00				
Total Increased Cancer Risk						**5.0**				**0.18**				

* Third trimester of pregnancy

Millbrae Nursey School, Millbrae, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk Calculations From Construction of Residences and Hotel
Preschool - 1.5 meters - Child Exposure

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child				Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 9**	**2 - 16**	**16 - 30**
Parameter					
ASF =	10	10	3	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	861	572	261
A =	1	1	1	1	1
EF =	350	350	350	350	350
AT =	70	70	70	70	70
FAH =	1.00	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

		Child - Exposure Information			Child		Maximum	
	Exposure			Age*	Cancer			
Exposure	Duration	DPM Conc (ug/m3)		Sensitivity	Risk		Fugitive	Total
Year	(years)	Year	Annual	Factor	(per million)	HI	PM2.5	PM2.5
1	1	2021	0.0733	3	2.9	0.015	0.196	0.270
2	1	2022	0.0503	3	2.0	0.010	0.051	0.101
3	1	2023	0.0656	3	2.6	0.013	0.114	0.180
4	1	2024	0.0353	3	1.4	0.007	0.003	0.039
TOTAL					**8.7**	**0.01**	**0.20**	**0.27**

* Students assumed to be from 2 to 5 years old

Attachment 5: Screening Community Risk Calculations

Bay Area Air Quality Management District

Roadway Screening Analysis Calculator

County specific tables containing estimates of risk and hazard impacts from roadways in the Bay Area.

INSTRUCTIONS:

Input the site-specific characteristics of your project by using the drop down menu in the "Search Parameter" box. We recommend that this analysis be used for roadways with 10,000 AADT and above.

• County: Select the County where the project is located. The calculator is only applicable for projects within the nine Bay Area counties.

• Roadway Direction: Select the orientation that best matches the roadway. If the roadway orientation is neither clearly north-south nor east-west, use the highest values predicted from either orientation.

• Side of the Roadway: Identify on which side of the roadway the project is located.

• Distance from Roadway: Enter the distance in feet from the nearest edge of the roadway to the project site. The calculator estimates values for distances greater than 10 feet and less than 1000 feet. For distances greater than 1000 feet, the user can choose to extrapolate values using a distribution curve or apply 1000 feet values for greater distances.

• Annual Average Daily Traffic (ADT): Enter the annual average daily traffic on the roadway. These data may be collected from the city or the county (if the area is unincorporated).

When the user has completed the data entries, the screening level PM2.5 annual average concentration and the cancer risk results will appear in the Results Box on the right. Please note that the roadway tool is not applicable for California State Highways and the District refers the user to the Highway Screening Analysis Tool at: http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx

Notes and References listed below the Search Boxes

Search Parameters

County	San Mateo	
Roadway Direction	North-South	
Side of the Roadway	East	
Distance from Roadway	330	feet
Annual Average Daily Traffic (ADT)	31,545	

Results

San Mateo County

NORTH-SOUTH DIRECTIONAL ROADWAY

PM2.5 annual average

0.153 (μg/m^3)

Cancer Risk

6.75 (per million)

El Camino Real

Background plus project volumes from traffic report

Data for San Mateo County based on meteorological data collected from San Mateo Sewage Treatment Plant in 2005

Adjusted for 2015 OEHHA and EMFAC2014 for 2018

4.64

(per million)

Note that EMFAC2014 predicts DSL PM2.5 aggregate rates in 2018 that are 46% of EMFAC2011 for 2014. TOG gasoline rates are 56% of EMFAC2011 year 2014 rates. This is for light- and medium-duty vehciles traveling at 30 mph for Bay Area

Notes and References:

1. Emissions were developed using EMFAC2011 for fleet mix in 2014 assuming 10,000 AADT and includes impacts from diesel and gasoline vehicle exhaust, brake and tire wear, and resuspended dust.
2. Roadways were modeled using CALINE4 CaB\qhcr air dispersion model assuming a source length of one kilometer. Meteorological data used to estimate the screening values are noted at the bottom of the "Results" box.
3. Cancer risks were estimated for 70 year lifetime exposure starting in 2014 that includes sensitivity values for early life exposures and OEHHA toxicity values adopted in 2013.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

BAAQMD RESPONSE

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	9/23/2019
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	cdivine@illingworthrodkin.com
Project Name	Anton Millbrae
Address	1100 El Camino Real
City	Millbrae
County	San Mateo
Type (residential, commercial, mixed use, industrial, etc.)	Res & Hotel
Project Size (# of units or building square feet)	384du, 187 rooms
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in **Table A**. Incomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/**, and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B blue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (meters) or MEI[1]	FACID (Plant No.)	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments
200	20169	City of Millbrae - Dept Utilities and Operations	350 Madrone Street	0.153	0.0003	0.0002		Generator		Emissions file attached. Use Health Risk Calculator
160	**106250**	**San Francisco Water Department**	**1000 El Camino Real**	**1.598**	**0.0079**	**--**		**GDF**		**Permitted max throughput for 2019: 400,000 gallons/year**
130	14241	SFPUC - Water Supply & Treatment	1000 El Camino Real	1.791	0.0114	0.0589		Generator		Emissions file attached. Use Health Risk Calculator
240	**22217**	**Orchard Supply Company, LLC - Site #210**	**900 El Camino Real**	**1.42**	**0.002**	**0.0018**		**Generator (2)**		**New Plant No. 24451. Emissions file attached**
280	19561	Verizon Wireless (SFO West)	1009A Hemlock Drive	1.404	0.0021	0.0018		Generator		Emissions file attached. Use Health Risk Calculator
120	**102970**	**Olympic**	**1009 El Camino Real**	**5.959**	**0.0294**	**--**		**GDF**		**Permitted max throughput for 2019: 600,000 gallons/year**

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

Date last updated: 03/13/2018

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information	
Date of Request	9/23/2019
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	cdivine@illingworthrodkin.com
Project Name	Anton Millbrae
Address	1100 El Camino Real
City	Millbrae
County	San Mateo
Type (residential, commercial, mixed use, industrial, etc.)	Res & Hotel
Project Size (# of units or building square feet)	384du, 187 rooms
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A. Incomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/**, and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B blue section only.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Areana Flores at 415-749-4616, or aflores@baaqmd.gov

Table B: Google Earth data

Distance from Receptor (meters) or MEI[1]	FACID (Plant No.)	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	I&R Action
200	20169	City of Millbrae - Dept Utilities and Operations	350 Madrone Street	0.2	0.00005	0.0002		Generator		Emissions file attached. Use Health Risk Calculator	Computed
160	**106250**	**San Francisco Water Department**	**1000 El Camino Real**	**0.03**	**0.0001**	--		**GDF**		**Permitted max throughput for 2019: 400,000 gallons/year**	**Computed**
130	14241	SFPUC - Water Supply & Treatment	1000 El Camino Real	0.1	0.0002	0.0002		Generator		Emissions file attached. Use Health Risk Calculator	Computed
240	**24451 (22217)**	**San Francsico Water Department (Orchard Supply Company, LLC - Site #210)**	**900 El Camino Real**	**1.7**	**0.19**	**0.0001**		**Generator (2)**		**New Plant No. 24451. Emissions file attached**	**Computed**
280	19561	Verizon Wireless (SFO West)	1009A Hemlock Drive	0.3	0.001	0.0004		Generator		Emissions file attached. Use Health Risk Calculator	Computed
120	**102970**	**Olympic**	**1009 El Camino Real**	**0.04**	**0.0002**	--		**GDF**		**Permitted max throughput for 2019: 600,000 gallons/year**	**Computed**

Construction MEI

Distance from Receptor (meters) or MEI[1]	FACID (Plant No.)	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
300	20169	0.1	0.01	0.01
310	106250	0.1	-	0.01
		3.9	0.01	0.04
250	14241	0.1	0.01	0.01
380	22217	1.1	0.01	0.01
450	19561	0.3	0.01	0.01
285	102970	0.1	-	0.01

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.
7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
   a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
   b. The risk from natural
   c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
   d. Non co-residential dry
   e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
   f. Unless otherwise noted,
   g. This spray booth is considered to be insignificant.

Date last updated: 03/13/2018

Appendix C
Biological Resources Methodology Memorandum

1.0 INTRODUCTION

This memorandum (memo) was prepared to support Section 4.4 Biological Resources of the SCEA for El Camino Real Redevelopment Project (Project). Specifically, this memo describes the methods and results for determining the potential for special-status species to occur onsite.

2.0 METHODS

A desktop analysis, based on a review of existing information about sensitive biological resources known to occur near the project site, was conducted to determine whether biological resources are absent, present, or are likely to be present. For the purpose of this evaluation, special-status plant species include plants that are listed or designated as follows: 1) listed as threatened or endangered under the California Endangered Species Act (CESA) or Federal Endangered Species Act (FESA); 2) proposed for federal listing as threatened or endangered; 3) listed as state or federal candidate species; 4) designated as rare by the California Department of Fish and Wildlife (CDFW); or 5) designated as California Rare Plant Rank 1A, 1B, 2A or 2B species. Special-status animal species include species that are listed or designated as follows: 1) listed as threatened or endangered under CESA or FESA; 2) proposed for federal listing as threatened or endangered; 3) listed as state or federal candidate species; or 4) identified by CDFW as species of special concern or fully protected species.

Sensitive natural communities are those communities that are highly limited in distribution and may or may not contain rare, threatened, or endangered species. The California Natural Diversity Database (CNDDB) ranks natural communities according to their rarity and endangerment in California. Habitats are considered sensitive if they are identified on the CDFW List of Vegetation Alliances and Associations as being highly imperiled or classified by CDFW in the CNDDB as natural communities of special concern – Ranks S1 to S3.

Other information sources consulted to determine which special-status species could potentially occur in the project site included the following:

- USGS California 7.5-minute topographic quadrangles for Montara Mountain, San Francisco South, Hunter's Point and San Mateo;
- Aerial photographs of the project site and surrounding vicinity (Google Earth 2020);
- United States Fish and Wildlife Service (USFWS) list of endangered and threatened species that may occur in the project site (USFWS 2020a);
- USFWS Designated Critical Habitat (USFWS 2020a)
- USFWS National Wetlands Inventory (USFWS 2020b)
- The CDFW CNDDB plant and animal records within 5 miles of the project site (CDFW 2020a);
- Special Animals List (CDFW 2020b);
- California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants (CNPS 2020)
    - California Wildlife Habitat Relationships System (CDFW 2014).

Based on this review of existing information, a list of special-status species that have the potential to occur or are known to occur in the project site and vicinity was developed. The list was refined based on the habitat within and adjacent to the project site to determine the potential for those species to occur.

3.0 HABITAT COMMUNITIES

Habitat types within the project site were classified based on descriptions provided in *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988), as well as the California Natural Community List (CDFW 2020c), which is adapted from the technical approach and vegetation alliance classification system described in *A Manual of California Vegetation* (Sawyer et al. 2009). The habitat community present in the project site is Urban. No aquatic resources were identified within or adjacent to the project site. A description of the habitat within the project site is provided below.

3.1.1 Urban

The project site is completely developed with the El Rancho Inn and two residential buildings that are surrounded by surface parking. Minimal landscaped areas occur throughout the project site and include ornamental trees and shrubs planted adjacent to buildings, parking spots, and walkways. A small ornamental grass lawn occurs along the northeastern boundary of the project site.

4.0 RESULTS

4.1 SPECIAL-STATUS SPECIES

4.1.1 Plants

A total of 66 special-status plant species were identified based on a review of pertinent literature, the USFWS species list and CNDDB and CNPS database records (Appendix A). CNDDB special-status plant species occurrences were reviewed within 5 miles of the project site. For each species, habitat requirements were assessed and compared to the habitats in the project site and immediate vicinity to determine if potential habitat occurs in the project site. The project site does not provide suitable habitat for special-status plants due to the existing development.

4.1.2 Wildlife

A total of 35 special-status animal species were identified based on a review of pertinent literature, the USFWS species list (Appendix A), CNDDB database records (Appendix A), and a query of the California Wildlife Habitat Relationship System (CDFW 2014). CNNDB special-status animal species occurrences were reviewed within 5 miles of the project site. For each species, habitat requirements were assessed and compared to the habitats in the project site and the immediate vicinity to determine the species' potential to occur in or near the project site. The project site does not provide suitable habitat for special-status species due to the existing development.

4.2 CRITICAL HABITAT

The project site is not within USFWS-designated critical habitat (Appendix A). There is critical habitat within the vicinity of the project site, including California red-legged frog critical habitat located 1.5 miles southwest and Bay checkerspot butterfly critical habitat located 4 miles north of the project site. There is no suitable habitat present on the project site for either of these species.

Appendix A: Database Table Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Montara Mountain (3712254) OR San Francisco South (3712264) OR Hunters Point (3712263) OR San Mateo (3712253))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acanthomintha duttonii San Mateo thorn-mint	PDLAM01040	Endangered	Endangered	G1	S1	1B.1
Adela oplerella Opler's longhorn moth	IILEE0G040	None	None	G2	S2	
Agrostis blasdalei Blasdale's bent grass	PMPOA04060	None	None	G2	S2	1B.2
Allium peninsulare var. franciscanum Franciscan onion	PMLIL021R1	None	None	G5T2	S2	1B.2
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Arctostaphylos franciscana Franciscan manzanita	PDERI040J3	Endangered	None	G1	S1	1B.1
Arctostaphylos imbricata San Bruno Mountain manzanita	PDERI040L0	None	Endangered	G1	S1	1B.1
Arctostaphylos montana ssp. ravenii Presidio manzanita	PDERI040J2	Endangered	Endangered	G3T1	S1	1B.1
Arctostaphylos montaraensis Montara manzanita	PDERI042W0	None	None	G1	S1	1B.2
Arctostaphylos pacifica Pacific manzanita	PDERI040Z0	None	Endangered	G1	S1	1B.1
Arctostaphylos regismontana Kings Mountain manzanita	PDERI041C0	None	None	G2	S2	1B.2
Astragalus pycnostachyus var. pycnostachyus coastal marsh milk-vetch	PDFAB0F7B2	None	None	G2T2	S2	1B.2
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Banksula incredula incredible harvestman	ILARA14100	None	None	G1	S1	
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Brachyramphus marmoratus marbled murrelet	ABNNN06010	Threatened	Endangered	G3G4	S1	
Caecidotea tomalensis Tomales isopod	ICMAL01220	None	None	G2	S2S3	
Calicina minor Edgewood blind harvestman	ILARA13020	None	None	G1	S1	
Callophrys mossii bayensis San Bruno elfin butterfly	IILEPE2202	Endangered	None	G4T1	S1	
Carex comosa bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1
Centromadia parryi ssp. parryi pappose tarplant	PDAST4R0P2	None	None	G3T2	S2	1B.2
Charadrius alexandrinus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
Chorizanthe cuspidata var. cuspidata San Francisco Bay spineflower	PDPGN04081	None	None	G2T1	S1	1B.2
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Cicindela hirticollis gravida sandy beach tiger beetle	IICOL02101	None	None	G5T2	S2	
Cirsium andrewsii Franciscan thistle	PDAST2E050	None	None	G3	S3	1B.2
Cirsium fontinale var. fontinale fountain thistle	PDAST2E161	Endangered	Endangered	G2T1	S1	1B.1
Cirsium occidentale var. compactum compact cobwebby thistle	PDAST2E1Z1	None	None	G3G4T2	S2	1B.2
Collinsia corymbosa round-headed Chinese-houses	PDSCR0H060	None	None	G1	S1	1B.2
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
Dipodomys venustus venustus Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
Dirca occidentalis western leatherwood	PDTHY03010	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Dufourea stagei Stage's dufourine bee	IIHYM22010	None	None	G1G2	S1	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eriophyllum latilobum San Mateo woolly sunflower	PDAST3N060	Endangered	Endangered	G1	S1	1B.1
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	SSC
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S1	
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
Fritillaria biflora var. ineziana Hillsborough chocolate lily	PMLIL0V031	None	None	G3G4T1	S1	1B.1
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Gilia capitata ssp. chamissonis blue coast gilia	PDPLM040B3	None	None	G5T2	S2	1B.1
Gilia millefoliata dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
Grindelia hirsutula var. maritima San Francisco gumplant	PDAST470D3	None	None	G5T1Q	S1	3.2
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	PDAST4R065	None	None	G5T2	S2	1B.2
Hesperevax sparsiflora var. brevifolia short-leaved evax	PDASTE5011	None	None	G4T3	S2	1B.2
Hesperolinon congestum Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
Heteranthera dubia water star-grass	PMPON03010	None	None	G5	S2	2B.2
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
Horkelia marinensis Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Hydroporus leechi Leech's skyline diving beetle	IICOL55040	None	None	G1?	S1?	
Hypogymnia schizidiata island tube lichen	NLT0032640	None	None	G2G3	S2	1B.3
Ischnura gemina San Francisco forktail damselfly	IIODO72010	None	None	G2	S2	
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lasthenia californica ssp. macrantha perennial goldfields	PDAST5L0C5	None	None	G3T2	S2	1B.2
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Layia carnosa beach layia	PDAST5N010	Endangered	Endangered	G2	S2	1B.1
Leptosiphon croceus coast yellow leptosiphon	PDPLM09170	None	Endangered	G1	S1	1B.1
Leptosiphon rosaceus rose leptosiphon	PDPLM09180	None	None	G1	S1	1B.1
Lessingia arachnoidea Crystal Springs lessingia	PDAST5S0C0	None	None	G2	S2	1B.2
Lessingia germanorum San Francisco lessingia	PDAST5S010	Endangered	Endangered	G1	S1	1B.1
Lichnanthe ursina bumblebee scarab beetle	IICOL67020	None	None	G2	S2	
Limnanthes douglasii ssp. ornduffii Ornduff's meadowfoam	PDLIM02039	None	None	G4T1	S1	1B.1
Malacothamnus arcuatus arcuate bush-mallow	PDMAL0Q0E0	None	None	G2Q	S2	1B.2
Melospiza melodia pusillula Alameda song sparrow	ABPBXA301S	None	None	G5T2?	S2S3	SSC
Monardella sinuata ssp. nigrescens northern curly-leaved monardella	PDLAM18162	None	None	G3T2	S2	1B.2
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Mylopharodon conocephalus hardhead	AFCJB25010	None	None	G3	S3	SSC
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4	S3	
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Nyctinomops macrotis big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
Pentachaeta bellidiflora white-rayed pentachaeta	PDAST6X030	Endangered	Endangered	G1	S1	1B.1
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
Plebejus icarioides missionensis Mission blue butterfly	IILEPG801A	Endangered	None	G5T1	S1	
Polemonium carneum Oregon polemonium	PDPLM0E050	None	None	G3G4	S2	2B.2
Polygonum marinense Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
Potentilla hickmanii Hickman's cinquefoil	PDROS1B0U0	Endangered	Endangered	G1	S1	1B.1
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G5T1	S1	FP
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sanicula maritima adobe sanicle	PDAPI1Z0D0	None	Rare	G2	S2	1B.1
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Silene scouleri ssp. scouleri Scouler's catchfly	PDCAR0U1MC	None	None	G5T4T5	S2S3	2B.2
Silene verecunda ssp. verecunda San Francisco campion	PDCAR0U213	None	None	G5T1	S1	1B.2
Speyeria callippe callippe callippe silverspot butterfly	IILEPJ6091	Endangered	None	G5T1	S1	
Speyeria zerene myrtleae Myrtle's silverspot butterfly	IILEPJ608C	Endangered	None	G5T1	S1	
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Suaeda californica California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis sirtalis tetrataenia San Francisco gartersnake	ARADB3613B	Endangered	Endangered	G5T2Q	S2	FP
Trachusa gummifera San Francisco Bay Area leaf-cutter bee	IIHYM80010	None	None	G1	S1	
Trifolium amoenum two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Triphysaria floribunda San Francisco owl's-clover	PDSCR2T010	None	None	G2?	S2?	1B.2
Triquetrella californica coastal triquetrella	NBMUS7S010	None	None	G2	S2	1B.2
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Record Count: 111

CNPS California Native Plant Society — Inventory of Rare and Endangered Plants

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

61 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in Quads 3712264, 3712254 3712253 and 3712263;

Modify Search Criteria Export to Excel Modify Columns Modify Sort Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Acanthomintha duttonii	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	1B.1	S1	G1
Agrostis blasdalei	Blasdale's bent grass	Poaceae	perennial rhizomatous herb	May-Jul	1B.2	S2	G2
Allium peninsulare var. franciscanum	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	1B.2	S2	G5T2
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
Arctostaphylos franciscana	Franciscan manzanita	Ericaceae	perennial evergreen shrub	Feb-Apr	1B.1	S1	G1
Arctostaphylos imbricata	San Bruno Mountain manzanita	Ericaceae	perennial evergreen shrub	Feb-May	1B.1	S1	G1
Arctostaphylos montana ssp. ravenii	Presidio manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	1B.1	S1	G3T1
Arctostaphylos montaraensis	Montara manzanita	Ericaceae	perennial evergreen shrub	Jan-Mar	1B.2	S1	G1
Arctostaphylos pacifica	Pacific manzanita	Ericaceae	evergreen shrub	Feb-Apr	1B.1	S1	G1
Arctostaphylos regismontana	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	1B.2	S2	G2
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	Fabaceae	perennial herb	(Apr)Jun-Oct	1B.2	S2	G2T2
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
Centromadia parryi ssp. parryi	pappose tarplant	Asteraceae	annual herb	May-Nov	1B.2	S2	G3T2
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2
Chorizanthe cuspidata var. cuspidata	San Francisco Bay spineflower	Polygonaceae	annual herb	Apr-Jul(Aug)	1B.2	S1	G2T1
Chorizanthe robusta var. robusta	robust spineflower	Polygonaceae	annual herb	Apr-Sep	1B.1	S1	G2T1
Cirsium andrewsii	Franciscan thistle	Asteraceae	perennial herb	Mar-Jul	1B.2	S3	G3
Cirsium fontinale var. fontinale	Crystal Springs fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	1B.1	S1	G2T1
Cirsium occidentale var. compactum	compact cobwebby thistle	Asteraceae	perennial herb	Apr-Jun	1B.2	S2	G3G4T2
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	1B.2	S1	G1
Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	1B.2	S2	G2
Dirca occidentalis	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	1B.2	S2	G2
Eriophyllum latilobum	San Mateo woolly sunflower	Asteraceae	perennial herb	May-Jun	1B.1	S1	G1

Fritillaria biflora var. ineziana	Hillsborough chocolate lily	Liliaceae	perennial bulbiferous herb	Mar-Apr	1B.1	S1	G3G4T1
Fritillaria lanceolata var. tristulis	Marin checker lily	Liliaceae	perennial bulbiferous herb	Feb-May	1B.1	S2	G5T2
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
Gilia capitata ssp. chamissonis	blue coast gilia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G5T2
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	1B.2	S2	G2
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	Asteraceae	annual herb	Apr-Nov	1B.2	S2	G5T2
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Asteraceae	annual herb	Mar-Jun	1B.2	S2	G4T3
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	1B.1	S1	G1
Heteranthera dubia	water star-grass	Pontederiaceae	perennial herb (aquatic)	Jul-Oct	2B.2	S2	G5
Horkelia cuneata var. sericea	Kellogg's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.1	S1?	G4T1?
Horkelia marinensis	Point Reyes horkelia	Rosaceae	perennial herb	May-Sep	1B.2	S2	G2
Hypogymnia schizidiata	island rock lichen	Parmeliaceae	foliose lichen (null)		1B.3	S1	G2
Lasthenia californica ssp. macrantha	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	1B.2	S2	G3T2
Leptosiphon croceus	coast yellow leptosiphon	Polemoniaceae	annual herb	Apr-Jun	1B.1	S1	G1
Leptosiphon rosaceus	rose leptosiphon	Polemoniaceae	annual herb	Apr-Jul	1B.1	S1	G1
Lessingia arachnoidea	Crystal Springs lessingia	Asteraceae	annual herb	Jul-Oct	1B.2	S2	G2
Lessingia germanorum	San Francisco lessingia	Asteraceae	annual herb	(Jun)Jul-Nov	1B.1	S1	G1
Lilium maritimum	coast lily	Liliaceae	perennial bulbiferous herb	May-Aug	1B.1	S2	G2
Limnanthes douglasii ssp. ornduffii	Ornduff's meadowfoam	Limnanthaceae	annual herb	Nov-May	1B.1	S1	G4T1
Malacothamnus aboriginum	Indian Valley bush-mallow	Malvaceae	perennial deciduous shrub	Apr-Oct	1B.2	S3	G3
Malacothamnus arcuatus	arcuate bush-mallow	Malvaceae	perennial evergreen shrub	Apr-Sep	1B.2	S2	G2Q
Malacothamnus davidsonii	Davidson's bush-mallow	Malvaceae	perennial deciduous shrub	Jun-Jan	1B.2	S2	G2
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	(Apr)May-Sep(Oct)	1B.2	S2	G2
Monardella sinuata ssp. nigrescens	northern curly-leaved monardella	Lamiaceae	annual herb	(Apr)May-Jul(Aug-Sep)	1B.2	S2	G3T2
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	(Feb)Mar-Jul	1B.2	S3	G3
Pentachaeta bellidiflora	white-rayed pentachaeta	Asteraceae	annual herb	Mar-May	1B.1	S1	G1
Plagiobothrys chorisianus var. chorisianus	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.2	S1	G3T1Q
Polemonium carneum	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	2B.2	S2	G3G4
Potentilla hickmanii	Hickman's cinquefoil	Rosaceae	perennial herb	Apr-Aug	1B.1	S1	G1
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
Silene scouleri ssp. scouleri	Scouler's catchfly	Caryophyllaceae	perennial herb	(Mar-May)Jun-Aug(Sep)	2B.2	S2S3	G5T4T5
Silene verecunda ssp. verecunda	San Francisco campion	Caryophyllaceae	perennial herb	(Feb)Mar-Jun(Aug)	1B.2	S1	G5T1
Suaeda californica	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	1B.1	S1	G1
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
Triphysaria floribunda	San Francisco owl's-clover	Orobanchaceae	annual herb	Apr-Jun	1B.2	S2?	G2?
Triquetrella californica	coastal triquetrella	Pottiaceae	moss		1B.2	S2	G2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 10 January 2020].

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- About the Rare Plant Program
- CNPS Home Page
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Contributors

- The Calflora Database
- The California Lichen Society
- California Natural Diversity Database
- The Jepson Flora Project
- The Consortium of California Herbaria
- CalPhotos

Questions and Comments

rareplants@cnps.org

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Millbrae SCEA

LOCATION

San Mateo County, California

DESCRIPTION

Redevelopment

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

2. [NOAA Fisheries](), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Salt Marsh Harvest Mouse Reithrodontomys raviventris No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/613	Endangered
Southern Sea Otter Enhydra lutris nereis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8560	Threatened Marine mammal

Birds

NAME	STATUS
California Clapper Rail Rallus longirostris obsoletus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered
California Least Tern Sterna antillarum browni No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened

Short-tailed Albatross Phoebastria (=Diomedea) albatrus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/433

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8035

Reptiles

NAME	STATUS
Green Sea Turtle Chelonia mydas No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199	Threatened
San Francisco Garter Snake Thamnophis sirtalis tetrataenia No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5956	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS

Delta Smelt Hypomesus transpacificus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Tidewater Goby Eucyclogobius newberryi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Insects

NAME	STATUS
Mission Blue Butterfly Icaricia icarioides missionensis There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6928	Endangered
Myrtle's Silverspot Butterfly Speyeria zerene myrtleae No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6929	Endangered
San Bruno Elfin Butterfly Callophrys mossii bayensis There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered

Flowering Plants

NAME	STATUS
Hickman's Potentilla Potentilla hickmanii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6343	Endangered

San Mateo Woolly Sunflower Eriophyllum latilobum — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7791

White-rayed Pentachaeta Pentachaeta bellidiflora — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7782

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/

conservation-measures.php

- Nationwide conservation measures for birds
  http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Oystercatcher Haematopus bachmani — Breeds Apr 15 to Oct 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9591

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

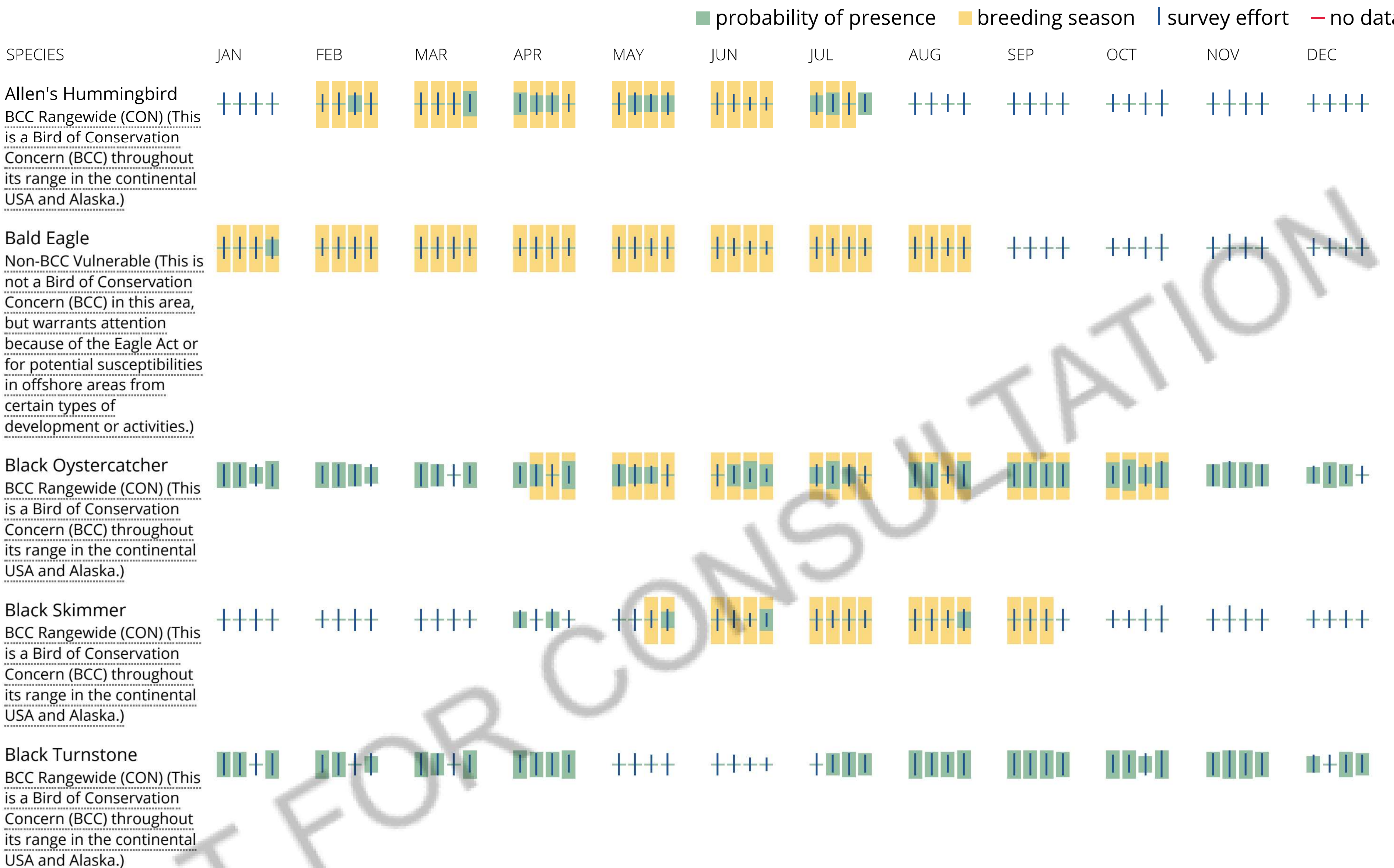
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



SPECIES

Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

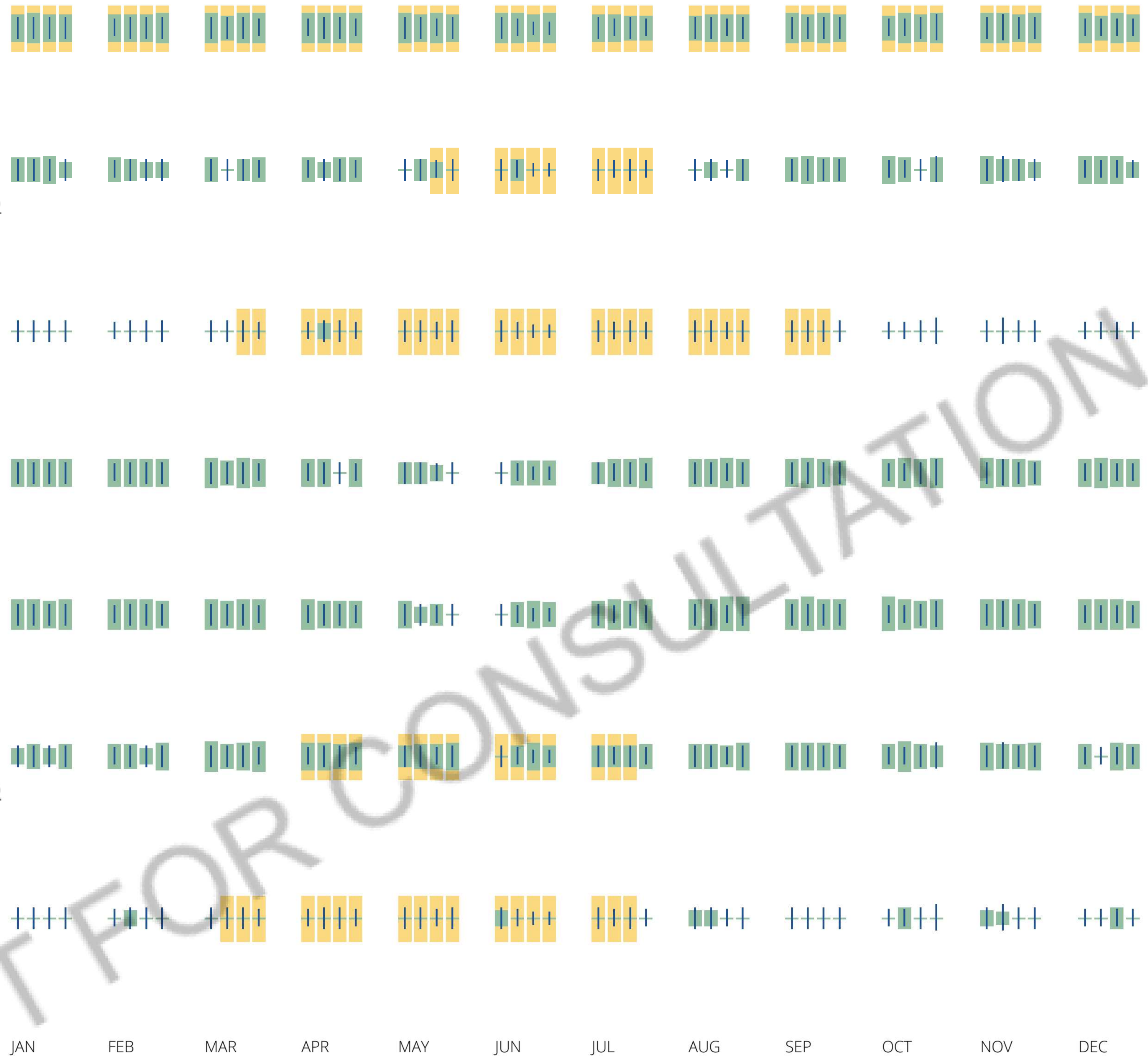
Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

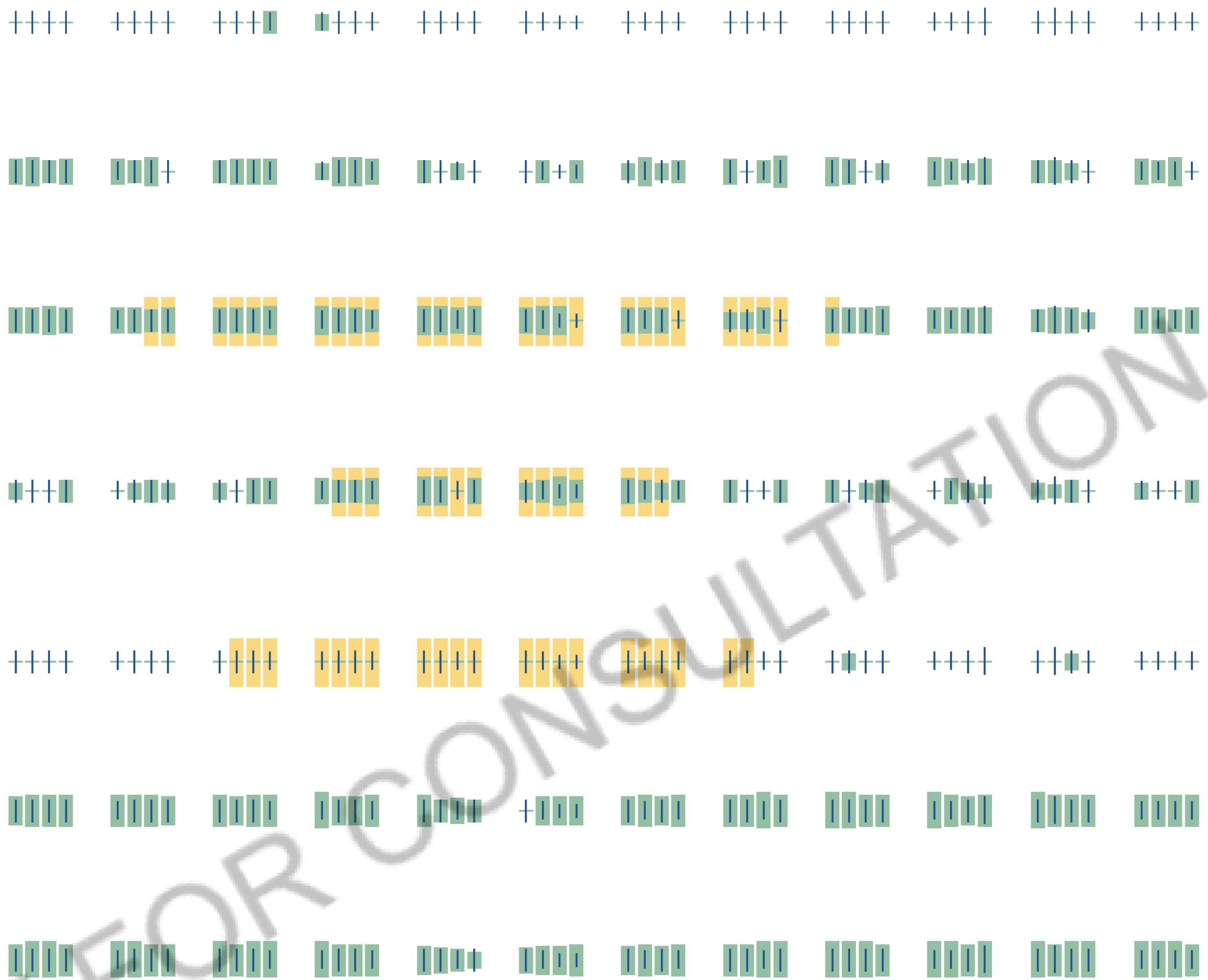
Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

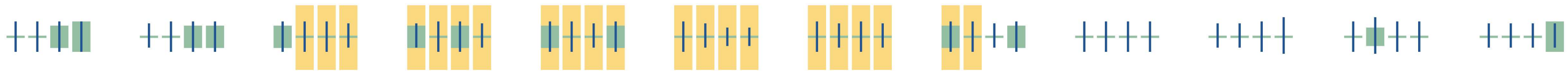
Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

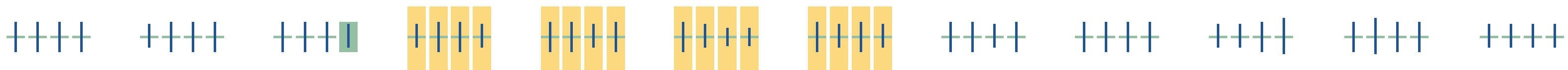
Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter *Enhydra lutris nereis*
https://ecos.fws.gov/ecp/species/8560

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix D
Arborist Report

TREE SURVEY REPORT

1100 EL CAMINO REAL
MILLBRAE, CALIFORNIA

Submitted to:

Anton Development Company, LLC
950 Tower Lane, Suite 1225
Foster City, CA 94404

Prepared by:

David L. Babby
Registered Consulting Arborist® #399
Board-Certified Master Arborist® #WE-4001B

Initial: May 23, 2017
Current: August 12, 2020

TABLE OF CONTENTS

EXHIBITS

1.0 INTRODUCTION

Anton Development Company has retained me to prepare this *Tree Survey Report* in connection with the future redevelopment of 1100 El Camino Real, Millbrae (currently occupied by El Rancho Inn). This report serves to update my prior one, dated 5/23/17, specific tasks performed in 2017 and currently are as follows:

- Visit the site on 5/17/17 and 8/7/20 to identify 74 trees[1] which are located within or immediately adjacent to the subject site and have trunks or multiple trunks with a total diameter of ≥6 inches (at 24 inches above grade). This report captures one additional tree, #74, not presented in my 2017 report, but now has a trunk diameter ≥6 inches.
- Determine each trunk diameter at 24 inches above grade (rounded to the nearest inch), and trees listed with more than one diameter are comprised of multiple trunks. This report represents the existing diameters of all trees not defined as a "protected tree"[2] in 2017.
- Identify which are defined as protected trees pursuant to City Code.
- Estimate each tree's canopy spread (rounded to the nearest fifth).
- Ascertain each tree’s health and structural integrity, and assign an overall condition rating (e.g. good, fair, poor or dead).
- Determine each tree’s suitability for preservation (e.g. good, moderate or low).
- Provide details regarding pertinent site conditions, and health/structural issues.
- Assign numbers to the trees, and show each on the two site maps presented in Exhibit B; base maps include Sheet 3 and 4 of the *ALTA/NSPS Land Title Survey* by Morrow Engineering, dated 10/26/16. For trees not shown on the survey, identify their roughly approximate center of trunk locations (red arrow).
- Affix round metal tags with corresponding engraved numbers to each tree. For #69 and 70, their tags are affixed to the wood fence adjacent to their trunks.
- Obtain photographs; see Exhibit C. The photos of #10, 25 and 74 were obtained on 8/7/20, and all others on 5/17/17.
- Prepare this report containing the above information, and submit as a PDF document.

[1] Section 9.45.040 of the City of Millbrae Municipal Code defines a "tree" as having a trunk or multiple trunks with a diameter of ≥6" (circumference of 19") obtained at 24" inches above mean grade level.
[2] Section 9.45.040 defines a "protected tree" as having a trunk or multiple trunks with a diameter of ≥11.5" (circumference of 36") obtained 24" above mean grade level.

2.0 TREE COUNT AND COMPOSITION

Seventy-four (74) trees of 15 various species were inventoried for this report. They are sequentially numbered **1 thru 74**, and the table below identifies their names, assigned numbers, counts and overall percentages.

NAME	TREE NUMBER(S)	COUNT	% OF TOTAL
Blackwood acacia	50-52	3	4%
Blue gum	48, 49, 53	3	4%
Cabbage palm	33, 38	2	3%
Canary Island date palm	13, 14, 25, 27, 28, 31, 32, 34-37, 41, 43, 44, 46, 72, 73	17	23%
Canary Island pine	60	1	1%
Coast redwood	29, 30, 57-59, 64-70	13	18%
Crape myrtle	17-22, 24	8	11%
Pear tree	47	1	1%
Flowering plum	51	1	1%
Glossy privet	62	1	1%
Lemonwood tree	42	1	1%
Mexican fan palm	1, 2, 4, 5, 23, 26	6	8%
Monterey pine	54-56	3	4%
Olive tree	6-13, 15, 16, 71	11	15%
Queen palm	39, 40, 45	3	4%
	Total	**74**	**100%**

As illustrated within the table, the site populated predominantly by palms trees and redwoods. Regarding the palms, combined, they represent 38-percent of the total trees, consisting primarily of Canary Island, followed by Mexican fan, Queen and Cabbage.

Specific information regarding each tree is presented within the table in Exhibit A. The trees' numbers and approximate locations can be viewed on the two site maps in Exhibit B, and photographs are presented in Exhibit C.

Fifty-five (55) trees are regulated by City Code as protected trees due to having single or combined multiple trunks with diameters exceeding 11.5 inches at 24 inches above mean existing grade; they include #1-5, 8, 10, 13, 14, 22, 23, 25-44, 46, 48, 49, 51, 53-61 and 63-73. This list include two additional trees, #10 and 25, not included in the 2017 report due to previously being less than protected tree size.

Trees #1, 2 and 5 originate from the public right-of-way along El Camino Real, and as such, are regarded as street trees.

The trunks of trees #64 thru 70 are located offsite on the neighboring northern property; they form a dense, solid row along the rear, northwest portion of the site.

3.0 SUITABILITY FOR TREE PRESERVATION

Each tree has been assigned either a “good,” “moderate” or “low” suitability for preservation rating as a means to cumulatively measure its existing health, structural integrity, anticipated life span, remaining life expectancy, location, growing space, size, species, tolerance to construction impacts, frequency of pruning and care needed, and safety to property and persons within striking distance. Descriptions of these ratings and their respective tree numbers are provided below; the good category comprises 10 trees (or 14%), the moderate category 55 (or 74%), and the low category 9 (or 12%).

Good: Applies to #17-20, 27, 28, 30-32 and 60.

These trees appear relatively healthy and structurally stable; have no apparent, significant health issues or structural defects; present a good potential for contributing long-term to the site; and typically require only periodic care and monitoring to maintain their longevity and structural integrity.

Moderate: Applies to #1-16, 20-26, 29, 34-38, 41-49, 53-55, 57-59, 61, 63-71, 73 and 74.

These trees contribute to the site, but at levels less than those assigned a good suitability; have health and/or structural issues which may or may not be reasonably addressed and properly mitigated; and more frequent care and monitoring is typically required to maintain and/or improve their longevity. In the case of #71, continued decline, a lack of pruning, and/or targets introduced within striking distance would result in a low suitability.

Low: Applies to #33, 39, 40, 50-52, 56, 62 and 72.

These trees are in notably poor, declining or dead condition, and expected to worsen regardless of tree care measures employed (i.e. beyond improvement or likely recovery). As a general guideline, these trees are not suitable for incorporating into the future landscape, and their removal at this time is the appropriate action regardless of any future development.

4.0 ASSUMPTIONS AND LIMITING CONDITIONS

- All information presented herein covers only the inventoried trees, and reflects their size, condition, and areas viewed from the ground and project site on 5/17/17 and 8/7/20.
- The documented condition and suitability ratings of dormant trees are subject to change once they can be more fully observed following the regrowth of new leaves.
- My observations were performed visually without probing, coring, dissecting or excavating. I cannot, in any way, assume responsibility for any defects that could only have been discovered by performing the mentioned services in the specific area(s) where a defect was located.
- The assignment pertains solely to trees listed in Exhibit A. I hold no opinion towards other trees on or surrounding the project area.
- I cannot provide a guarantee or warranty, expressed or implied, that deficiencies or problems of any trees or property in question may not arise in the future.
- No assurance can be offered that if all my recommendations and precautionary measures (verbal or in writing) are accepted and followed, that the desired results may be achieved.
- I cannot guarantee or be responsible for the accuracy of information provided by others.
- I assume no responsibility for the means and methods used by any person or company implementing the recommendations provided in this report.
- The information provided herein represents my opinion. Accordingly, my fee is in no way contingent upon the reporting of a specified finding, conclusion or value.
- The trunk locations shown on the site maps in Exhibit B are intended to only serve as roughly approximate and shall not be considered surveyed points.
- This report is proprietary to me and may not be copied or reproduced in whole or part without prior written consent. It has been prepared for the sole and exclusive use of the parties to who submitted for the purpose of contracting services provided by David L. Babby.
- If any part of this report or copy thereof be lost or altered, the entire evaluation shall be invalid.

Prepared By: ______________________ Date: August 12, 2020

David L. Babby
Registered Consulting Arborist® #399
Board-Certified Master Arborist® #WE-4001B
CA Licensed Tree Service Contractor #796763 (C61/D49)

EXHIBIT A:

TREE INVENTORY TABLE

(ten sheets)

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE		CONDITION			Suitability for Preservation (Good/Moderate/Low)	Protected Tree
		Trunk Diameter (in.)	Canopy Spread (ft.)	Health Condition (100%=Best, 0%=Worst)	Structural Integrity (100%=Best, 0%=Worst)	Overall Condition (Good/Fair/Poor/Dead)		
1	Mexican fan palm (*Washingtonia robusta*)	23	20	50%	70%	Fair	Moderate	X
	Comments: Adjacent to wall and driveway entry. Within a small square planter surrounded by pavement along all sides. Notable nutrient deficiency.							
2	Mexican fan palm (*Washingtonia robusta*)	16	15	60%	70%	Fair	Moderate	X
	Comments: Chlorotic. Notable nutrient deficiency.							
3	Canary Island date palm (*Phoenix canariensis*)	44	30	50%	80%	Fair	Moderate	X
	Comments: Highly chlorotic lower crown. Notable nutrient deficiency.							
4	Mexican fan palm (*Washingtonia robusta*)	21	10	50%	70%	Fair	Moderate	X
	Comments: 10' long dead thatch. Chlorotic. Notable nutrient deficiency.							
5	Mexican fan palm (*Washingtonia robusta*)	17	15	60%	70%	Fair	Moderate	X
	Comments: 5' long dead thatch.							
6	Olive tree (*Olea europaea*)	9	15	40%	50%	Poor	Moderate	
	Comments: Trunk bifurcates at 3.5' high. Grows towards lot, away from adjacent building.							
7	Olive tree (*Olea europaea*)	9	20	60%	40%	Fair	Moderate	
	Comments: Asymmetrical canopy grows away from adjacent building, trunk sweeping NE. Has a prominent buttress root growing towards building.							
8	Olive tree (*Olea europaea*)	8, 8	20	60%	40%	Fair	Moderate	X
	Comments: Asymmetrical growth away from adjacent building. Significantly pruned in past.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Canopy Spread (ft.)	CONDITION: Health Condition (100%=Best, 0%=Worst)	CONDITION: Structural Integrity (100%=Best, 0%=Worst)	CONDITION: Overall Condition (Good/Fair/Poor/Dead)	Suitability for Preservation (Good/Moderate/Low)	Protected Tree
9	Olive tree (*Olea europaea*)	9	20	60%	50%	Fair	Moderate	
	Comments: Prominent buttress root towards building. Canopy is mostly one-sided along building.							
10	Olive tree (*Olea europaea*)	7, 6	20	60%	40%	Poor	Moderate	X
	Comments: The two trunks originate at grade and wrap around another. High canopy. Branches encroach on roof.							
11	Olive tree (*Olea europaea*)	9	25	60%	60%	Fair	Moderate	
	Comments: Three codominant leaders at 5.5' high. Thin interior. Balanced form.							
12	Olive tree (*Olea europaea*)	9	20	60%	50%	Fair	Moderate	
	Comments: Large 2.3' tall by 8" wide wound near ground. Buttress roots grow against adjacent wall.							
13	Olive tree (*Olea europaea*)	5, 5, 5, 4	30	60%	50%	Fair	Moderate	X
	Comments: Broad canopy.							
14	Canary Island date palm (*Phoenix canariensis*)	~48	35	60%	80%	Fair	Moderate	X
	Comments: Base is covered by shrubs. Nutrient deficiency.							
15	Olive tree (*Olea europaea*)	9	15	60%	40%	Fair	Moderate	
	Comments: Grows with a distinct lean away from wall, and trunk bifurcates at 3.5' high into codominants forming a weak union. Significantly pruned in past and has a high crown. Has a few decaying wounds, one along trunk and another along southern limb.							
16	Olive tree (*Olea europaea*)	9	15	60%	40%	Fair	Moderate	
	Comments: Has a prominent buttress root. Asymmetrical canopy grows towards lot. Adjacent to wall.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Canopy Spread (ft.)	CONDITION: Health Condition (100%=Best, 0%=Worst)	CONDITION: Structural Integrity (100%=Best, 0%=Worst)	CONDITION: Overall Condition (Good/Fair/Poor/Dead)	Suitability for Preservation (Good/Moderate/Low)	Protected Tree
17	Crape myrtle (*Lagerstroemia indica*)	9	20	80%	80%	Good	Good	
	Comments: Dense canopy.							
18	Crape myrtle (*Lagerstroemia indica*)	9	15	70%	70%	Good	Good	
	Comments: Prominent buttress root towards south.							
19	Crape myrtle (*Lagerstroemia indica*)	9	15	70%	70%	Good	Good	
	Comments: Within a narrow planter.							
20	Crape myrtle (*Lagerstroemia indica*)	11	20	60%	70%	Fair	Good	
	Comments: Within a narrow planter. Diameter is 10.6".							
21	Crape myrtle (*Lagerstroemia indica*)	9	15	60%	60%	Fair	Moderate	
	Comments:							
22	Crape myrtle (*Lagerstroemia indica*)	5, 5, 5, 4, 3	15	50%	40%	Poor	Moderate	X
	Comments: Multistem structure (all other crape myrtles have single trunks). Sparse canopy.							
23	Mexican fan palm (*Washingtonia robusta*)	14	10	60%	70%	Fair	Moderate	X
	Comments: 8' long dead thatch. Notable nutrient deficiency.							
24	Crape myrtle (*Lagerstroemia indica*)	8	10	50%	60%	Fair	Moderate	
	Comments: Within a narrow finger planter island.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Canopy Spread (ft.)	CONDITION: Health Condition (100%=Best, 0%=Worst)	CONDITION: Structural Integrity (100%=Best, 0%=Worst)	CONDITION: Overall Condition (Good/Fair/Poor/Dead)	Suitability for Preservation (Good/Moderate/Low)	Protected Tree
25	Canary Island date palm (*Phoenix canariensis*)	28	15	60%	80%	Fair	Moderate	X
	Comments: Young palm at 15' tall (grew since 2017).							
26	Mexican fan palm (*Washingtonia robusta*)	16	15	50%	60%	Fair	Moderate	X
	Comments: 10' long dead thatch.							
27	Canary Island date palm (*Phoenix canariensis*)	48	30	70%	80%	Good	Good	X
	Comments:							
28	Canary Island date palm (*Phoenix canariensis*)	48	25	70%	80%	Good	Good	X
	Comments:							
29	Coast redwood (*Sequoia sempervirens*)	50	35	40%	60%	Poor	Moderate	X
	Comments: Base is within a few feet of walk. Multiple tops for the top 25' of a 75' tall tree. Canopy is quite thin and sparse. Canopy is also asymmetrical, growing away and intertwined with #30's. Dead branches concentrated predominantly in lower crown.							
30	Coast redwood (*Sequoia sempervirens*)	51	50	60%	70%	Fair	Good	X
	Comments: Asymmetrical growth away from #29's canopy. Dead branches.							
31	Canary Island date palm (*Phoenix canariensis*)	40	30	70%	80%	Good	Good	X
	Comments: Very high root initiation zone.							
32	Canary Island date palm (*Phoenix canariensis*)	33	30	60%	80%	Fair	Good	X
	Comments: Very high root initiation zone. Within and nearly outgrowing a circular planter.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE		CONDITION			Suitability for Preservation (Good/Moderate/Low)	Protected Tree
		Trunk Diameter (in.)	Canopy Spread (ft.)	Health Condition (100%=Best, 0%=Worst)	Structural Integrity (100%=Best, 0%=Worst)	Overall Condition (Good/Fair/Poor/Dead)		
33	Cabbage palm (*Cordyline australis*)	31	15	40%	20%	Poor	Low	X
	Comments:	Massive decaying hollow along trunk's east side. Basal wound along trunk's south side.						
34	Canary Island date palm (*Phoenix canariensis*)	~48	30	60%	80%	Fair	Moderate	X
	Comments:	Nutrient deficiency. Canopy intermingled with #35. Short height.						
35	Canary Island date palm (*Phoenix canariensis*)	~44	30	60%	80%	Fair	Moderate	X
	Comments:	Nutrient deficiency. Canopy intermingled with #34. Short, partly below #36. Chlorotic.						
36	Canary Island date palm (*Phoenix canariensis*)	~32	30	60%	40%	Fair	Moderate	X
	Comments:	Very high root initiation zone. Chlorotic, nutrient deficiency. Irregular trunk formation below pineapple, where there is a distinct depression. Possible low suitability.						
37	Canary Island date palm (*Phoenix canariensis*)	27	25	60%	40%	Fair	Moderate	X
	Comments:	Irregular trunk formation, quite narrow below pineapple. High root initiation zone. Possible low suitability.						
38	Cabbage palm (*Cordyline australis*)	23	20	40%	60%	Poor	Moderate	X
	Comments:	Dead limb at top west side. Declining.						
39	Queen palm (*Syagrus romanzoffiana*)	12	20	60%	30%	Poor	Low	X
	Comments:	Within a small square planter, growing up against column. Pronounced, one-sided crown towards south. Fruit hangs vertically. Has a basal, superficial wound.						
40	Queen palm (*Syagrus romanzoffiana*)	13	20	60%	30%	Poor	Low	X
	Comments:	Large wound near base, 1' tall, 6" wide and 6" deep; presents a structural concern, particularly long-term. Unbalanced canopy. Dead and live fronds on roof.						

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Canopy Spread (ft.)	CONDITION: Health Condition (100%=Best, 0%=Worst)	CONDITION: Structural Integrity (100%=Best, 0%=Worst)	CONDITION: Overall Condition (Good/Fair/Poor/Dead)	Suitability for Preservation (Good/Moderate/Low)	Protected Tree
41	Canary Island date palm (*Phoenix canariensis*)	40, 36	40	60%	60%	Fair	Moderate	X
	Comments: Formed by two trunks, the SE one growing on top of a highly buckled curb. Chlorotic due to nutrient deficiency. Fronds on adjacent roof.							
42	Lemonwood tree (*Pittosporum eugenioides*)	12	30	40%	40%	Poor	Moderate	X
	Comments: Watersprouts throughout an open crown. Sparse canopy. Pronounced buttress roots towards the north. Four codominants begin at 4' high. Vase shaped.							
43	Canary Island date palm (*Phoenix canariensis*)	~36	30	60%	70%	Fair	Moderate	X
	Comments: Nutrient deficiency. Good suitability if health improves.							
44	Canary Island date palm (*Phoenix canariensis*)	~48	30	60%	70%	Fair	Moderate	X
	Comments: Chlorotic. Nutrient deficiency. Good suitability if health improves.							
45	Queen palm (*Syagrus romanzoffiana*)	9	20	50%	40%	Poor	Moderate	
	Comments: Two dead fronds. Unbalanced crown. Chlorotic canopy due to nutrient deficiency. Has a buried root collar.							
46	Canary Island date palm (*Phoenix canariensis*)	~24	20	80%	70%	Good	Moderate	X
	Comments: Short at 20-25' tall (young).							
47	Pear tree (*Pyrus communis*)	3, 3, 3	10	70%	40%	Fair	Moderate	
	Comments: Crowded-growing conditions adjacent to #46. Ivy along trunk.							
48	Blue gum (*Eucalyptus globulus*)	~35	45	80%	50%	Fair	Moderate	X
	Comments: Immediately adjacent to, and canopy is contiguous with #49. Trunk bifurcates at 5' high. Large surface root found 20' away.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE		CONDITION			Suitability for Preservation (Good/Moderate/Low)	Protected Tree
		Trunk Diameter (in.)	Canopy Spread (ft.)	Health Condition (100%=Best, 0%=Worst)	Structural Integrity (100%=Best, 0%=Worst)	Overall Condition (Good/Fair/Poor/Dead)		
49	Blue gum (*Eucalyptus globulus*)	~28	30	70%	50%	Fair	Moderate	X
	Comments: Immediately adjacent to, and canopy is contiguous with #48. Asymmetrical. Buried root collar.							
50	Blackwood acacia (*Acacia melanoxylon*)	8	10	40%	30%	Poor	Low	
	Comments: Crowded-growing conditions below (understory to) #48, 49 and 54.							
51	Blackwood acacia (*Acacia melanoxylon*)	20	15	60%	30%	Poor	Low	X
	Comments: Crowded-growing conditions, and top sweeps sharply away from #49.							
52	Blackwood acacia (*Acacia melanoxylon*)	5.6, 5.6	15	50%	30%	Poor	Low	
	Comments: Comprised of two trunks forming a very weak union at grade.							
53	Blue gum (*Eucalyptus globulus*)	22	20	70%	40%	Fair	Moderate	X
	Comments: Poor form, mostly one-sided away from #54. Crowded-growing conditions. Pronounced buttress roots surfaced towards adjacent fence. Small girdling root around base.							
54	Monterey pine (*Pinus radiata*)	43	65	50%	40%	Poor	Moderate	X
	Comments: Excessive limb weight. Large deadwood within lower canopy. Adjacent to high-voltage electrical wires. Infected by pine pitch canker.							
55	Monterey pine (*Pinus radiata*)	52	60	50%	40%	Poor	Moderate	X
	Comments: Lower trunk bifurcates at 5.5' high. A large surface root seen 15' away. Large deadwood and excessive limb weight. Multi-leader crown. Adjacent to high-voltage electrical wires, and numerous stubs exist from improper past cuts made for clearance. A large scaffold limb originates from the trunk's east side, then sweeps southeast, its bottom at the trunk nears grade. Diameter measured immediately below this limb. Infected by pitch canker.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Canopy Spread (ft.)	CONDITION: Health Condition (100%=Best, 0%=Worst)	CONDITION: Structural Integrity (100%=Best, 0%=Worst)	CONDITION: Overall Condition (Good/Fair/Poor/Dead)	Suitability for Preservation (Good/Moderate/Low)	Protected Tree
56	Monterey pine (*Pinus radiata*)	36	45	30%	30%	Poor	Low	X
	Comments: Grows adjacent to high-voltage electrical wires, and stubs created from improper cuts made for clearance. Infected by pine pitch canker. Multi-leaders begin at 5' high. Multiple limbs cut along bottom of trunk's south side many years ago. Has very poor form, canopy being dominant and excessively heavy towards the parking lot side. Extremely sparse and declining canopy, most notably along the top north side. Low canopy.							
57	Coast redwood (*Sequoia sempervirens*)	12	15	60%	50%	Fair	Moderate	X
	Comments: Located at perimeter of #56. Has a thin and asymmetrical canopy.							
58	Coast redwood (*Sequoia sempervirens*)	52	50	40%	50%	Poor	Moderate	X
	Comments: Tall tree growing alongside high-voltage electrical wires and #59. Excessive limb weight, and has a notably sparse and thin canopy. Has a mat of small girdling roots around base.							
59	Coast redwood (*Sequoia sempervirens*)	38, 24	45	50%	70%	Fair	Moderate	X
	Comments: Tall tree with a thin top.							
60	Canary Island pine (*Pinus canariensis*)	39	45	70%	70%	Good	Good	X
	Comments: Tall tree. Sinuous lower SE limb, and a sizeable depression or seam at its attachment with the trunk (likely from a prior limb or wound). Typical amount of deadwood. Excessive limb weight.							
61	Flowering plum (*Prunus cerasifera*)	~18	25	50%	40%	Poor	Moderate	X
	Comments: Multiple leaders forming a weak union at 18" high.							
62	Glossy privet (*Ligustrum lucidum*)	8	15	50%	30%	Poor	Low	
	Comments: Asymmetrical growth away from #63. Crowded-growing conditions beneath #61 and 63. Vertical decay column along trunk and a dead limb.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Canopy Spread (ft.)	CONDITION: Health Condition (100%=Best, 0%=Worst)	CONDITION: Structural Integrity (100%=Best, 0%=Worst)	CONDITION: Overall Condition (Good/Fair/Poor/Dead)	Suitability for Preservation (Good/Moderate/Low)	Protected Tree
63	Coast redwood (*Sequoia sempervirens*)	~70	50	70%	40%	Fair	Moderate	X
	Comments: Very dense canopy, its north side below two sets of high-voltage distribution wires. Multiple tops, the central trunks were likely reduced in height, or broke, sometime ago. Irregular form. Deadwood concentrated throughout the lower crown. Twig dieback. Multiple trunks begin at roughly 3' high. Adjacent to wood fence and footings.							
64	Coast redwood (*Sequoia sempervirens*)	17	20	60%	30%	Poor	Moderate	X
	Comments: Height is roughly 23 feet, and is topped below two sets of high-voltage distribution wires. Begins dense row of redwoods #64 thru 70, resembling a tall shrub line.							
65	Coast redwood (*Sequoia sempervirens*)	21	25	50%	30%	Poor	Moderate	X
	Comments: Same as for #64.							
66	Coast redwood (*Sequoia sempervirens*)	20	25	60%	30%	Poor	Moderate	X
	Comments: Same as for #64.							
67	Coast redwood (*Sequoia sempervirens*)	21	25	60%	30%	Poor	Moderate	X
	Comments: Same as for #64.							
68	Coast redwood (*Sequoia sempervirens*)	21	20	60%	30%	Poor	Moderate	X
	Comments: Same as for #64.							
69	Coast redwood (*Sequoia sempervirens*)	~23	25	60%	30%	Poor	Moderate	X
	Comments: Same as for #64.							

TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	SIZE: Trunk Diameter (in.)	SIZE: Canopy Spread (ft.)	CONDITION: Health Condition (100%=Best, 0%=Worst)	CONDITION: Structural Integrity (100%=Best, 0%=Worst)	CONDITION: Overall Condition (Good/Fair/Poor/Dead)	Suitability for Preservation (Good/Moderate/Low)	Protected Tree
70	Coast redwood (*Sequoia sempervirens*)	~25	25	60%	30%	Poor	Moderate	X
	Comments: Same as for #64.							
71	Olive tree (*Olea europaea*)	22	35	30%	50%	Poor	Moderate	X
	Comments: Within a raised planter, comprised of four leaders originating from the trunk at 18" high. Has a broad, balanced form. Large portion of its top center is dead, and the tree overall is declining. Moderate to low suitability.							
72	Canary Island date palm (*Phoenix canariensis*)	~36	20	60%	30%	Poor	Low	X
	Comments: Highly crowded-growing conditions, pinched between two buildings.							
73	Canary Island date palm (*Phoenix canariensis*)	~36	25	70%	40%	Fair	Moderate	X
	Comments: Crowded conditions against adjacent building. Two fronds scorched from heat vents.							
74	Crape myrtle (*Lagerstroemia indica*)	6	10	60%	60%	Fair	Moderate	
	Comments: Within finger island across from #24 and near #23.							

EXHIBIT B:

SITE MAPS

(two sheets)

Map Index

NO.	DATE	REVISION
1.	9-20-2016	ADDED 35 CENTER ST. TO ADDRESSES
2.	10-6-2016	COMMENTS
3.	10-26-2016	ADDED 3964 O.R. 603

BENCHMARK:
NAVD 88 FROM GPS OBSERVATIONS.

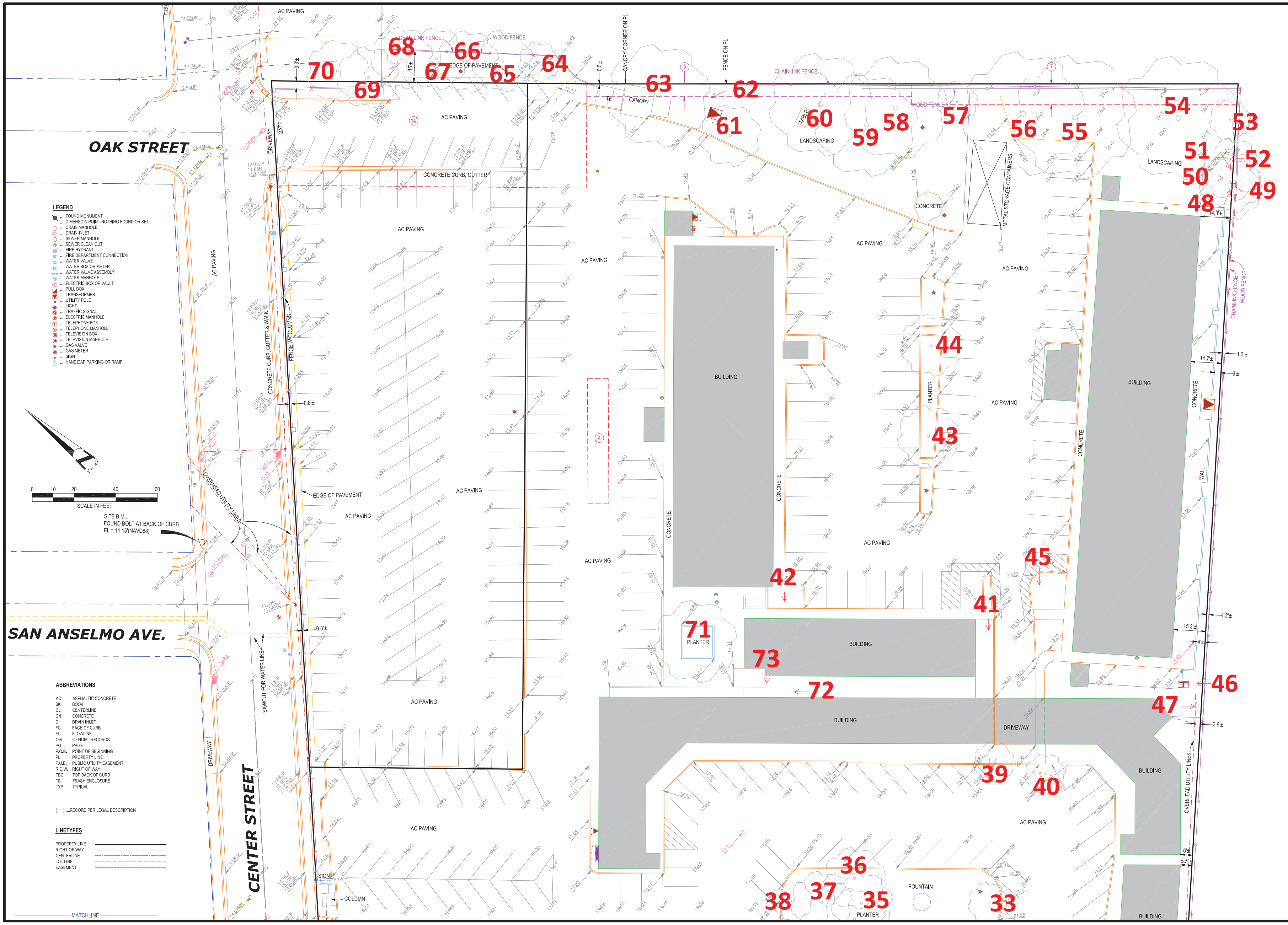
BASIS OF BEARINGS:
PARCEL MAP ENTITLED "MARINO VISTA PARK #2", PER VOL. 47, PG. 95, SAN MATEO COUNTY RECORDS.

DATE: 9-16-2016
SCALE: 1" = 20'
FIELD BOOK:
DRAWING NO. : 0213-007
DRAWN BY: A. Zarlos

ALTA/NSPS LAND TITLE SURVEY

PROJECT
1100, 1150 El Camino Real & 33 & 35 Center St.
City of Millbrae County of San Mateo California

Morrow Surveying
LAND SURVEYORS
1255 Starboard Drive
West Sacramento ~ CA ~ 95691
Phone: 916-372-8124
Fax: 916-372-8538
Email: adamz@morrowsurveying.com
www.morrowsurveying.com



NO.	DATE	COMMENTS
1.	9-20-2016	ADDED 35 CENTER ST. TO ADDRESSES
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REVISION

BENCHMARK:
NAVD 88 FROM GPS OBSERVATIONS.

BASIS OF BEARINGS:
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DATE: 9-16-2016
SCALE: 1" = 20'
FIELD BOOK:
DRAWING NO. : 0213-007
DRAWN BY: A. Zarfos

ALTA/NSPS LAND TITLE SURVEY

PROJECT
1100, 1150 El Camino Real & 33 & 35 Center St.
City of Millbrae County of San Mateo California

Morrow Surveying
LAND SURVEYORS
1255 Starboard Drive
West Sacramento ~ CA ~ 95691
Phone: 916-372-8124
Fax: 916-372-8538
Email: adamz@morrowsurveying.com
www.morrowsurveying.com

EXHIBIT C:

PHOTOGRAPHS

(nine sheets)

Photo Index


#1
EL RANCHO
INN & SUITES


#2
#3


#3
#4


#5


#6
#7


#8
#9


#10


#11


#12
#13
DODGE
4X4


#14
10
MILLBRAE SHUTTLE
4X4


#15
10
Suites


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#74

Appendix E
Historical Evaluation

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # ______________________
HRI # ______________________
Trinomial ______________________
NRHP Status Code ______________

Other Listings ______________________
Review Code ________ Reviewer ______________________ Date ________

***NRHP Status Code** 6Z
***Resource Name or #** (Assigned by recorder) El Rancho Inn

P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**

***a. County** San Mateo **and** (P2b and P2c or P2d. Attach a Location Map, as necessary.)

***b. USGS 7.5' Quad** Montara Mountain **Date** 1997 (photo revised) T__; R___;__ ¼ of __¼ of **Sec:**_____; ____________B.M.

c. Address: 1100 El Camino Real **City**: Millbrae, CA **Zip:** 94030

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN 021-324-320

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The El Rancho Inn comprises eight buildings spread over a 5.858-acre parcel. Each of the buildings that house guest rooms are single-loaded (except where noted otherwise), with exterior hallways only on the main elevation of the building, facing the parking areas in the center of the motel complex. The building was originally designed in the Mission style in 1949 with renovations and expansions ongoing since then. Despite the renovations and expansions, the property maintains certain Mission details limited to smooth stucco, overhanging eaves, and some tile roofing materials.

The property has three main parking areas that are encircled by the buildings. The property faces El Camino Real, within a heavily developed urban corridor near the San Francisco International Airport.
See Continuation Sheet on page 3.

***P3b. Resource Attributes:** (List attributes and codes) HP5. Motel/hotel
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) July 6, 2020, view facing east

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**
Anton DevCo
1676 N California Blvd. Suite 250
Walnut Creek, CA 94596

***P8. Recorded by:** (Name, affiliation, address)
Christine Cruiess and Eleanor Cox
ICF, 980 9th Street, Suite 1200
Sacramento, CA 95814

***P9. Date Recorded:** September 4, 2020
***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** N/A

***Attachments:** NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) ______________

***NRHP Status Code** 6Z
***Resource Name or #** (Assigned by recorder) El Rancho Inn

B1. Historic Name: El Rancho de Mill Motor Hotel
B2. Common Name: El Rancho Inn
B3. Original Use: Motel **B4. Present Use:** Motel
***B5. Architectural Style:** Mission
***B6. Construction History:** (Construction date, alteration, and date of alterations)

The El Rancho Motel was built in 1949, and at the time of construction had three buildings with rectangular plans arranged perpendicular to El Camino Real with a central courtyard and parking (Figure 1). This included the Office Building, Building 100, and a building that was demolished after 1965 that contained motel rooms (Figures 2 and 3). In 1949, the property occupied only the southwestern portion of the present-day parcel (Figures 1 through 3). The Office Building was wood frame, one-story tall with a one-story-tall porch, and had a 20-foot-tall bell tower (Figures 4 through 6). Located parallel to and just northwest of the office building, the now-demolished building was wood frame, one-story tall with a one-story-tall porch, and had 15 motel rooms (Figures 6 and 8). Following the same geometry, Building 100 is just northeast of the Office Building and originally had 20 units and was two stories tall with porches on each level. In addition, in 1949 the roadway configuration in the vicinity of the El Rancho Motel was different because Marino Vista Court terminated at the hotel parking area.
See Continuation Sheet on page 8.

***B7. Moved?** ☒ No ☐ Yes ☐ Unknown **Date:** N/A **Original Location:** N/A
***B8. Related Features:** N/A
B9. Architect: Unknown for original building, Robert Onorato and Associates for the 1977 renovation b. Builder: Unknown
***B10. Significance: Theme** Mission Style Architecture, Roadside Motels, Wilm Family **Area** Millbrae, CA
Period of Significance 1949 **Property Type** Motel **Applicable Criteria** N/A

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)
See Continuation Sheet on page 8.

B11. Additional Resource Attributes: (List attributes and codes)
None

***B12. References:**
See Continuation Sheet on page 15.

B13. Remarks:

***B14. Evaluator:**
Christine Cruiess
ICF, 980 9th Street, Suite 1200
Sacramento, CA 95814

***Date of Evaluation:**
September 4, 2020
(This space reserved for official comments.)

Sketch Map of 1100 El Camino Real/El Rancho Inn, Millbrae, CA. Source: Google Earth, imagery date March 26, 2018.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The El Rancho Inn comprises several buildings, parking lots, and landscaped areas including mature trees (redwoods), decorative flower beds, and lawns. The buildings are as follows: Office Building, Health Club Building, Terrace Café and Pool Complex, Building 100, Building 200, Building 300, Building 500, Building 600, and Building 700.

<u>Office Building</u>

The Office Building was part of the original motel that was built in 1949, although it has undergone several alterations since 1949 (Photo 1). In its current configuration, this is a one-story building with a gabled roof at the northern end and a hipped roof at the southern end that intersects with a porte-cochere (added ca. 1960) that has a hipped/flat roof. The side of the roof that is visible from the main entrance (west elevation) and parking area has a tiled roof, but the rear side of the building has composite roofing material. A long porch with stuccoed columns and arched openings spans the parking-lot side of the building. The walls of the building are clad in a smooth stucco. The southern terminus of the building has a bell tower. While the bell tower is original to the motel complex, the fenestration pattern has been altered. The three-and-a-half-story-tall stuccoed bell tower has modern window openings on all elevations and floors, whereas originally it appeared that only one elevation had windows on one elevation and the top-half story (compare to Figures 3 through 5). The original windows and doors throughout the building all appear to have been replaced with modern vinyl or metal versions.

Photo 1. View of the Office Building and bell tower facing southeast. Source: ICF 2020.

<u>Health Club Building</u>

The Health Club Building appears to have been built ca. 1950 and is a two-story building with a rectangular plan and a flat roof with an overhanging eave on the parking-lot side and an exterior stairwell. The walls are clad with stucco and the windows all appear to be replacement windows.

Photo 2. View of the Health Club Building facing southeast. Source: ICF 2020.

Terrace Café and Pool Complex

A portion of the restaurant building was built in 1956, although it appears that a substantial renovation was completed in the last quarter of the twentieth century (Photo 3) (City of Millbrae 1956).[1] The complex has a compound plan and is one-story tall. The building has a combination of rooflines including hipped, flat, and gabled roofs. The building has a stuccoed arcade with decorative tiles and arched openings. A bell tower with quatrefoil openings articulates the southern corner in the L plan. The windows and door openings all appear to contain modern, commercial-grade metal or vinyl windows and doors. The building is surrounded by a pool, a poolside terrace and amenities, and a landscaped area with mature plantings, including large redwood trees. The restaurant had indoor windows that looked into the swimming pool, where synchronized swimmers performed for diners in the restaurant.

Photo 3. View of the Terrace Café and Pool Complex and bell tower facing north-northeast. Source: ICF 2020.

Building 100

Building 100 is one of the original buildings dating to 1949 (Photo 4). The building is two stories tall with a hipped roof with an overhanging open eave clad in composite shingles. A porch spans the elevation on each of the floors. The first floor has stuccoed columns and arches, whereas the upper floor has square columns and a balustrade. Stairways are present at either end of the building. The windows and balustrade appear to have been replaced, but the doors may date to the mid-twentieth century (compare to Figures 4 through 6).

[1] Note that due to COVID-19, the permit research was completed by Linda Roberson at the City of Millbrae.

Photo 4. View of Building 100 facing southeast. The replacement railing was likely added ca. 1950 when Buildings 200 and 300 were built. Compare to Figures 4 through 6. Source: Google Earth 2019.

Building 200

Building 200 was built in phases and partially extant by ca. 1954 (Photo 5, Figures 6 and 7) and finished by 1965 (Figure 2) (Dawdy 2020). The building has a U-shaped plan and is two stories tall. The roof has a false hipped front with a tile roof that terminates in a composite-clad flat roof. The porches throughout this building match those on Building 100, although the first-floor arcade turns the corner at the ends of the building. Similarly, the windows all appear to be replacements, although the doors may be original to the 1950 construction campaign. Decorative Mission-style parapets articulate the corners and middle section of the building. Stairwells are located at the ends and the center of the building with arched doorways and windows. The building was cut through with a driveway, likely ca. 1977, to provide vehicular access to Buildings 500, 600, and 700.

Photo 5. View of Building 200 facing east-southeast. Source: Google Earth 2019.

Building 300

Building 300 is partially attached to the Terrace Café and Pool Complex and like Building 200, was likely built between ca. 1954 and 1965 (Dawdy 2020; University of California Santa Barbara Frame Finder 1965) (Photo 6, Figures 2 and 6). It is a two-story-tall building with an L-shaped plan. The detailing of the building is generally the same as Building 200 with one decorative Mission-style parapet wall at its internal west corner. However, Building 300 lacks the tiled roof and instead has asphalt shingles.

Photo 6. View of Building 300 facing southwest. Source: Google Earth 2019.

Building 500

Building 500 was likely part of the expansion project approved by the Millbrae Planning Commission in 1977 (San Mateo Times 1977:33) (Photo 7). The construction of this building, along with Buildings 600 and 700, changed the primary focus of the complex with two courtyard parking areas rather than one. The new buildings constructed during the ca. 1977 expansion remained vaguely Mission or Spanish Colonial Revival in style, with minimal detailing. Building 500 is two-stories tall, with double-loaded rooms and exterior hallways on both sides of the building. The walls are clad in stucco and the second-floor porch has a cantilevered walkway with a simple metal balustrade and no supporting columns that also serves as the cover for the first-floor walkway. The roof is partially hipped with roof tiles and a projecting eave but terminates in a flat roof. Towers for vertical circulation are located at regular intervals and have tiled, hipped roofs, arched openings, quatrefoil faux-windows, and stuccoed walls. The central stairwell also has a small arcade with arched openings.

Photo 7. View of Building 500 facing south. Source: Google Earth 2019.

Building 600

Building 600 has the same detailing as Building 500 (Photo 8) and dates to ca. 1977. Because it backs up to Building 200, Building 600 has single-loaded guest rooms. In addition, a second-floor connector walkway links Building 600 to Building 500.

Photo 8. View of Building 600 facing southwest. Note the cut-through of Building 200 that provides vehicular access to the northern end of the complex. Source: Google Earth 2019.

Building 700

Building 700 is double loaded and has similar detailing to Building 500, but with a raised foundation and a first-floor railing (Photo 9).

Photo 9. View of Building 700 facing west. Source: Google Earth 2019.

***B6. Construction History:** (continued from page 2)

Contemporary newspaper articles indicate that the property was subsequently expanded in 1956 (San Mateo Times 1977:33). By 1965, the property had expanded to the northeast and the lot appears to be L-shaped (Figure 2). Four additional buildings were built, between ca. 1954 and 1965, and included the restaurant building, Building 300 with an L-shaped plan at the northern end of the site, Building 200 with a U-shaped plan at the northeastern end of the site, and the Health Club with a rectangular plan that connected the original buildings with the U-shaped building. Additional expansions and renovations took place in 1969 and 1977. The renovation planned in 1977, designed by Robert Onorato and Associates of San Bruno, called for the expansion of the property further to the northeast (including Buildings 500, 600, and 700), demolishing residential buildings on the site and the construction of new buildings northeast of the Building 200. This addition required a driveway cut-through of the Building 200. The 1977 plans also called for extensive renovation and expansion of the lobby in the Office Building, the renovation of the existing rooms, and construction of a tennis court (San Mateo Times 1977:33).

In addition to the expansion of the complex and construction and demolition of buildings, the buildings have undergone significant alterations. It appears that all original windows pre-dating 1977 have been replaced, the porte-cochere was added, the porch railings have been replaced, the bell tower has had fenestration added, and the original signage (with a windmill) removed. Research did not confirm the dates of these alterations.

***B10. Significance:** (continued from page 2)

The most appropriate contexts for the evaluation of California Register of Historical Resources (CRHR) and National Register of Historic Places (NRHP) eligibility for the El Rancho Inn include the history and development of Millbrae; Mission-style architecture; the development of motels; and the subject motel's association with the Wilms family, a locally prominent family in Millbrae.

Brief History of Millbrae

The City of Millbrae was once part of the Rancho Buri Buri, which the Mexican government conveyed to Jose Antonio Sanchez, Jr. for his years of military service. The section occupied by present-day Millbrae was inherited by one of Sanchez's sons and subsequently sold at a sheriff's auction to James Wilson. Wilson sold the land to a gold rush entrepreneur Darius Ogden Mills in 1860, who built an estate and dairying operation on the property. Millbrae remained a small, sparsely populated town through the 1920s. In 1931, an attempt to incorporate the city failed, and as a result, residents formed a civic club to establish and maintain essential municipal services. The debate over incorporation continued through the 1930s and 1940s with arguments between competing interests. The citizens voted to incorporate on September 3, 1946, which after a lawsuit filed by the City of Burlingame, was upheld by the California Supreme Court. The first municipal election was held on December 3, 1946, which formed the first Millbrae City Council, although the election results were not certified until January 12, 1948, due to the lawsuit filed by Burlingame. Millbrae was finally incorporated on January 14, 1948 (Millbrae Historical Society n.d.:n.p.).

By 1949, commercial development in Millbrae was primarily centered on or immediately adjacent to El Camino Real, with stores, restaurants, theaters, gas stations, auto repair, parking, light industrial, and other commercial services (Sanborn Map Company, ProQuest Digital Sanborn Maps 1949:1-13). El Camino Real was originally built in the eighteenth century as a transportation corridor to support Spanish colonial missions, presidio, and pueblo sites. The position of El Camino Real as a transportation corridor within Millbrae played a role in the city's development from conception through the twentieth century. The alignment of El Camino Real has fluctuated throughout the nineteenth and twentieth centuries. In San Mateo County, the route is officially incorporated as California State Highway 82 (Faigin 2019).

In October 1949, it appears that the El Rancho Motor Hotel is the only short-term lodging in the city. However, by the time that the 1949-1950 city directory was published (Coast Directory Company 1949:202), at least two additional short-term lodging facilities were extant, the English Motel and Riche's Inn, both located at 1300 El Camino Real. The proximity to the San Francisco Airport likely encouraged the ongoing development of motels along El Camino Real in Millbrae. By 1954, three motels are listed in the San Mateo County Yellow Pages within the limits of Millbrae, with dozens of motels located on El Camino Real in San Mateo County (California – White and Yellow Pages 1954:326–329). In 1963, four motels were located in Millbrae, along with dozens throughout San Mateo County (California – White and Yellow Pages 1962:406–411).

Mission-Style Architecture

Mission-style eclectic architecture was prevalent primarily from about 1890 through 1920, although later occurrences are common, especially in the western United States. The primary subtypes of the style include symmetrical façades and asymmetrical façades. Common identifying features of the style include mission-shaped dormer or roof parapets, roof tiles, open and overhanging eaves, porch roofs supported with square wood piers, arched openings over porches, and stuccoed walls. Buildings in this style have a variety of dormers and roof parapets that echo or mimic those found on Spanish Colonial mission buildings. One-story porches are common and sometimes echo the form of the arcades on the colonial antecedents. Bell towers and quatrefoil windows are common but decorative detailing is minimal and mostly limited to patterned tiles or carved stonework. Original windows are usually double-hung sash, as single, paired, or ribbon windows (McAlester 2013:510–518).

Development of Motels

Motel design in California began in the 1920s with the emergence of motor cottage courts, which evolved from separate cottage-like buildings to attached rooms, in various configurations, to the form today identifiable as a motel. Typical plans for motels emerged in the 1920s through the post-World War II years and included L-shaped plans, narrow U-shaped plans (both attached and detached at the bottom of the U), rooms arranged around a courtyard, and row-on-row plans (with two long linear buildings parallel to one another). The location of parking immediately outside the rooms was a hallmark of the form.

The first use of the term "motel" in California appears to be the Milestone Mo-Tel in San Luis Obispo, designed in 1926, by an architect who specialized in cottage motor courts. Generally, the earlier Depression-era motels followed the ubiquitous contemporary styles of domestic architecture. During the 1930s, it was common for motel design to take cues from prevalent local architectural styles. In western states, it was common to see motels take cues from Pueblo architecture, Spanish Colonial Revival, and Mission-style buildings. During the same period and extending into the late 1940s, the development of Streamline Moderne motels became common. These trends continued through the close of World War II (SurveyLA 2016:59–63).

In the post-World War II years, motel design becomes progressively more utilitarian. While the common areas like front offices and restaurants often had stylistic detailing, that rarely extended to the individual motel room units. In addition to a lack of stylistic detailing, the units became more connected to maximize efficiency in building systems. During this time, Mid-Century Modern and Googie became typical styles, at least for the street-facing buildings, in addition to some of the more historicizing styles that continued into the post-war years that had been common during the 1930s and 1940s. Eventually, the form changed for even more efficiency with two-story, double-loaded buildings with back-to-back rooms. The form further evolved to the more elaborate motor inn, which supplanted earlier hotels. The motor inns were typically larger, more luxurious, and had public facilities like banquet halls, restaurants, lounges, and meeting rooms. However, despite the more elaborate public spaces, motor inns relied on the efficiency of standardized blocks of rooms (SurveyLA 2016:62–66).

Wilms Family in Millbrae

Born in 1886, Martin Wilms traveled to the United States from Copenhagen, Denmark, as an engineering student in 1905. While he stopped briefly in New York City and Omaha, Nebraska, he decided to settle in the San Francisco area to help rebuild in the aftermath of the 1906 earthquake. Martin Wilms found work as an electrician and settled in the Bay Area. He married Sadie Sarah Jenkins in 1911. They had two children, Mary Elizabeth in 1912 and Earl Martin in 1915 (Federal Naturalization Records, California 1938).

Martin Wilms worked as a machinist engineer at the American Can Company and helped establish operations at the Bristol Bay Packing Company in Alaska. He first built a family house in the Mission District and a second home in St. Francis Woods in San Francisco in 1926. After the stock market crash in 1929, the family's finances were severely affected. Wilms sold the house in St. Francis Woods in 1948 and moved to Burlingame. A year later he opened the El Rancho Inn (San Mateo Times 1961:2).

Martin and Sadie's son, Earl Wilms, married Marilyn Thorsander Wilms in 1947. The couple had two sons, John and Paul. Earl joined his father in managing the El Rancho Inn, but later Earl and Marilyn ran the motel together (Napa Valley Register 1998:2D). In addition to managing the motel, Earl Wilms held many local positions in government and civic organizations. He was elected to Millbrae's City Council in April 1954 (San Francisco Examiner 1954:20) and was mayor of Millbrae in 1955. He held the post of chairman of the transportation committee of the North County Council and supported the early development of the Bay Area Transit System (San Francisco Examiner 1955:9). He served as the president of the San Mateo County Motel Owners Association, as well as the San Mateo County Chamber of Commerce (San Francisco Examiner 1966:11). In 2017, John Wilms, along with other family members, sold the property to a development company (Dawdy 2017:4).

National Register of Historic Places and California Register of Historical Resources Eligibility

Criterion 1/A

Eligibility for CRHR and NRHP Criterion 1/A was evaluated using the contextual history of Millbrae. Within the context of the development of Millbrae, the El Rancho Inn was not pivotal within the development of the city; the development of Millbrae would have followed the same trajectory with or without the presence of the El Rancho Inn within its boundaries. While it was the first motel within the city limits, it was not the first motel in the vicinity. By 1948, more than a dozen motels were located in San Mateo County (Pacific Telephone and Telegraph Company 1948:198). An airport had been on the site of San Francisco International Airport since the 1920s, so, likely, the development of motels and temporary lodging in the vicinity of the airport are more closely linked to that transportation hub than to the development of each individual municipality. Even so, research did not reveal that the El Rancho Inn was remarkable within the context of motel development on the San Francisco Peninsula. After the restaurant and banquet facilities were built, the El Rancho Inn became more important as a banquet site to the Millbrae community, but that association does not appear to have been significant in the development of Millbrae. The El Rancho Inn was not important within the context of Millbrae's development but rather broadly represents the growth of the city's commercial corridors across the twentieth century. Therefore, the El Rancho Inn is not significant under Criterion 1/A.

Criterion 2/B

Eligibility for CRHR and NRHP Criterion 2/B was evaluated based on the property's association with the Wilms family in Millbrae. While the Wilms family was locally prominent in the early development of Millbrae, with members holding political positions, leading professional organizations, or local business owners, the family did not possess exceptional importance within those groups. Furthermore, the family does not appear to have gained prominence as motel owners, such that the El Rancho Inn would not directly convey their most notable contributions to Millbrae's development. Therefore, the El Rancho Inn is not significant under Criterion 2/B.

Criterion 3/C

Eligibility for CRHR and NRHP Criterion C/3 was evaluated based on Mission-style architecture and the development of motels as a type of architecture.

While the original three-building motel may have embodied the distinctive characteristics of the style, the subsequent alterations to the El Rancho Inn have destroyed those character-defining features that were integral to the original design including the original windows, doors, fenestration patterns on the bell tower, and porch railings. Research did not identify the architect of the original motel complex, constructed in 1949. Furthermore, with a construction date of 1949, the El Rancho Inn is a late example of Mission-style buildings. As it currently appears, the El Rancho Inn does not embody the characteristics of the Mission style, nor does it represent the work of a master, or possess artistic value.

While the El Rancho Inn is associated with the development of motels as a new property type tied inextricably to the rise in automobile culture, it was not an early example of the form nor was it innovative in its design. In its original design, it was a standard row-on-row layout with three buildings arranged around a central parking area. Furthermore, as the population in the area grew in the post-war years, the motel continuously expanded to meet rising demand. The expansions have altered the original form of the motel and the later iteration of the property is not a representative example of the type, either as an early example of a motel or as a later, larger example of a motor inn. The El Rancho Inn does not possess significance within the context of motel development.

Therefore, the El Rancho Inn is not significant under Criterion 3/C.

Criterion 4/D

NRHP and CRHR Criterion 4/D most commonly applies to archaeological resources. The El Rancho Inn is a typical example of a twentieth-century motel complex that has been expanded over time. This historic context is well documented in historical sources, photographs, and other existing documentation, and as such the subject building would not fill any data gaps and would not yield information important to prehistory or history. For this reason, the El Rancho Inn is not significant under Criterion 4/D.

Integrity

While integrity is a property's ability to convey its significance, and the El Rancho Inn does not possess significance under any criteria, the integrity of the property was nevertheless assessed, based on an assumed period of significance for the contexts of 1949, its date of construction.

Location is the place where the historic property was constructed or the place where the historic event occurred. The El Rancho Inn retains integrity of location.

Design is the combination of elements that create the form, plan, space, structure, and style of a property. The El Rancho Inn does not possess integrity of design from its initial construction date. Furthermore, the subsequent alterations to the property loosely interpreted the original style and caused demolition and significant alterations to the original design of the 1949-era buildings.

Setting is the physical environment of a historic property. The El Rancho Inn has had a continually evolving setting based on its urban context. While it does not possess integrity of setting, the setting is not an essential aspect of integrity for this property to convey its significance.

Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. Linked to integrity of design, the integrity of materials for the El Rancho Inn have been compromised due to the ongoing alterations, demolitions, and expansion of the property. With the loss of character-defining features like historic windows and doors, roofing materials, balustrades, and changes in fenestration patterns, the buildings that date to 1949 do not retain integrity of materials.

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. With the loss of character-defining materials, the workmanship is lost. While the workmanship of the building form, including the exterior walls and roof, those components are not sufficient to convey its significance.

Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. The El Rancho Inn no longer retains its feeling as a mid-century Mission-style motel.

Association is the direct link between an important historic event or person and a historic property. The El Rancho Inn does not retain integrity of association.

Overall, the El Rancho Inn does not possess integrity.

<u>Conclusion</u>

The El Rancho Inn at 1100 El Camino Real is not eligible for listing in the CRHR and NRHP due to its lack of significance under applicable evaluative criteria. Additionally, the El Rancho Inn was evaluated in accordance with Section 15064.5(a) (2)-(3) of the California Environmental Quality Act (CEQA) Guidelines using the criteria outlined in Section 5024.1 of the California Resources Code, and it does not appear to be a historical resource for the purposes of CEQA.

***Resource Name or #** (Assigned by recorder) El Rancho Inn

***Recorded by** Christine Cruiess, ICF *Date September 4, 2020 ☒ Continuation ☐ Update

Figures

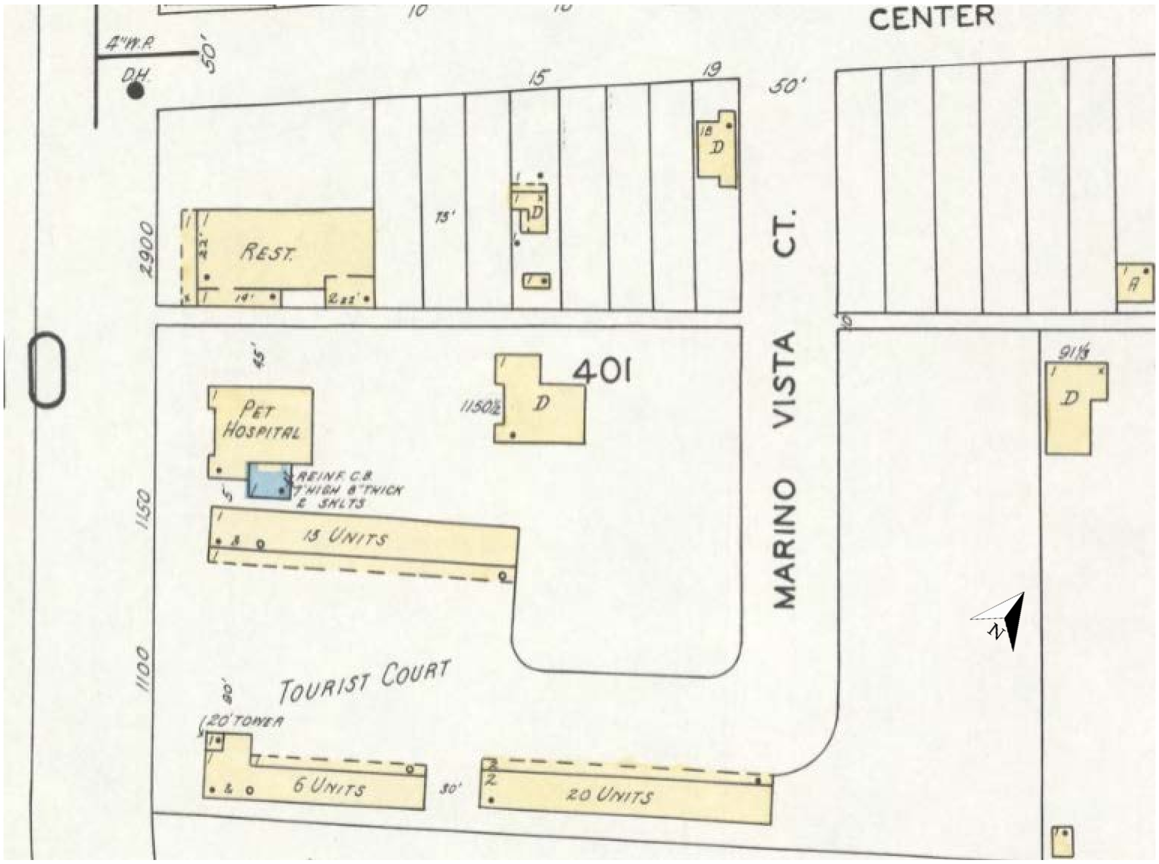

Figure 1. Sanborn Map of the El Rancho Inn, 1949. Source: Sanborn Map Company. The El Rancho Inn is noted as "Tourist Court" and the building that has "15 Units" was demolished after 1975.

Figure 2: Aerial image of El Rancho Inn, 1965. Source: University of California Santa Barbara Framefinder.

Figure 3. Photograph of the El Rancho Motel in 1949. The image was part of an advertisement in The Advance*, Burlingame from Saturday, May 14, 1949. Source: Dawdy 2020.*

Figure 4. Early photograph of the El Rancho Motel, no date. Source: Dawdy 2020.

Figure 5. Early photograph of the El Rancho Motel from a AAA advertisement, no date. Source: Dawdy 2020.

Figure 6. Photo of the El Rancho Motel ca. 1954. By this time, Building 200 was partially extant and the now-demolished "15 Units" building was present at the western edge of the site. Source: Dawdy 2020.

Figure 7. Photo of the El Rancho Motel pool ca. 1954. Source: Dawdy 2020.

Figure 8. 1975 photo of the El Rancho Motel showing the now-demolished "15 Units" building. Source: City of Millbrae 1975.

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State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

***Resource Name or #:** El Rancho Inn

***Map Name:** Aerial Image with Building Naming and Photo Angles ***Scale:** See scale in image ***Date of Map**: 2018

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # ____
HRI # ____
Trinomial ____
NRHP Status Code ____
Other Listings ____
Review Code ____ Reviewer ____ Date ____

***NRHP Status Code** 6z
***Resource Name or #** (Assigned by recorder) 33 Center Street

P1. Other Identifier: N/A
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Mateo **and** (P2b and P2c or P2d. Attach a Location Map, as necessary.)
***b. USGS 7.5' Quad:** ____ **Date:** ____ **T**____; **R**____; ____ ¼ of ____¼ of **Sec:**____; ____**B.M.**
c. Address: 33 Center Street **City**: Millbrae **Zip:** 94030
e. Other Locational Data: APN 021-324-190
***P3a. Description:**

The building at 33 Center Street is a two-story multi-family residential building with a L-shaped plan. The building is one of two properties on the 0.215-acre parcel adjacent to the El Rancho Inn. The building consists of 24 total rooms totaling approximately 7,656 square feet, including eight bedrooms and eight full baths. The long side of the L has a hipped roof, and the short side of the L has a hipped/open gable roof. The walls of the building are clad in a smooth stucco with a variety of window openings on all elevations. The building design is driven by functionality and the needed characteristics of the multiple family residential typology, including standardized doors and windows, multiple garage doors, and stylistic uniformity between apartments. There are, however, moderate Midcentury Modern and International style features that suggest some architectural distinction, including large windows with modern metal muntins, an overhanging roof, decorative louvers, and an overall design with clean lines and geometric shapes.

See Continuation Sheet on page 3.

***P3b. Resource Attributes:** (List attributes and codes) HP3: Multiple family property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo:
View from Center Street looking south at the northwest elevation, Google Earth, 2021.

***P6. Date Constructed/Age and Sources:**
☒ Historic ☐ Prehistoric ☐ Both
1948-1956

***P7. Owner and Address:**
El Rancho Motel Inc.
Mailing Address: 1110 El Camino Real, Millbrae, CA, 94030

***P8. Recorded by:**
Nicole Felicetti
ICF, 201 Mission Street, Suite 1500
San Francisco, CA 94105

***P9. Date Recorded:** October 15, 2021
***P10. Survey Type:**
Intensive

***P11. Report Citation:** (Cite survey report and other sources or enter "none"). None

***Attachments:** NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) ____

***NRHP Status Code** 6z
***Resource Name or #** (Assigned by recorder) 33 Center Street

B1. Historic Name: N/A
B2. Common Name: N/A
B3. Original Use: Multiple family residential **B4. Present Use:** Multiple family residential
***B5. Architectural Style:** Midcentury Modern/International; utilitarian
***B6. Construction History:**

The building at 33 Center Street was constructed between 1948-1956 (University of California, Santa Barbara [UCSB] and ESRI 1947; Environmental Title Research [NETR] 1946,1956). The building's original architect and builder are unknown. A review of historic aerial photographs revealed 33 Center Street was constructed prior to 35 Center Street, the adjacent building on the shared parcel (NETR 1946). Online newspaper research was limited but indicated the building was privately owned and never subdivided (San Mateo Times 1959:27; San Mateo Times 1960:14). No building permits were uncovered, but visual analysis suggests the building has undergone regular maintenance through the decades and has replaced windows and doors with contemporary designs. Siting has remained consistent.

***B7. Moved?** ☒ No ☐ Yes ☐ Unknown **Date:** 1948-1956 **Original Location:** N/A
***B8. Related Features:** N/A
B9. Architect: Unknown **b. Builder:** Unknown
***B10. Significance: Theme** N/A
Area: Millbrae, San Mateo County
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A

Brief History of Millbrae: (excerpt from 1100 El Camino Real DPR 523, September 4, 2020)

The City of Millbrae was once part of the Rancho Buri Buri, which the Mexican government conveyed to Jose Antonio Sanchez, Jr. for his years of military service. The section occupied by present-day Millbrae was inherited by one of Sanchez's sons and subsequently sold at a sheriff's auction to James Wilson. Wilson sold the land to a gold rush entrepreneur Darius Ogden Mills in 1860, who built an estate and dairying operation on the property. Millbrae remained a small, sparsely populated town through the 1920s. In 1931, an attempt to incorporate the city failed, and as a result, residents formed a civic club to establish and maintain essential municipal services. The debate over incorporation continued through the 1930s and 1940s with arguments between competing interests. The citizens voted to incorporate on September 3, 1946, which after a lawsuit filed by the City of Burlingame, was upheld by the California Supreme Court. The first municipal election was held on December 3, 1946, which formed the first Millbrae City Council, although the election results were not certified until January 12, 1948, due to the lawsuit filed by Burlingame. Millbrae was finally incorporated on January 14, 1948 (Millbrae Historical Society n.d.:n.p.).

See Continuation Sheet.

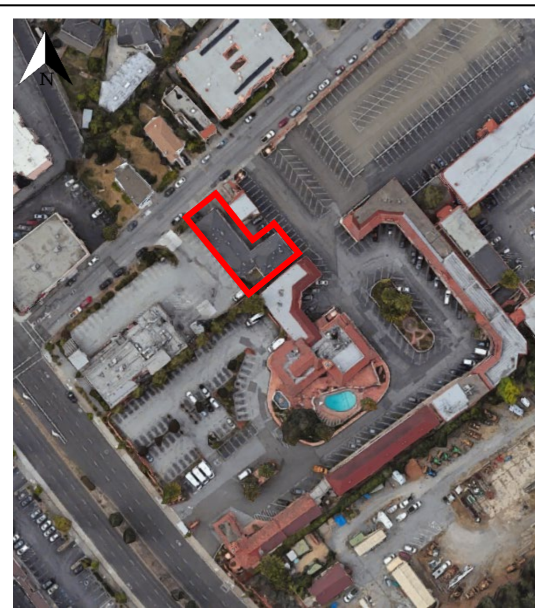
B11. Additional Resource Attributes:

***B12. References:**
See Continuation Sheet.

B13. Remarks:

***B14. Evaluator:**
Nicole Felicetti
ICF, 201 Mission Street, Suite 1500
San Francisco, CA 94105

***Date of Evaluation:**
October 15, 2021
(This space reserved for official comments.)



Sketch Map of 33 Center Street, Millbrae, CA. Source: Google Earth, 2021.

***P3a. Description:** (con't)

The north section of the northwest elevation faces Center Street at the end of the long side of the L. There are two single-car garage doors, two rectangular, metal picture windows with casement flankers and attached sills of varied size, and two openings shielding the staircase behind with vertical louver blades. The roof overhangs slightly, which, at this end of the L, is hipped. The southern section of the northwest elevation (the short side of the L) faces the interior courtyard. Part of the first floor is covered by the second-floor veranda and has one apartment door, one utility door, two single-car garage doors, and one metal picture window with casement flankers. Part of the second floor is covered by the overhanging roof and has two apartment doors, three metal picture windows of various sizes with casement flankers, and a metal guardrail at the veranda's edge. The remaining section of the elevation at both the first and second floor is on the same plane as the roof's edge and has two metal picture windows with casement flankers

The north section of the northeast elevation (the long side of the L) creates a courtyard of limited parking within the building footprint. A V-shaped brick staircase and metal handrailing lead to the second-floor veranda at the north end of the elevation. The first floor is slightly covered by the second-floor veranda and has two apartment doors, two single-car garage doors, and two metal picture windows of various sizes with casement flankers The second floor is covered by the overhanging roof and has three apartment doors, four picture windows with casement flankers, and a metal guardrail at the veranda's edge. The south section of the northeast elevation (at the end of the short side of the L) features two picture windows with casement flankers and the edge of the open gable roof nearly flush with the exterior wall.

The southeastern elevation nears the southern edge of the parcel boundary that abuts an El Rancho Inn building and is partially obscured by a privacy fence. A part of the first floor is covered by the second-floor veranda and has two apartment doors and a double casement window. A part second floor is covered by an overhanging roof and has two apartment doors, a double casement window, a narrow staircase with matching handrails up to the second floor, and a matching guardrail at the veranda's edge. The remaining section of the elevation at both the first and second floor is on the same plane as the roof's edge and has two picture windows with casement flankers. The southwest elevation is on the western edge of the parcel boundary and is not visible behind a row of tall trees. The L-shaped plan deviates at the southwest corner of the building where both walls are cut back to create uncovered outdoor space.

***B10. Significance:** (continued from page 2)

Brief History of Millbrae: (excerpt from 1100 El Camino Real DPR 523, September 4, 2020) (con't)

By 1949, commercial development in Millbrae was primarily centered on or immediately adjacent to El Camino Real, with stores, restaurants, theaters, gas stations, auto repair, parking, light industrial, and other commercial services (Sanborn Map Company, ProQuest Digital Sanborn Maps 1949:1-13). El Camino Real was originally built in the eighteenth century as a transportation corridor to support Spanish colonial missions, presidio, and pueblo sites. The position of El Camino Real as a transportation corridor within Millbrae played a role in the city's development from conception through the twentieth century. The alignment of El Camino Real has fluctuated throughout the nineteenth and twentieth centuries. In San Mateo County, the route is officially incorporated as California State Highway 82 (Faigin 2019).

In October 1949, it appears that the El Rancho Motor Hotel is the only short-term lodging in the city. However, by the time that the 1949-1950 city directory was published (Coast Directory Company 1949:202), at least two additional short-term lodging facilities were extant, the English Motel and Riche's Inn, both located at 1300 El Camino Real. The proximity to the San Francisco Airport likely encouraged the ongoing development of motels along El Camino Real in Millbrae. By 1954, three motels are listed in the San Mateo County Yellow Pages within the limits of Millbrae, with dozens of motels located on El Camino Real in San Mateo County (California – White and Yellow 9). In 1963, four motels were located in Millbrae, along with dozens throughout San Mateo County (California – White and Yellow Pages 1962:406–411).

National Register of Historic Places and California Register of Historical Resources Eligibility

The most appropriate context for the evaluation of California Register of Historical Resources (CRHR) and National Register of Historic Places (NRHP) eligibility for the 33 Center Street building is the 20th-century residential development in Millbrae and Midcentury Modern/International style architecture.

Criterion 1/A

Eligibility for CRHR and NRHP Criterion 1/A was evaluated on its association with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The building at 33 Center Street is not associated with any events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The building appears to have been constructed as a multiple family residential building representing an unremarkable pattern of residential development around the commercial growth of El Camino Real. In addition, no tenants uncovered in online research appear exceptional within the context of Millbrae's 20th-century residential development or have a noteworthy association to 33 Center Street. Moreover, no records were found to indicate a connection to the adjacent El Rancho Inn by way of significant persons or events. Newspaper research did not find the building associated with any other important single events, patterns of events, repeated activities, or historic trends; instead, it appears to have contributed to the everyday life of the community. Therefore, 33 Center Street is not significant under Criterion 1/A.

Criterion 2/B

Eligibility for CRHR and NRHP Criterion 2/B was evaluated based on its association with the lives of persons important to local, California, or national history. Research did not reveal that the subject property has been associated with the lives of persons significant at the local, state, or national level. Although none of its past owners were identified, the multiple family residential building has a broad and unremarkable association with local community life and economic patterns, as described above, through a series of revolving tenants. It would be expected that any significant person associated with the subject property would have been widely publicized in local newspaper accounts. Yet newspaper research yielded no such evidence of associations with significant individuals. The lack of online records supports the notion that persons associated with the building did not significantly contribute to residential development throughout the 20th century. Finally, no evidence suggests that the building housed activities that allowed a particular owner or tenant to achieve the historical significance that the building would best convey. Therefore, 33 Center Street is not significant under Criterion 2/B.

Criterion 3/C

Eligibility for CRHR and NRHP Criterion C/3 was evaluated based on if and how it embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values. The building at 33 Center Street does not embody distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value. The building is a utilitarian two-story multiple family building with minimal architectural distinction since its construction between 1948-1956. There are some residential Midcentury Modern and International style features present in the building, including large windows with modern metal muntins, an overhanging roof, decorative louvers, and an overall design with clean lines and geometric shapes, there is not a cohesive or style-driven design. Instead, the building meets functional needs through combining multiple contemporary-style features relatively common in residential design. Additionally, no evidence in the available historical record or visual analysis suggests that this residential building is it a distinct or solely remaining example of Millbrae's residential development in the mid-20th century nor a residential Midcentury Modern/International style design. Although the research did not reveal the identities of the building's original architect and builder, it is unlikely that a master designer was involved in what appears to be one of many pockets of residential developments in Millbrae that paralleled the commercial development along El Camino Real. Therefore, 33 Center Street is not significant under Criterion 3/C.

Criterion 4/D

NRHP and CRHR Criterion 4/D was evaluated to determine if the resource has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation. The building at 33 Center Street does not appear to be a source, or likely source, of important historical information not already captured in the historic record. Therefore, it is not significant under NRHP/CRHR Criterion D/4.

Conclusion

The building at 33 Center Street does not appear eligible for listing in the CRHR due to its lack of significance under applicable evaluative criteria. 33 Center Street was evaluated in accordance with Section 15064.5(a) (2)-(3) of the California Environmental Quality Act (CEQA) Guidelines using the criteria outlined in Section 5024.1 of the California Resources Code, and it does not appear to be a historical resource for the purposes of CEQA.

Figures

Figure 1. 1941 Historic aerial photograph of the 33 and 35 Center Street parcel as the surrounding area is scattered residential development. 35 Center Street is constructed, but 33 Center Street is not yet built. Source: UCSB and ESRI 2021.

Figure 2. 1947 Historic aerial photograph of the 33 and 35 Center Street parcel as the surrounding area is scattered residential development. More residential construction is to the south and vacant land is to the north. 35 Center Street and additional buildings around the adjacent hotel are constructed, but 33 Center Street is not yet built. The map has been rotated 90 degrees counterclockwise to justify north. Source: UCSB and ESRI 2021.

Figure 3. 1965 Historic aerial photograph of the 33 and 35 Center Street parcel as the surrounding area developed significantly in the mid-20th century. Source: UCSB and ESRI 2021.

***B12. References**

Nationwide Environmental Title Research, LLC. 1946, 1956, 1968, 1980. Historic Aerials, 33 Center Street, Millbrae, California. Available: www.historicaerials/.com/viewer. Accessed: October 15, 2021.

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San Mateo Times. 1959. "Run Over by Truck; Taken to Hospital." Page 27.

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1941. Flight C_6660, Frame 341. March 23.

1947. Flight GS_CP, Frame 3-41. January 1.

1965. Flight CAS_65_13-, Frame 16-22. May 1.

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # ______
HRI # ______
Trinomial ______
NRHP Status Code ______

Other Listings ______
Review Code ______ Reviewer ______ Date ______

***NRHP Status Code** 6z
***Resource Name or #** (Assigned by recorder) 35 Center Street

P1. Other Identifier: N/A
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County:** San Mateo **and** (P2b and P2c or P2d. Attach a Location Map, as necessary.)
***b. USGS 7.5' Quad:** ______ **Date:** ______ **T**______; **R**___; __ ¼ of __¼ of **Sec:**____; ______**B.M.**
c. Address: 35 Center Street **City**: Millbrae **Zip:** 94030
e. Other Locational Data: APN 021-324-190
***P3a. Description:**

The building at 35 Center Street is a two-story single family residential building with a rectangular plan. The building is one of two properties on the 0.215-acre parcel adjacent to the El Rancho Inn. The building footprint is set back from Center Street to create an elevated gravel front yard and driveway to a single-car garage door on the north elevation. Most of the building has a flat roof, except for the northwest elevation that transitions into a shed roof with red tile roofing. The building maintains a limited number of Mission details: smooth stucco exterior walls, tile roofing, and broad unadorned wall surfaces with limited fenestrations. The primary door and all windows on the building are contemporary replacements.

See Continuation Sheet on page 3.

***P3b. Resource Attributes:** (List attributes and codes) HP2: Single family property
***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo:
View from Center Street looking east at the northwest and southwest elevations, Google Earth, 2021

***P6. Date Constructed/Age and Sources:**
☒ Historic ☐ Prehistoric ☐ Both
Prior to 1941

***P7. Owner and Address:**
El Rancho Motel Inc.
Mailing Address: 1110 El Camino Real,
Millbrae, CA, 94030

***P8. Recorded by:**
Nicole Felicetti
ICF, 201 Mission Street, Suite 1500
San Francisco, CA 94105

***P9. Date Recorded:** October 15, 2021
***P10. Survey Type:**
Intensive

***P11. Report Citation:** (Cite survey report and other sources or enter "none"). None

***Attachments:** NONE ☒ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (list) ______

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6z
***Resource Name or #** (Assigned by recorder) 35 Center Street

B1. Historic Name: N/A
B2. Common Name: N/A
B3. Original Use: Single family residential **B4. Present Use:** Single family residential
***B5. Architectural Style:** Mission; utilitarian
***B6. Construction History:**

The building at 35 Center Street was constructed prior to 1941 (University of California, Santa Barbara [UCSB] and ESRI 1941). The building's original architect and builder are unknown. A review of historic aerial photographs revealed 35 Center Street was constructed years after 33 Center Street, the adjacent building on the shared parcel (Environmental Title Research [NETR] 1946,1956). Online newspaper research indicates the building was rented as a three-room apartment with contemporary fixtures and amenities like stainless steel kitchen appliances, washer and dryer, community patios, and automobile garages. The building was advertised as a "new veranda type" housing (San Francisco Examiner 1951:86). No building permits were uncovered, but visual analysis suggests the building has undergone regular maintenance through the decades and has not incurred significant alterations to original massing or fenestrations.

***B7. Moved?** ☒ No ☐ Yes ☐ Unknown **Date:** Prior to 1941 **Original Location:** N/A
***B8. Related Features:** N/A
B9. Architect: Unknown **b. Builder:** Unknown
***B10. Significance: Theme** N/A
Area: Millbrae, San Mateo County
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A

Brief History of Millbrae: (excerpt from 1100 El Camino Real DPR 523, September 4, 2020)

The City of Millbrae was once part of the Rancho Buri Buri, which the Mexican government conveyed to Jose Antonio Sanchez, Jr. for his years of military service. The section occupied by present-day Millbrae was inherited by one of Sanchez's sons and subsequently sold at a sheriff's auction to James Wilson. Wilson sold the land to a gold rush entrepreneur Darius Ogden Mills in 1860, who built an estate and dairying operation on the property. Millbrae remained a small, sparsely populated town through the 1920s. In 1931, an attempt to incorporate the city failed, and as a result, residents formed a civic club to establish and maintain essential municipal services. The debate over incorporation continued through the 1930s and 1940s with arguments between competing interests. The citizens voted to incorporate on September 3, 1946, which after a lawsuit filed by the City of Burlingame, was upheld by the California Supreme Court. The first municipal election was held on December 3, 1946, which formed the first Millbrae City Council, although the election results were not certified until January 12, 1948, due to the lawsuit filed by Burlingame. Millbrae was finally incorporated on January 14, 1948 (Millbrae Historical Society n.d.:n.p.).

See Continuation Sheet.

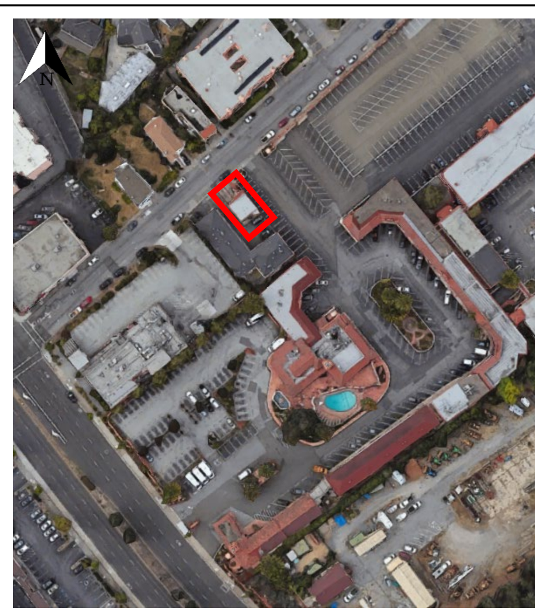
B11. Additional Resource Attributes:

***B12. References:**
See Continuation Sheet.

B13. Remarks:

***B14. Evaluator:**
Nicole Felicetti
ICF, 201 Mission Street, Suite 1500
San Francisco, CA 94105

***Date of Evaluation:**
October 15, 2021
(This space reserved for official comments.)



Sketch Map of 35 Center Street, Millbrae, CA. Source: Google Earth, 2021.

***P3a. Description:** (con't)

The northwest elevation faces Center Street and features the building's primary entrance. The procession to the wood panel door above grade is a set of three steps, a short path over the elevated gravel front yard, and a set of seven steps and a landing – all of which are painted concrete. The stairs and landing have a decorative, white-painted metal handrail on either side. Adjacent to the door is a downspout, sconce, address plaque, three double-hung windows set in a vinyl set, and utility fixtures. The northwest elevation also has a single-car garage door and three additional double-hung windows in vinyl. The wall with the garage door is set back from the plane with the primary door.

The east elevation is on the edge of the parcel boundary and a short wooden fence that separates the parcel from additional El Rancho Inn vehicular parking. The profile of the wall matches the transition from flat to shed roof at the northeast corner and steps down to meet the shorter massing at the southeast corner of the building. The elevation has one double-hung window.

The southeast elevation has a single door on the second floor, accessed by a wooden staircase and a small elevated deck with a guardrail. There is also an additional massing at the southeast corner of the building with a lower flat roof, one double-hung window, and a downspout. The most southern wall is on the same plane as the deck. All walls on this elevation are finished in yellow paint.

The southwest elevation does not have any fenestrations, but the footprint is partially lined by a narrow vegetative bed and low concrete and brick walls that parallel the vehicular thoroughfare to the courtyard of 33 Center Street.

***B10. Significance:** (continued from page 2)

Brief History of Millbrae: (excerpt from 1100 El Camino Real DPR 523, September 4, 2020) (con't)

By 1949, commercial development in Millbrae was primarily centered on or immediately adjacent to El Camino Real, with stores, restaurants, theaters, gas stations, auto repair, parking, light industrial, and other commercial services (Sanborn Map Company, ProQuest Digital Sanborn Maps 1949:1-13). El Camino Real was originally built in the eighteenth century as a transportation corridor to support Spanish colonial missions, presidio, and pueblo sites. The position of El Camino Real as a transportation corridor within Millbrae played a role in the city's development from conception through the twentieth century. The alignment of El Camino Real has fluctuated throughout the nineteenth and twentieth centuries. In San Mateo County, the route is officially incorporated as California State Highway 82 (Faigin 2019).

In October 1949, it appears that the El Rancho Motor Hotel is the only short-term lodging in the city. However, by the time that the 1949-1950 city directory was published (Coast Directory Company 1949:202), at least two additional short-term lodging facilities were extant, the English Motel and Riche's Inn, both located at 1300 El Camino Real. The proximity to the San Francisco Airport likely encouraged the ongoing development of motels along El Camino Real in Millbrae. By 1954, three motels are listed in the San Mateo County Yellow Pages within the limits of Millbrae, with dozens of motels located on El Camino Real in San Mateo County (California – White and Yellow 9). In 1963, four motels were located in Millbrae, along with dozens throughout San Mateo County (California – White and Yellow Pages 1962:406–411).

Mission-Style Architecture: (excerpt from 1100 El Camino Real DPR 523, September 4, 2020)

Mission-style eclectic architecture was prevalent primarily from about 1890 through 1920, although later occurrences are common, especially in the western United States. The primary subtypes of the style include symmetrical façades and asymmetrical façades. Common identifying features of the style include mission-shaped dormer or roof parapets, roof tiles, open and overhanging eaves, porch roofs supported with square wood piers, arched openings over porches, and stuccoed walls. Buildings in this style have a variety of dormers and roof parapets that echo or mimic those found on Spanish Colonial mission buildings. One-story porches are common and sometimes echo the form of the arcades on the colonial antecedents. Bell towers and quatrefoil windows are common but decorative detailing is minimal and mostly limited to patterned tiles or carved stonework. Original windows are usually double-hung sash, as single, paired, or ribbon windows (McAlester 2013:510–518).

National Register of Historic Places and California Register of Historical Resources Eligibility

The most appropriate contexts for the evaluation of California Register of Historical Resources (CRHR) and National Register of Historic Places (NRHP) eligibility for the 35 Center Street building include 20th-century residential development in Millbrae and Mission-style architecture.

Criterion 1/A

Eligibility for CRHR and NRHP Criterion 1/A was evaluated on its association with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The building at 35 Center Street is not associated with any events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The building appears to have been constructed as a single-family residential building representing an unremarkable pattern of residential development around the commercial growth of El Camino Real. In addition, no tenants uncovered in online research appear exceptional within the context of Millbrae's 20th-century residential development or have a noteworthy association to 35 Center Street. Moreover, no records were found to indicate a connection to the adjacent El Rancho Inn by way of significant persons or events. Newspaper research did not find the building associated with any other important single events, patterns of events, repeated activities, or historic trends; instead, it appears to have contributed to the everyday life of the community. Therefore, 35 Center Street is not significant under Criterion 1/A.

Criterion 2/B

Eligibility for CRHR and NRHP Criterion 2/B was evaluated based on its association with the lives of persons important to local, California, or national history. Research did not reveal that the subject property has been associated with the lives of persons significant at the local, state, or national level. Although none of its past owners were identified, the single-family residential building has a broad and unremarkable association with local community life and economic patterns, as described above, through a series of revolving tenants. It would be expected that any significant person associated with the subject property would have been widely publicized in local newspaper accounts. Yet newspaper research yielded no such evidence of associations with significant individuals. The lack of online records supports the notion that persons associated with the building did not significantly contribute to residential development throughout the 20th century. Finally, no evidence suggests that the building housed activities that allowed a particular owner or tenant to achieve the historical significance that the building would best convey. Therefore, 35 Center Street is not significant under Criterion 2/B.

Criterion 3/C

Eligibility for CRHR and NRHP Criterion C/3 was evaluated based on if and how it embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values. The building at 35 Center Street does not embody distinctive characteristics of a type, period, or method of construction, nor does it represent the work of a master or possess high artistic value. The building is a modest two-story single-family building that has lacked architectural distinction since its construction prior to 1941. No evidence in the available historical record or visual analysis suggests that this residential building originally had a noteworthy architectural design; it is not a distinct or solely remaining example of Millbrae's residential development in the mid-20th century, nor is there a significant amount or distinguishable craft of Mission-style architecture. The few features of Mission style present in the building – smooth stucco exterior walls, tile roofing, and broad unadorned wall surfaces with limited fenestrations – are either common in other residential styles or have been significantly altered since construction to match contemporary trends. Additionally, research did not reveal the identities of the building's original architect and builder, but it is unlikely that a master designer was involved in what appears to be an early and standalone residential construction in Millbrae that paralleled the commercial development along El Camino Real. Other than a few extant buildings across Center Street, the construction of 35 Center Street prior to 1941 pre-dates the more significant pattern of residential development in Millbrae post-WWII. Therefore, 35 Center Street is not significant under Criterion 3/C.

Criterion 4/D

NRHP and CRHR Criterion 4/D was evaluated to determine if the resource has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation. The building at 35 Center Street does not appear to be a source, or likely source, of important historical information not already captured in the historic record. Therefore, it is not significant under NRHP/CRHR Criterion D/4.

Conclusion

The building at 35 Center Street does not appear eligible for listing in the CRHR due to its lack of significance under applicable evaluative criteria. 35 Center Street was evaluated in accordance with Section 15064.5(a) (2)-(3) of the California Environmental Quality Act (CEQA) Guidelines using the criteria outlined in Section 5024.1 of the California Resources Code, and it does not appear to be a historical resource for the purposes of CEQA.

Figures

Figure 1. 1941 Historic aerial photograph of the 33 and 35 Center Street parcel as the surrounding area is scattered residential development. 35 Center Street is constructed, but 33 Center Street is not yet built. Source: UCSB and ESRI 2021.

Figure 2. 1947 Historic aerial photograph of the 33 and 35 Center Street parcel as the surrounding area is scattered residential development. More residential construction is to the south and vacant land is to the north. 35 Center Street and additional buildings around the adjacent hotel are constructed, but 33 Center Street is not yet built. The map has been rotated 90 degrees counterclockwise to justify north. Source: UCSB and ESRI 2021.

Figure 3. 1965 Historic aerial photograph of the 33 and 35 Center Street parcel as the surrounding area developed significantly in the mid-20th century. Source: UCSB and ESRI 2021.

***B12. References**

Nationwide Environmental Title Research, LLC. 1946, 1956, 1968, 1980. Historic Aerials, 35 Center Street, Millbrae, California. Available: www.historicaerials/.com/viewer. Accessed: October 15, 2021.

ParcelQuest. 2021. 35 Center Street, Millbrae, CA. Available: https://pqweb.parcelquest.com/#home. Accessed: October 15, 2021.

San Francisco Examiner. 1951. "Smart-New Veranda Type." Page 86.

University of California, Santa Barbara (UCSB) and ESRI. 2021. FrameFinder. Available: https://mil.library.ucsb.edu/ap_indexes/FrameFinder/. Accessed: October 15, 2021.

1941. Flight C_6660, Frame 341. March 23.

1947. Flight GS_CP, Frame 3-41. January 1.

1965. Flight CAS_65_13-, Frame 16-22. May 1.

Appendix F
Energy Calculations

Offroad Equipment List

Phase	Equipment	Quantity	Horsepower	Load Factor	Hours per day	Total Working Days	Total Hours		LPMH	GPH	Total Fuel (gals)
Residential											
Demolition	Concrete/Industrial Saws	2	81	0.73	6	23	138		11.97	3.16	873
	Excavators	2	158	0.38	7	23	161		12.15	3.21	1,034
	Rubber Tired Dozers	2	247	0.4	7	23	161		20.00	5.28	1,701
	Tractors/Loaders/Backhoes	2	97	0.37	7	23	161		7.26	1.92	618
Site Preparation	Rubber Tired Dozers	0	247	0.4	0	138	0		20.00	5.28	0
	Tractors/Loaders/Backhoes	4	97	0.37	7	138	966		7.26	1.92	7,414
Grading	Excavators	2	158	0.38	7	92	644		12.15	3.21	4,134
	Graders	2	187	0.41	7	92	644		15.52	4.10	5,280
	Rubber Tired Dozers	2	247	0.4	7	92	644		20.00	5.28	6,803
	Tractors/Loaders/Backhoes	0	97	0.37	8	92	736		7.26	1.92	0
Trenching	Tractors/Loaders/Backhoes	4	97	0.37	7	154	1,078		7.26	1.92	8,274
Building Construction	Cranes	0	231	0.29	0	528	0		13.56	3.58	0
	Forklifts	2	89	0.2	7	528	3,696		3.60	0.95	7,035
	Generator Sets	2	84	0.74	1.3	528	686		12.58	3.32	4,562
	Tractors/Loaders/Backhoes	2	97	0.37	7	528	3,696		7.26	1.92	14,184
	Welders	2	46	0.45	7	528	3,696		4.19	1.11	8,181
Architectural Coating	Aerial Lifts	1	63	0.31	7	502	3,514		3.95	1.04	3,669
	Air Compressors	1	78	0.48	7	502	3,514		7.58	2.00	7,034
Paving	Cement and Mortar Mixers	2	9	0.56	7	44	308		1.02	0.27	166
	Pavers	2	130	0.42	7	44	308		11.05	2.92	1,798
	Paving Equipment	2	132	0.36	7	44	308		9.62	2.54	1,565
	Rollers	2	80	0.38	7	44	308		6.15	1.63	1,001
	Tractors/Loaders/Backhoes	2	97	0.37	7	44	308		7.26	1.92	1,182
Hotel											
Trenching	Tractors/Loaders/Backhoes	4	97	0.37	8	66	528		7.26	1.92	4,053
Site Preparation	Graders	0	187	0.41	8	138	1,104		15.52	4.10	0
	Rubber Tired Dozers	0	247	0.4	7	138	966		20.00	5.28	0
	Tractors/Loaders/Backhoes	4	97	0.37	7	138	966		7.26	1.92	7,414
Grading	Graders	2	187	0.41	7	69	483		15.52	4.10	3,960
	Rubber Tired Dozers	2	247	0.4	7	69	483		20.00	5.28	5,103
	Tractors/Loaders/Backhoes	2	97	0.37	7	69	483		7.26	1.92	1,854
Building Construction	Cranes	0	231	0.29	0	352	0		13.56	3.58	0
	Forklifts	2	89	0.2	7	352	2,464		3.60	0.95	4,690
	Generator Sets	2	84	0.74	0.4	352	141		12.58	3.32	936
	Tractors/Loaders/Backhoes	2	97	0.37	7	352	2,464		7.26	1.92	9,456
	Welders	2	46	0.45	7	352	2,464		4.19	1.11	5,454
Architectural Coating	Aerial Lifts	1	63	0.31	7	336	2,352		3.95	1.04	2,456
	Air Compressors	1	78	0.48	7	336	2,352		7.58	2.00	4,708
Paving	Cement and Mortar Mixers	2	9	0.56	7	44	308		1.02	0.27	166
	Pavers	2	130	0.42	7	44	308		11.05	2.92	1,798
	Paving Equipment	2	132	0.36	7	44	308		9.62	2.54	1,565
	Rollers	2	80	0.38	7	44	308		6.15	1.63	1,001
	Tractors/Loaders/Backhoes	2	97	0.37	7	44	308		7.26	1.92	1,182
Total Diesel Consumption											**142,301**

Onroad Equipment List

Phase	Category	Vehicle Type	Quantity	Total Working Days	Trip Length	Total trips per Day	Total Trips per Phase	Mileage per Day	Total Mileage per Phase	Fuel Economy	Total Fuel Consumption
Residential											
Demolition	Worker	Light-Duty/Passenger Vehicles	20	23	10.8	40	920	432	9,936	26.2	379
	Trucks	Heavy-Duty Diesel	208	23	20	18	416	362	8,320	6.1	1,364
Site Preparation	Worker	Light-Duty/Passenger Vehicles	10	138	10.8	20	2760	216	29,808	26.2	1,138
	Trucks	Heavy-Duty Diesel	0	138	20	0	0	0	0	6.1	0
Grading	Worker	Light-Duty/Passenger Vehicles	15	92	10.8	30	2760	324	29,808	26.2	1,138
	Trucks	Heavy-Duty Diesel	3970	92	20	86	7940	1,726	158,800	6.1	26,033
Trenching	Worker	Light-Duty/Passenger Vehicles	10	154	10.8	20	3080	216	33,264	26.2	1,270
	Trucks	Heavy-Duty Diesel	0	154	20	0	0	0	0	6.1	0
Building Construction	Worker	Light-Duty/Passenger Vehicles	364	528	10.8	728	384384	7,862	4,151,347	26.2	158,448
	Trucks	Heavy-Duty Diesel	75	528	7.3	150	79200	1,095	578,160	6.1	94,780
Architecutral Coating	Worker	Light-Duty/Passenger Vehicles	73	502	10.8	146	73292	1,577	791,554	26.2	30,212
	Trucks	Heavy-Duty Diesel	0	502	7.3	0	0	0	0	6.1	0
Paving	Worker	Light-Duty/Passenger Vehicles	25	44	10.8	50	2200	540	23,760	26.2	907
	Trucks	Heavy-Duty Diesel	0	44	7.3	0	0	0	0	6.1	0
Residential Subtotal											**315,669**
Hotel						**0**	**0**				
Trenching	Worker	Light-Duty/Passenger Vehicles	10	66	10.8	20	1320	216	14,256	26.2	544
	Trucks	Heavy-Duty Diesel	0	66	7.3	0	0	0	0	6.1	0
Site Preparation	Worker	Light-Duty/Passenger Vehicles	10	138	10.8	20	2760	216	29,808	26.2	1,138
	Trucks	Heavy-Duty Diesel	0	138	7.3	0	0	0	0	6.1	0
Grading	Worker	Light-Duty/Passenger Vehicles	15	69	10.8	30	2070	324	22,356	26.2	853
	Trucks	Heavy-Duty Diesel	0	69	7.3	0	0	0	0	6.1	0
Building Construction	Worker	Light-Duty/Passenger Vehicles	86	352	10.8	172	60544	1,858	653,875	26.2	24,957
	Trucks	Heavy-Duty Diesel	34	352	7.3	68	23936	496	174,733	6.1	28,645
Architecutral Coating	Worker	Light-Duty/Passenger Vehicles	17	336	10.8	34	11424	367	123,379	26.2	4,709
	Trucks	Heavy-Duty Diesel	0	336	7.3	0	0	0	0	6.1	0
Paving	Worker	Light-Duty/Passenger Vehicles	25	44	10.8	50	2200	540	23,760	26.2	907
	Trucks	Heavy-Duty Diesel	0	44	7.3	0	0	0	0	6.1	0
Hotel Subtotal											**61,753**
Total Diesel Consumption											**150,822**
Total Gas Consumption											**226,600**
Proposed Project Total											**377,421**

Assumed CalEEMod default trip length for construction worker trips

Operational Vehicles

Land Use	Size	Unit	Auto Trip Rate/unit	Total Trips per Day	Daily Vehicle Mileage	Days per Year	Annual VMT	Average Fuel Economy (miles/gallon)	Total Annual Fuel Consumption (gallons)
Apartment	384	du	5.45	2093	10.80	365	8,249,817.60	34.2	241,223
Hotel	200	Room	8.19	1638	9.50	261	4,061,421.00	34.2	118,755
Total							**12,311,239**		**359,978**

Electricy and Gas Demand

EnergyUseLandUseSubType	Size	Title 24 Electricity Energy Intensity (KWhr/size/year)	Nontitle 24 Electricity Energy Intensity (KWhr/size/year)	Lighting Energy Intensity (KWhr/size/year)	Total Electricity Energy Demand (KWhr/size/year)	Total Electricity Demand (KWhr/year)		Title 24 Natural Gas Energy Intensity (KBTU/size/year)	Nontitle 24 Natural Gas Energy Intensity (KBTU/size/year)	Total Natural Gas Energy Demand (KBTU/size/year)	Total Natural Gas Demand (KBTU/year)
Apartments	384	426.45	3054.1	741.44	4221.99	1,621,244		6,115.43	2,615.00	8,730.43	3,352,485.12
Parking with Elevator	548	3.92	0.19	1.75	5.86	3,211		0.00	0.00	0.00	0.00
Hotel	200	2.19	2.85	3.13	8.17	1,634		29.38	7.13	36.51	7,302.00
Parking with Elevator	187	3.92	0.19	1.75	5.86	1,096		0.00	0.00	0.00	0.00
Total						**1,627,185**					**3,359,787.12**

Component	MBH/hr	BTU/hr	Hours per day	Days	Total usage	KBTU
Swimming Pool	1000	1,000,000	18	122	2,196,000,000	2,196,000
Spa	400	400,000	18	122	878,400,000	878,400
Notes:						
Based on June through September Season						
Hours of use based on more hours than average pool size - https://www.hawkinsserviceco.com/2016/10/18/whats-the-cost-to-run-a-pool-heater/						

Appendix G
Geotechnical Study

GEOTECHNICAL
ENVIRONMENTAL
WATER RESOURCES
CONSTRUCTION SERVICES

Project No.
13420.000.000

August 14, 2020

Mr. Garrett Borges
Anton Development Company
900 Hopyard Road, Suite 300
Pleasanton, CA 94588

Subject: 1100 El Camino Real
Millbrae, California

REVISIONS TO ADDRESS COMMENTS

References:

1. ENGEO; Geotechnical Exploration, 1100 El Camino Real, Millbrae, California; October 28, 2016, revised August 14, 2020; Project No. 13420.000.000.
2. ENGEO; Geotechnical Considerations for Planned Updated Development Configuration; 1100 El Camino Real, Millbrae, California; August 7, 2020 ; Project No. 13420.000.000.

Dear Mr. Borges:

At your request, we prepared this cover letter to the revised geotechnical report for your 1100 El Camino Real project in Millbrae, California. We received comments to the original geotechnical report, and have updated the report to address the comments (Reference 1).

As noted in our August 7, 2020 letter (Reference 2), the geotechnical design report should be updated at a future date, prior to or as part of the design review application process, to address the necessary updates to the hotel portion of the project. This includes 1) updating the report to the prevailing California Building Code at the time of application; and 2) updating the foundation design recommendations for the planned seven-story hotel.

The revisions in the updated report (attached) do not include updates to the current California Building Code or updated foundation design recommendations; as such, the revision date should only be interpreted as the date the report was revised to address specific comments received during the Sustainable Communities Environmental Assessment review by the City of Millbrae reviewer.

If you have any questions regarding the contents of this letter, please do not hesitate to contact us.

Sincerely,
ENGEO Incorporated

James S. Yang, GE
jsy/tpb/dt

Theodore P. Bayham, GE, CEG

Attachment: ENGEO; Geotechnical Exploration, 1100 El Camino Real, Millbrae, California; October 28, 2016, revised August 14, 2020; Project No. 13420.000.000.

GEOTECHNICAL EXPLORATION

1100 EL CAMINO REAL
MILLBRAE, CALIFORNIA

Submitted to:
Mr. Garrett Borges
Anton Development Company
950 Tower Lane, Suite 1225
Foster City, CA 94404

Prepared by:
ENGEO Incorporated

October 28, 2016
Revised August 14, 2020

Project No:
13420.000.000

Project No.
13420.000.000

October 28, 2016
Revised August 14, 2020

Mr. Garrett Borges
Anton Development Company
950 Tower Lane, Suite 1225
Foster City, CA 94404

Subject: 1100 El Camino Real
Millbrae, California

GEOTECHNICAL EXPLORATION

Dear Mr. Borges:

ENGEO has prepared this geotechnical exploration report for the proposed development at 1100 and 1150 El Camino Real, and 33 Center Street in Millbrae, California. The accompanying report presents the results of our site exploration, the analysis of the geotechnical and geologic data accumulated during the study, and our geotechnical recommendations for design of the proposed development at the time of the original report.

This report has been revised on August 14, 2020 to incorporate requested minor updates and clarifications based on comments provided during the Sustainable Communities Environmental Assessment review by the City of Millbrae.

With the exception of updating the Site Map (Figure 2) to show general development footprints, this report revision does not account for changes to the development concept relative to the concept at the time of the original report, and does not include modifications or updates to the recommendations. Therefore, references within this revised report to the development concept and configuration are in reference to the concept and configuration at the time of the original report. More substantial modifications, such as updates regarding the development configuration and concept and recommendations related to those updates, should be incorporated in a future report revision. We understand that it is not practical to do so at this time.

Based on our findings, it is our opinion that the original proposed development is feasible from a geotechnical standpoint, provided that the recommendations included in this report are incorporated into design and implemented during construction. The main geotechnical considerations for the planned development include existing undocumented fills in areas of the site, potential loose layers susceptible to liquefaction and seismic settlement, compressible soils, and presence of shallow groundwater.

If you have any questions or comments regarding this report, please call and we will be glad to discuss them with you.

Sincerely,

ENGEO Incorporated

James S. Yang, GE

Theodore P. Bayham, GE, CEG

Leroy Chan, GE
jsy/tpb/lc/dt

TABLE OF CONTENTS

Letter of Transmittal

TABLE OF CONTENTS (Continued)

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

ENGEO has prepared this geotechnical report for design of the proposed development at 1100 El Camino Real in Millbrae, California. Our services were outlined in our proposal dated September 15, 2016.

The purpose of the geotechnical exploration is to evaluate the geotechnical and geologic hazards to provide foundation and grading recommendations for the design and construction of the proposed development. The scope of our services for this study included:

- Review of available geologic maps, and our database of previous borings for the immediate area;
- Perform subsurface exploration consisting of five cone penetration tests and three exploratory soil borings;
- Perform laboratory testing of materials sampled collected during the field exploration;
- Perform data analyses to evaluate geotechnical hazard and/or to develop design parameters;
- Characterize subsurface soil and groundwater conditions; and
- Prepare report summarizing our recommendations for the proposed site development.

This report was prepared for the exclusive use of our client Anton Development Company and their consultants for design of this project. In the event that any changes are made in the character, design or layout of the development, we must be contacted to review the conclusions and recommendations contained in this report to evaluate whether modifications are necessary. This document may not be reproduced in whole or in part by any means whatsoever, nor may it be quoted or excerpted without our express written consent.

1.2 PROJECT LOCATION

The proposed development at the time of the original report, identified by Assessor's Parcel Numbers (APNs) 021-324-190, 021-324-310, and 021-324-320, is located at 1100 and 1150 El Camino Real, and 33 Center Street in Millbrae, California. The project area is shown in Figures 1 and 2. The property is bordered by El Camino Real to the southwest, Center Street, a two-story apartment structure and a single-story restaurant to the northwest, a paved access road and Caltrain tracks to the northeast, and San Francisco Water facility to the southeast.

The project area generally dips towards the east from El Camino Real with an overall area of approximately 6.7 acres. It is currently occupied by the Best Western Hotel facilities with several two- to three-story hotel structures, a one-story restaurant with one partially below-grade level, at-grade paved parking, and landscaping.

1.3 PROJECT DESCRIPTION

The proposed project is to consist of a mixed-use development. At the time of the original report, we understood the development would consist of one five-story Type III “wrap”-style residential building totaling 320 units and one five-story Type III “wrap”-style hotel building that will also house approximately 6,000 square feet for retail use.

The following documents provide a description of the proposed project:

- Conceptual design package prepared by KTGY Architecture, dated August 5, 2016
- Land Title Survey prepared by Morrow Surveying, dated September 16, 2016

The KTGY plan shows buildings, access roads, emergency vehicle access (EVA), surface parking spaces, amenities including pools and patios, and landscaping.

At the time of this report, proposed grading and structural loads are not finalized. However, it is assumed that grading will consist of minor cuts and fills of up to 3 feet from existing grade, and building loads will be moderate for the proposed structures. We should review the finalize grading and foundation plans prior to construction to confirm the validity of the conclusions and recommendations within this report.

1.4 SITE HISTORY

We reviewed historic documents including shoreline surveys and historic aerials dating back to 1868. According to our review, the northern corner of the site was formerly a tidal marshland as mapped by the U.S. Coast Survey in 1868. By 1946, historic aerials show the former tidal marshland has been filled in during land reclamation of the area and the site to be lightly developed with relatively small structures scattered across the site and an apparent orchard at the southern corner of the site. By 1956, the structures that currently occupy the southern half of the site are visible. By 1980, the current overall site configuration is visible, with the exception of a structure at the occupied the southwestern corner of the site, which appears to be demolished and converted into a parking lot by 1987.

2.0 GEOLOGIC CONDITIONS

2.1 REGIONAL GEOLOGY

The site is located within the Coast Ranges geomorphic province, which is dominated by a series of northwest-trending, fault-bounded mountain ranges and intervening alleviated valleys. As depicted on Figure 3, regional geologic mapping (Brabb et. al, 1998) indicates the majority of the site is underlain by the Colma Formation (Qc). The northern corner of the site is underlain by artificial fill (af). The mapped limits of the artificial fill are generally consistent with the mapped limit of the former tidal marshlands.

2.2 REGIONAL FAULTING

The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone, and no known surface expression of active faults is believed to exist within the site. Fault rupture through the site, therefore, is not anticipated.

Numerous small earthquakes occur every year in the San Francisco Bay Region and larger earthquakes have been recorded and can be expected to occur in the future. Figure 4 shows the approximate locations of these faults and significant historic earthquakes recorded within the Greater Bay Area Region. Bonilla has mapped a northwest trending City College Fault approximately 500 feet south of the site. The Fault Activity Map of California by California Geologic Survey (Jennings, 2010) indicates this fault is Pre-Quaternary without recognized Quaternary displacement, therefore the City College Fault is not considered to be active. The most common nearby active faults within 30 miles of the site and their estimated maximum earthquake magnitudes are provided in the following table based on United States Geologic Survey (USGS) 2008 National Seismic Hazard Maps. An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 11,000 years) (Hart, 1997).

TABLE 2.2-1
Summarized Nearest Active Faults

Fault Name	Approximate Distance from Project Site (miles)	Maximum Moment Magnitude (Ellsworth)
San Andreas	1.3	7.9
San Gregorio	7.5	7.5
Monte Vista-Shannon	14.2	6.5
Hayward	16.9	7.3
Calaveras	25.5	7.0
Mount Diablo Thrust	27.0	6.7

The United States Geologic Survey evaluated the Bay Area seismicity through a study by the Working Group on California Earthquake Probabilities (WGCEP, 2014). WGCEP estimated the aggregate probability of a magnitude (Mw) of 6.7 or greater earthquake in the San Francisco Bay Area to be 72 percent in the San Francisco Region.

3.0 FIELD EXPLORATION

Our field exploration included performing five cone penetration tests (CPTs) and drilling three exploratory borings within the project site at the approximate locations shown on Figure 2. The exploration locations were mapped based on taping or pacing from existing features. As a result, the mapped locations should be considered only as accurate as the methods used to determine them.

The exploratory borings were performed on October 14, 2016, and consisted of drilling three borings to depths ranging between approximately 16½ to 51½ feet below existing grade. The borings were performed using a truck-mounted drill rig and mud rotary methods. The borings were logged in the field and soil samples were collected using either a 2½-inch inside diameter (I.D.) California-type split-spoon sampler fitted with 6-inch-long steel liners, a 2-inch outside diameter (O.D.) Standard Penetration Test (SPT) split-spoon sampler, or a 3-inch O.D. Shelby Tube sampler. The penetration of the samplers into underlying materials was recorded as the number of blows needed to drive the sampler 18 inches in 6-inch increments. The boring logs record blow count results as the actual number of blows required for the last one foot of penetration; no conversion factors have been applied. The samplers were driven with a 140-pound hammer falling a distance of 30 inches employing an automatic hammer system. The 3-inch O.D. Shelby Tube sampler was pushed hydraulically with the drill rig. The field logs were then used to develop the report boring logs, which are presented in Appendix A.

Five CPT soundings were advanced to depths ranging between approximately 32 to 58 feet below the existing ground surface on October 12, 2016. The CPT equipment utilized a 20-ton compression-type cone with a 15-square-centimeter (cm^2) base area, an apex angle of 60 degrees, and a friction sleeve with a surface area of 225 cm^2. The cone, connected with a series of rods, is pushed into the ground at a constant rate. Cone readings are taken at approximately 5-cm intervals with a penetration rate of 2 cm per second in accordance with current ASTM D-5778 standard. Measurements include the tip resistance to penetration of the cone (Q_c), the resistance of the surface sleeve (F_s), and dynamic pore pressure (U). The CPT holes were backfilled in general accordance with San Mateo County Environmental Health requirements. The CPT logs and supporting empirical data are located in Appendix B.

The logs depict subsurface conditions within the exploration at the time of the exploration. Subsurface conditions at other locations may differ from conditions occurring at these boring locations, and the passage of time may result in altered subsurface conditions. In addition, stratification lines represent the approximate boundaries between soil types, and the transitions may be gradual.

3.1 LABORATORY TESTING

We performed the following laboratory tests on select samples recovered during boring and CPT operations:

TABLE 3.1-1
Laboratory Testing

Soil Characteristic	Testing Method	Location of Results
Moisture Content	ASTM D2216	Appendix A
Atterberg Limits	ASTM D4318	Appendices A and C
Gradation	ASTM D6913	Appendices A and C
Unconfined Compression	ASTM D2166	Appendix C

Soil Characteristic	Testing Method	Location of Results
Unconsolidated Undrained Triaxial Test	ASTM D2850	Appendix C
Consolidation Testing Using Constant Rate of Strain	ASTM D4186	Appendix C
Water Soluble Sulfates in Soils	ASTM C1580	Appendix C

The laboratory test results are shown on the Boring Logs (Appendix A), with individual test results presented in Appendix C.

3.2 SUBSURFACE CONDITIONS

In general, the borings and CPTs encountered near surface deposits of existing "man-made" fill in the upper 3 to 4 feet across the site. The existing fill materials is composed of medium dense to medium stiff, silty sand and sandy clay. The fill deposits were placed during previous site development, and land reclamation in the proximity of the project site. Documentation of the manner at which the fill was placed is not available, and therefore it is considered undocumented and may contain unsuitable or poorly compacted materials. Our review of historic photographs of the site, show sequence of land development that appears variable and non-uniform.

Beneath the fill layer, our borings and CPTs generally encountered natural soils deposits. These deposits consist of alternating layers and variable thicknesses of medium stiff to hard, sandy clay and/or medium dense to dense, silty sand and sandy silt. These deposits are associated with the "Colma Formation" and these generally were encountered to the terminus our borings and CPTs, with the exception of at 1-B3 location.

At 1-B3, below the existing fill deposits the boring encountered a natural soil deposit of soft, highly expansive clay. The soft clay layer extended to a depth of approximately 9 feet below the ground surface (bgs). This soft clay layer is common in tidal marsh area along historic shoreline of the San Francisco Bay. Within this soft clay, wood debris was encountered between 5½ feet and 8 feet. This soft clay layer is susceptible to settlement if subjected to increased loads, such as induced by placement of additional new fill and foundation loading.

Based on interpretation of historic maps we estimated the extent of project area underlying by the Bay Deposit presented in Figure 2.

3.3 GROUNDWATER

Groundwater was measured in 1-CPT3 at approximately 12 feet below ground surface. We also performed in-situ pore pressure dissipation tests (PPDTs) but were unable to determine the equilibrated depth to groundwater due to the low permeability of the material. Groundwater measurements were not taken within the borings due to the method of drilling. According to data available from the State Water Resources Control Board, groundwater in the vicinity of the project has been encountered as shallow as 5 feet bgs.

Fluctuations in groundwater levels should be expected during seasonal changes or over a period of years because of precipitation changes, perched zones, changes in drainage patterns, and irrigation. For design purposes, we assumed a groundwater level of 5 feet bgs for our geotechnical analyses.

4.0 GEOLOGIC AND GEOTECHNICAL HAZARDS

The site was evaluated with respect to known geologic and other hazards common to the area. The primary hazards and the risks associated with these hazards with respect to the planned development are discussed in the following sections of this report.

4.1 SEISMIC HAZARDS

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking, ground lurching, soil liquefaction, and lateral spreading. These hazards are discussed in the following sections. Based on topographic and lithologic data, risk from earthquake-induced regional subsidence/uplift, tsunamis, lateral spreading, landsliding, and seiches is considered low to negligible at the site.

4.1.1 Ground Rupture

The site is not located within a State of California Earthquake Fault Hazard Zone and no known faults cross the site. Therefore, it is our opinion that ground rupture is unlikely at the subject property.

4.1.2 Ground Shaking

An earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site, similar to that which has occurred in the past. To mitigate the shaking effects, all structures should be designed using sound engineering judgment and the latest California Building Code (CBC) requirements, as a minimum.

Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake (SEAOC, 1996).

4.1.3 Soil Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded fine sands below the groundwater table. Empirical evidence indicates that low plasticity silt and clay are also potentially liquefiable, though this phenomenon is commonly referred to as cyclic softening; for the purposes of this report we will refer to cyclic softening as liquefaction. When seismic ground shaking occurs, the soil is subjected to cyclic shear stresses that can cause excess hydrostatic pressures to develop and liquefaction of susceptible soil to occur.

The general site is not located within areas mapped by USGS as being susceptible to liquefaction with the exception of the northern corner in the area of the former tidal marsh where it is mapped as susceptible to liquefaction. Since the borings and CPTs generally agreed with each other, we selected the CPTs for liquefaction analysis since the CPT data provides higher resolution of the subsurface conditions. We assigned a design groundwater level of 5 feet below the existing ground surface, a peak ground acceleration modified for site class (PGA_M) of 0.91g, and an earthquake magnitude M_w of 7.9. We further refined our analysis based on criteria suggested by Bray and Sancio (2006), using laboratory data from our borings to establish a site-specific soil behavior index (I_c) cutoff of 2.35. The refinement is necessary to correlate the I_c cutoff as the transition between sand-like and clay-like behavior to account for cyclic softening potential.

Our CPT analyses were based on methods published by Idriss & Boulanger (2014), with post-liquefaction settlement according to Zhang et. al. (2002). Results of our CPT analyses are presented below in Table 4.1.3-1. Our liquefaction results are attached as Appendix D.

TABLE 4.1.3 -1
Liquefaction Analysis Summary

Exploration Location	Estimates of Total Liquefaction-induced Settlement (inches)
1-CPT1	<¼
1-CPT2	<¼
1-CPT3	¾
1-CPT4	1¾
1-CPT5	<¼

Based on our analysis, it is our opinion that for the MCE-level earthquake, the site may experience up to 1¾ inches of total settlement from liquefaction of material that was primarily encountered at depths of between 5 to 20 feet. We anticipate that differential settlements will be approximately half of the total settlement over 50 feet (less than 1 inch over 50 feet).

We also evaluated the capping effect of overlying non-liquefiable soils, based on guidelines provided by Ishihara (1985) and Youd and Garris (1995). For liquefaction-induced ground failure to occur, the pore water pressure generated within the liquefied strata must exert a force sufficient to break through the overlying soil and vent to the surface resulting in sand boils or fissures. This may result in localized area of reduction in bearing support.

We assessed conditions assuming that future grades will approximately match the existing grades. Based on our analysis, the project site does not have a sufficiently thick cap of non-liquefiable soil.

4.1.4 Ground Lurching

Ground lurching is a result of the rolling motion imparted to the ground surface during energy released by an earthquake. Such rolling motion can cause ground cracks to form. The potential for the formation of these cracks is considered greater at contacts between deep alluvium or fill and bedrock. Since such contact does not exist at this site, such an occurrence does not appear likely at this site and any offset or strain is expected to be minor.

4.2 EXISTING FILL

As previously discussed, the borings and CPTs encountered 3 to 4 feet of undocumented fill. Existing fills may be susceptible to excessive total and differential settlements. In general, undocumented fills should be excavated, and replaced as engineered soil fill. The extent and quality of existing fills should be evaluated and mitigated during grading activities by an ENGEO representative.

4.3 COMPRESSIBLE SOILS

As discussed, the tidal marsh deposits at the northern corner of the site are considered susceptible to excessive long-term settlement when subjected to new added loads (ie. Building loads, placement of fills to raise grades, etc.). The approximate limits of the area underlain by the compressible material are shown on Figure 2. The depths of this material potentially extends up to 10 feet beneath the existing ground surface and will be subjected to excessive settlement under loading from the planned building.

4.4 FLOODING

The project Civil Engineer should be consulted on the potential for localized flooding at the subject site. The review should also include a determination of whether the site falls below the 100-year flood plain elevation.

4.5 CALIFORNIA BUILDING CODE SEISMIC PARAMETERS

Based on the subsurface conditions encountered and local seismic sources, the following 2013 CBC seismic design parameters should be used for design. These seismic design parameters should be updated for conformance to the applicable California Building Code at the time of project construction permitting.

TABLE 4.5-1
2013 CBC Seismic Information

Parameter	Design Value
Site Class	D
Mapped MCE_R spectral response accelerations for short periods, S_S (g)	2.352
Mapped MCE_R spectral response accelerations for 1-second periods, S_1 (g)	1.129
Site Coefficient, F_A	1.0
Site Coefficient, F_V	1.5
MCE spectral response accelerations for short periods, S_{MS} (g)	2.352
MCE spectral response accelerations for 1-second periods, S_{M1} (g)	1.693
Design spectral response acceleration at short periods, S_{DS} (g)	1.568
Design spectral response acceleration at 1-second periods, S_{D1} (g)	1.129
Mapped MCE Geometric Mean Peak Ground Acceleration (g)	0.907
Site Coefficient, F_{PGA}	1.0
MCE Geometric Mean Peak Ground Acceleration, PGA_M (g)	0.907

MCE_R = Risk-Targeted Maximum Considered Earthquake
MCE = Maximum Considered Earthquake
Latitude: 37.60808; Longitude: -122.3972

4.6 CORROSIVITY CONSIDERATIONS

One representative near-surface soil sample was collected for water-soluble sulfate concentrations testing. The result show that the tested sample had a non-detectable amount of water-soluble sulfate. The test results are included in Appendix C.

The CBC references the American Concrete Institute Manual, ACI 318 (Chapter 4, Sections 4.2 and 4.3) for concrete requirements. ACI tables provide the following sulfate exposure categories and classes and concrete requirements in contact with soil based upon the exposure risk.

TABLE 4.6-1
Sulfate Exposure Categories and Classes

Sulfate Exposure Category S	Exposure Class	Water- Soluble Sulfate in Soil % by Weight
Not Applicable	S0	$SO_4 < 0.10$
Moderate	S1	$0.10 \leq SO_4 < 0.20$
Severe	S2	$0.20 \leq SO_4 \leq 2.00$
Very Severe	S3	$SO_4 > 2.00$

TABLE 4.6-2
Requirements for Concrete by Exposure Class

Exposure Class	Max w/cm	Min f'c (psi)	Cement Type			Calcium Chloride Admixture
			ASTM C150	ASTM C595	ASTM C1157	
S0	N/A	2500	No Type restriction	No Type restriction	No Type restriction	No restriction
S1	0.5	4000	II†‡	IP(MS), IS(<70), (MS)	MS	No restriction
S2	0.45	4500	V‡	IP(HS), IS(<70), (HS)	HS	Not permitted
S3	0.45	4500	V + pozzolan or slag§	IP(HS) + pozzolan or slag or IS(<70) (HS) + pozzolan or slag§	HS + pozzolan or slag§	Not permitted

Notes: † For seawater exposure, other types of portland cements with tricalcium aluminate (C_3A) contents up to 10 percent are permitted if the w/cm does not exceed 0.40.
‡ Other available types of cement such as Type III or Type I are permitted in Exposure Classes S1 or S2 if the C_3A contents are less than 8 or 5 percent, respectively.
§ The amount of the specific source of the pozzolan or slag to be used shall not be less than the amount that has been determined by service record to improve sulfate resistance when used in concrete containing Type V cement. Alternatively, the amount of the specific source of the pozzolan or slag to be used shall not be less than the amount tested in accordance with ASTM C1012 and meeting the criteria in ACI 4.5.1.

In accordance with the criteria presented above, the test results are classified in the S0 sulfate exposure class. The minimum concrete strength for this exposure class is specified by the CBC in the table above. As minimum requirements, we recommend that Type II cement be used in foundation concrete for structures at the project site and concrete should incorporate a maximum water cement ratio of 0.5 and a minimum compressive strength of 3,000 psi. It should be noted, however, that the structural engineering design requirements for concrete might result in more stringent concrete specifications.

5.0 CONCLUSIONS

From a geotechnical standpoint, the site is suitable for the proposed development provided the recommendations and guidelines provided in this report are implemented during project planning, design, and construction. The main geotechnical considerations for the planned development are: existing undocumented fills in areas of the site, potential loose layers susceptible to liquefaction and seismic settlement, compressible soils, and presence of shallow groundwater.

5.1 TREATMENT OF COMPRESSIBLE SOILS

As previously discussed, compressible soils were encountered in the area of the former tidal marshland. The approximate limits of the area underlain by the compressible material is shown on Figure 2. The depths of this material potentially extends up to 10 feet beneath the existing ground surface and will be subjected to excessive settlement under loading from the planned building.

A remedial measure to reduce impact of compressible material to the planned development will be to completely remove this material and replace with engineered backfill within the planned structural areas. Such work may need to be performed from beyond the limits of excavation, or using specialized “mud cats” to grade. It is recommended that depth of overexcavation extend to bottom of compressible soils and laterally a minimum of 10 feet beyond the building footprint. The bottom of the excavation should be observed by an ENGEO representative to confirm that compressible material has been completely removed.

Soft clay deposits may not be suitable for reuse as engineered fill, unless these are treated by drying and mixing. Since excavation of compressible soil may extend below groundwater, the bottom of the excavation may become oversaturated and require localized dewatering.

5.2 GROUND EFFECTS OF LIQUEFIABLE SOILS

As previously discussed, the site is underlain by layer of potentially liquefiable material. We estimate seismic settlements up to 1¾- inch. Based on depth of liquefiable layers some adverse ground effects (ie sand boils, fissures etc.) may be possible if liquefaction were to occur. We recommend that foundations consist of rigid structural mat designed to tolerate the magnitude of total and differential settlement estimated for this site.

In addition, we recommend the following measures below the foundations to reduce secondary ground effects:

- The building foundation area should be overexcavated a minimum depth of 3-feet below the bottom of mat foundation, extending a minimum of 5 feet beyond the limits of the building.

- A layer of geotextile (Tensar TriAx 140, Tensar Basetex 1000/100 or approved equivalent) should be placed over the overexcavated bottom extending 5 feet beyond the limits of the building.

- The building pad subgrade area should be restored to grade using properly compacted engineered fill material. If designed for added allowable bearing capacity support the backfill may consist of Class II Aggregate Base.

5.3 TREATMENT OF UNDOCUMENTED FILL

Based on our exploration performed at the site, we estimate an average 3- to 4-foot-thick layer of undocumented fill blankets the site. We recommend overexcavation of these soils in their entirety and replacement in their entirety with properly compacted engineered fill. The bottom of the over-excavation should be scarified to a minimum depth of 10 inches and recompacted to provide adequate bonding with the initial lift of fill.

Provided the excavated material is free of deleterious and organic material, they can be reused as engineered fill. The extent of fill removal should be determined by an ENGEO Geotechnical Engineer or Certified Engineering Geologist during site grading. As a minimum, existing fill removal and recompaction should extend a minimum horizontal distance of 10 feet outside of the building footprints. After corrective grading is successfully completed, potential risk of settlement is anticipated to be low.

5.3.1 Demolition and Stripping

Site demolition includes the removal of structures, foundations, and buried structures, including abandoned utilities and septic tanks and their leach fields, if any exist. Debris and soft compressible soils should be also removed from any location to be graded, from areas to receive fill or structures, or those areas to serve as borrow. The depth of removal of such materials should be determined by the Geotechnical Engineer in the field at the time of grading. Existing surficial fill and disturbed soils may be found across the site, though they were not noted in the borings.

The existing vegetation should be removed from areas to receive fill or improvements, or those areas to serve for borrow. Tree roots should be removed down to a depth of at least 3 feet below existing grade. Any topsoil that will be retained for future use in landscape areas should be stockpiled in areas where it will not interfere with grading operations.

All excavations from demolition and stripping below design grades should be cleaned to a firm undisturbed soil surface determined by the Geotechnical Engineer. This surface should then be scarified, moisture conditioned, and backfilled with compacted engineered fill. The requirements for backfill materials and placement operations are the same as for engineered fill. No loose or uncontrolled backfilling of depressions resulting from demolition or stripping is permitted. If planned for reuse, demolition recommendations for paved parking areas and existing buildings are provided in the subsequent sections.

Corrective grading suggested above should meet the requirements of the Supplemental Recommendations (Appendix E) and should be observed and tested by ENGEO's field representative. ENGEO should be notified a minimum of three days prior to grading in order to coordinate its schedule with the grading contractor.

5.3.2 Fill Placement

Once a suitable firm base is achieved, the exposed non-yielding native surface should be scarified to a depth of 10 inches, moisture conditioned, and recompacted to provide adequate bonding with the initial lift of fill. All fills should be placed in thin lifts, with the lift thickness not to exceed 10 inches or the depth of penetration of the compaction equipment used, whichever is less.

The following compaction control requirements should be applied to on-site materials, including those used for roadway pavement subgrade:

Test Procedures:	ASTM D-1557.
Required Moisture Content:	Not less than 2 percentage points above optimum moisture content.

Required Relative Compaction: Not less than 90 percent.

The following compaction control requirements should be applied to import Class 2 Aggregate Base:

Test Procedures:	ASTM D-1557.
Required Moisture Content:	Not less than optimum moisture.
Minimum Relative Compaction:	Not less than 95 percent.

Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material.

5.3.3 Over-Optimum Soil Moisture Conditions

The contractor should anticipate encountering excessively over-optimum (wet) soil moisture conditions during winter or spring grading, or during or following periods of rain. In addition, wet soil conditions may be encountered near the bottom of excavations. Wet soil can make proper compaction difficult or impossible. Wet soil conditions can be mitigated by:

1. Frequent spreading and mixing during warm dry weather
2. Mixing with drier materials
3. Mixing with a lime, lime-flyash, or cement product
4. Stabilizing with aggregate, geotextile stabilization fabric, or both

Options 3 and 4 should be evaluated and approved by ENGEO prior to implementation.

5.4 SELECTION OF MATERIALS

With the exception of construction debris (wood, brick, asphalt, concrete, metal, etc.), trees, organically contaminated materials (soil which contains more than 3 percent organic content by weight), highly expansive soil, and environmentally impacted soils, we anticipate the site soils are suitable for use as engineered fill. Unsuitable materials and debris, including trees with their root balls, should be removed from the project site.

Subject to approval by the Landscape Architect, organically contaminated soil may be stockpiled in approved areas located outside of the grading limits for future placement within landscape areas. Oversized soil or rock materials (those exceeding two-thirds of the lift thickness or 6 inches in dimension, whichever is less) should be removed from the fill and broken down to meet this requirement or otherwise off-hauled.

The Geotechnical Engineer should be informed when import materials are planned for the site. Import materials should be submitted to, and approved by, the Geotechnical Engineer prior to delivery at the site and should conform to the requirements provided in the Supplemental Recommendations.

5.4.1 Material from Existing Buildings

From a geotechnical standpoint, reuse of concrete materials from the existing buildings as a low-expansive engineered fill material or reinforced granular soil layer under building footprint may be considered. Reinforcing steel should be removed and the concrete materials should be reduced/broken down (not pulverized) to meet the following gradation requirements.

TABLE 5.4.1-1
General Engineered Fill Gradation (ASTM D-421)

Sieve Size	Minimum Percent Passing
3-inch	100
#200	15

TABLE 5.4.1-2
Reinforced Soil Layer Gradation (ASTM D-421)

Sieve Size	Minimum Percent Passing
1 1/2-inch	100
#4	25-50
#200	<10

For general engineered fill the material should then be mixed with soil at a minimum ratio of 1:1 (1 part soil to 1 part recycled material) such that larger fragments (3 inch) are well dispersed throughout the fill. The mixing ratio may be adjusted to a heavier soil to recycled material blend in the field based on observations and compaction performance. Nesting of fragments should not be allowed.

Alternatively, the existing concrete and asphaltic concrete materials can be broken down to meet recycled Caltrans Class 2 aggregate base specifications. Compliance testing should be performed on the resulting crusher product if this option is used. All backfill materials should be placed and compacted as engineered fill according to the recommendations in a subsequent section.

If recycled pavements and construction materials are utilized at the site, we recommend full disclosure to future homeowners/tenants be provided. As a minimum, disclosed information should include the presence of asphaltic concrete and Portland cement concrete fill materials at the site.

5.5 MONITORING AND TESTING

It is important that all site preparations for site grading be done under the observation of the Geotechnical Engineer's field representative. The Geotechnical Engineer's field representative should observe all graded area preparation, including demolition and stripping, following the recommendations contained herein and in the Supplemental Recommendations (Appendix E). The final grading and foundation plans should be submitted to the Geotechnical Engineer for review.

6.0 STRUCTURAL MAT FOUNDATIONS

Provided that the building pad area is overexcavated and recompacted in accordance with our recommendations the building may be supported on a structural mat foundation. We estimate that potential total load-induced settlement may be up to 1½ inches, while liquefaction-induced settlements may be up to 1¾ inches. In addition, the mat should be designed to be stiff and resist differential movements of ¾ inch over 50 feet for load-induced settlements and 1 inch over 50 feet for liquefaction-induced settlements. A subgrade modulus of 150 pounds per cubic inch may be used for design. The foundation should be designed to accommodate the anticipated settlements.

The mat foundation may be designed using allowable bearing pressure of:

- Engineered fill comprised of soil – An allowable bearing capacity of 1,500psf (dead plus live load)

- Engineered fill comprised of Class 2 Aggregate Base - An allowable bearing capacity of 2,000 psf (dead plus live load)

Concentrated load areas, such as column or wall loads can consider an increased by one-third when considering total loads with wind or seismic loads.

6.1 Slab Moisture Vapor Reduction

When buildings are constructed with concrete slab-on-grade, such as structural mats, water vapor from beneath the slab will migrate through the slab and into the building. This water vapor can be reduced but not stopped. Vapor transmission can negatively affect floor coverings and lead to increased moisture within a building. When water vapor migrating through the slab would be undesirable, we recommend the following to reduce, but not stop, water vapor transmission upward through the slab-on-grade.

1. Install a vapor retarder membrane directly beneath the slab. Seal the vapor retarder at all seams and pipe penetrations. Vapor retarders shall conform to Class A vapor retarder in accordance with ASTM E 1745-11 “Standard Specification for Plastic Water Vapor Retarders used in Contact with Soil or Granular Fill under Concrete Slabs”.

2. Concrete should have a concrete water-cement ratio of no more than 0.50.

3. Provide inspection and testing during concrete placement to check that the proper concrete and water cement ratio are used.

4. Moist cure slabs for a minimum of 3 days or use other equivalent curing specific by the structural engineer.

The structural engineer should be consulted as to the use of a layer of clean sand or pea gravel (less than 5 percent passing the U.S. Standard No. 200 Sieve) placed on top of the vapor retarder membrane to assist in concrete curing.

7.0 TEMPORARY EXCAVATIONS AND DEWATERING

The Contractor should be familiar with applicable local, state, and federal regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards. It is the responsibility of the Contractor to provide stable, safe trench and construction slope conditions and to follow OSHA safety requirements. Since excavation procedures may be dangerous, it is also the responsibility of the Contractor to provide a trained "competent person" as defined by OSHA to supervise all excavation operations, ensure that all personnel are working in safe conditions and have thorough knowledge of OSHA excavation safety requirements.

For areas of excavation where the base of the excavation is near or below the groundwater table, temporary dewatering may need to be provided. We recommend that temporary dewatering lower the piezometric water surface at the excavation to a minimum of two feet below the base of the excavation prior to placing concrete or backfill within the excavation.

8.0 DRAINAGE

Perimeter grades should be positively sloped at all times to provide for rapid removal of surface water runoff away from the foundation systems and to prevent ponding of water under foundations or seepage toward the foundation systems at any time during or after construction. Ponded water may cause undesirable soil swell and loss of strength. As a minimum requirement, finished grades should have slopes of at least 5 percent within 10 feet from the exterior walls and at right angles to allow surface water to drain positively away from the structure. For paved areas, the slope gradient can be reduced to 2 percent.

All surface water should be collected and discharged into outlets approved by the Civil Engineer. Landscape mounds must not interfere with this requirement. All roof stormwater should be collected and directed to downspouts. Stormwater from roof downspouts should not be allowed to discharge directly onto the ground surface in close proximity to the foundation system, such as via spash-blocks. Rather, stormwater from roof downspouts should be directed to a solid pipe that discharges into the street or to an outlet approved by the Civil Engineer. If this is not acceptable, we recommend downspouts discharge at least 5 feet away from foundations. Alternatively, engineered stormwater systems can be developed under the guidance of ENGEO.

9.0 PRELIMINARY PAVEMENT DESIGN

Preliminary pavement design is provided based on assumed Traffic Index and subgrade resistance values (R-value). The Traffic Index should be determined by the Civil Engineer or appropriate public agency. The sections provided below should be reviewed and revised, if applicable, based on R-value tests performed on samples of actual subgrade materials recovered at the time of grading.

9.1 FLEXIBLE PAVEMENT

Based on our field exploration, we estimate that site soil will have a resistance (R-value) value of 5. The following preliminary pavement sections have been determined based on an assumed R-value of 5 according to the method contained in the Highway Design Manual by CALTRANS.

TABLE 9.1-1
Preliminary Flexible Pavement Design

Traffic Index (TI)	R-Value of 5 (untreated subgrade)	
	AC (inches)	AB (inches)
5.0	3	10
6.0	3 ½	13
7.0	4	16

Notes: AC is asphalt concrete
AB is aggregate base Class 2 Material with minimum R = 78

9.2 RIGID PAVEMENTS

A rigid pavement section is recommended in truck loading dock areas where truck trailers will be parked. The recommended rigid pavement designs listed below are based on an assumed Medium Subgrade-subbase support and Axle-Load Category 3 per Portland Cement Association (PCA):

- Portland Cement Concrete Pavement (PCCP) = minimum of 8 inches
- Minimum Concrete Strength = 5,000 psi
- Aggregate Base (Class II) = minimum of 6 inches

9.3 PAVEMENT SUBGRADE PREPARATION

Pavement construction and all materials (hot mix asphalt and aggregate base) should comply with the requirements of the Standard Specifications of the State of California Division of Highways, City of Millbrae requirements, and the following minimum requirements.

- All pavement subgrades should be scarified to a depth of 12 inches below finished subgrade elevation and moisture conditioned and compacted per the fill placement specifications. Pavement subgrades should also be prepared in accordance with City of Millbrae requirements.

- Subgrade soils should be in a stable, non-pumping condition at the time aggregate baserock materials are placed and compacted. Proof-rolling with a heavy wheel-loaded piece of construction equipment should be implemented. Yielding materials should be appropriately mitigated, with suitable mitigation measures developed in coordination with the client, contractor and Geotechnical Engineer.

- Adequate provisions must be made such that the subgrade soils and aggregate baserock materials are not allowed to become saturated.

- Aggregate baserock materials should meet current Caltrans specifications for Class 2 aggregate baserock and should be compacted to at least 95 percent of maximum dry density at a moisture content of at least optimum. Proof-rolling with a heavy wheel-loaded piece of construction equipment should be implemented after placement and compaction of the aggregate base. Yielding materials should be appropriately mitigated, with suitable mitigation measures developed in coordination with the client, contractor and Geotechnical Engineer.

- All concrete curbs separating pavement and irrigated landscaped areas should extend into the subgrade and below the bottom of adjacent aggregate baserock materials. An undercurb drain could also be considered to help collect and transport subsurface seepage.

10.0 UTILITIES

It is recommended that utility trench backfilling be done under the observation of a Geotechnical Engineer. Ideally, pipe zone backfill (i.e. material beneath and immediately surrounding the pipe) should consist of native material less than ¾ inch in maximum dimension compacted in accordance with recommendations provided above for engineered fill. Trench zone backfill (i.e. material placed between the pipe zone backfill and the ground surface) should also consist of native soil compacted in accordance with recommendations for engineered fill. Controlled density fill is also suitable for pipe zone and trench zone backfill.

If required by local agencies, where import material is used for pipe zone backfill, we recommend it consist of quarry fines, fine- to medium-grained sand, or a well-graded mixture of sand and gravel and that this material not be used within 2 feet of finish subgrades. This material should be compacted to at least 90 percent relative compaction at a moisture content of not less than optimum.

In general, uniformly graded gravel should not be used for pipe or trench zone backfill due to the potential for migration of soil into the relatively large void spaces present in this type of material and for movement of water along trenches backfilled with this type of material. If uniformly graded gravel is used, we recommend that it be encapsulated in 6-ounce filter fabric. Providing outlet locations into manholes or catch basins for water collected in granular trench backfill should also be considered.

All utility trenches entering the buildings and paved areas should be provided with an impervious seal where the trenches pass under or through the building perimeter or curb lines. The impervious plug should extend at least 3 feet to both sides of the crossing and should be placed below, around, and above the utility pipe such that it is entirely in contact with the trench walls and pipe. This is to prevent surface water percolation into the import sand or gravel pipe zone backfill under foundations and pavements where such water would remain trapped in a perched condition.

Care should be exercised where utility trenches are located beside foundation areas. Utility trenches constructed parallel to foundations should be located entirely above a plane extending down from the lower edge of the footing at an angle of 45 degrees. Utility companies and Landscape Architects should be made aware of this information.

Utility trenches in areas to be paved should be constructed in accordance with the City of Millbrae requirements or approved alternatives. Compaction of backfill by jetting should not be allowed at this site. If there appears to be a conflict between the City or other Agency requirements and the recommendations contained in this report, this should be brought to the Owner's attention for resolution prior to submitting bids.

11.0 LANDSCAPE AND DRAINAGE RECOMMENDATIONS

While the near-surface soils may be relatively permeable, the underlying Colma Formation is expected to have low permeability for stormwater infiltration. Therefore, best management practices should assume that stormwater infiltration will be limited at the site unless an engineered system is designed.

If bioretention areas are implemented, we recommend that a subdrain or other storm drain system be incorporated to collect and convey water to an approved outlet, considering the very low permeability of site soils. When practical, bioretention areas should be planned a minimum of 5 feet away from structural site improvements, such as buildings, streets, retaining walls, and sidewalks/driveways. When this is not practical, bioretention areas located within 5 feet of structural onsite or offsite improvements can either:

1. Be constructed with structural side walls (below-grade retaining walls) capable of withstanding the loads from the adjacent improvements, or

2. Incorporate filter material compacted to between 85 and 90 percent relative compaction (ASTM D1557, latest edition) and a waterproofing system designed to reduce the potential for moisture transmission into the subgrade soil beneath the adjacent improvement.

In addition, site improvements located adjacent to bioretention areas that are underlain by base rock, sand, or other imported granular materials, should be designed with a deepened edge that extends to the bottom of the imported material underlying the improvement.

Where adjacent site improvements include buildings greater than three stories, streets steeper than 3 percent, or design elements that will experience lateral loads (such as from impact or traffic patterns), additional design considerations may be required. If the surface of the bioretention area is depressed, the slope gradient should follow the slope guidelines described in earlier section(s) of this document. In addition, although not recommended, if trees are to be planted within bioretention areas, HDPE Tree Boxes that extend below the bottom of the bioretention system should be installed to reduce potential impact to subdrain systems that may be part of the bioretention area design. For this condition, the waterproofing system should be connected to the HPDE Tree Box with a waterproof seal.

Given the nature of bioretention systems and possible proximity to improvements, we recommend ENGEO be retained to review design plans and provide testing and observation services during the installation of linings, compaction of the filter material, and connection of designed drains.

It should be noted that the contractor is responsible for conducting all excavation and shoring in a manner that does not cause damage to adjacent improvements during construction and future maintenance of the bioretention areas. As with any excavation adjacent to improvements, the contractor should minimize the exposure time such that the improvements are not detrimentally impacted.

11.1 REQUIREMENTS FOR LANDSCAPING IRRIGATION

Planted areas should be avoided immediately adjacent to the buildings to reduce infiltration of water underneath the foundation. If planting adjacent to a structure is desired, the use of watertight planter boxes with controlled discharge or the use of plants that require very little moisture is recommended.

Sprinkler systems should not be installed where they may cause ponding or saturation of foundation soils within 3 feet from walls. Such ponding or saturation could result in undesirable soil swell, loss of compaction and consequent foundation and slab movements. Irrigation of landscaped areas should be strictly limited to that necessary to sustain vegetation. The Landscape Architect and prospective owners should be informed of the surface drainage and irrigation requirements included in this report.

12.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

This report is issued with the understanding that it is the responsibility of the owner to transmit the information and recommendations of this report to developers, contractors, buyers, architects, engineers, and designers for the project so that the necessary steps can be taken by the contractors and subcontractors to carry out such recommendations in the field. The conclusions and recommendations contained in this report are solely professional opinions.

The professional staff of ENGEO Incorporated strives to perform its services in a proper and professional manner with reasonable care and competence but is not infallible. There are risks of earth movement and property damages inherent in land development. We are unable to eliminate all risks or provide insurance; therefore, we are unable to guarantee or warrant the results of our services.

This report is based upon field and other conditions discovered at the time of preparation of ENGEO's documents of service. This document must not be subject to unauthorized reuse, that is, reuse without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time. Actual field or other conditions will necessitate clarifications, adjustments, modifications or other changes to ENGEO's documents. Therefore, ENGEO must be engaged to prepare the necessary clarifications, adjustments, modifications or other changes before construction activities commence or further activity proceeds. If ENGEO's scope of services does not include onsite construction observation, or if other persons or entities are retained to provide such services, ENGEO cannot be held responsible for any or all claims, including, but not limited to claims arising from or resulting from the performance of such services by other persons or entities, and any or all claims arising from or resulting from clarifications, adjustments, modifications, discrepancies or other changes necessary to reflect changed field or other conditions.

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FIGURES

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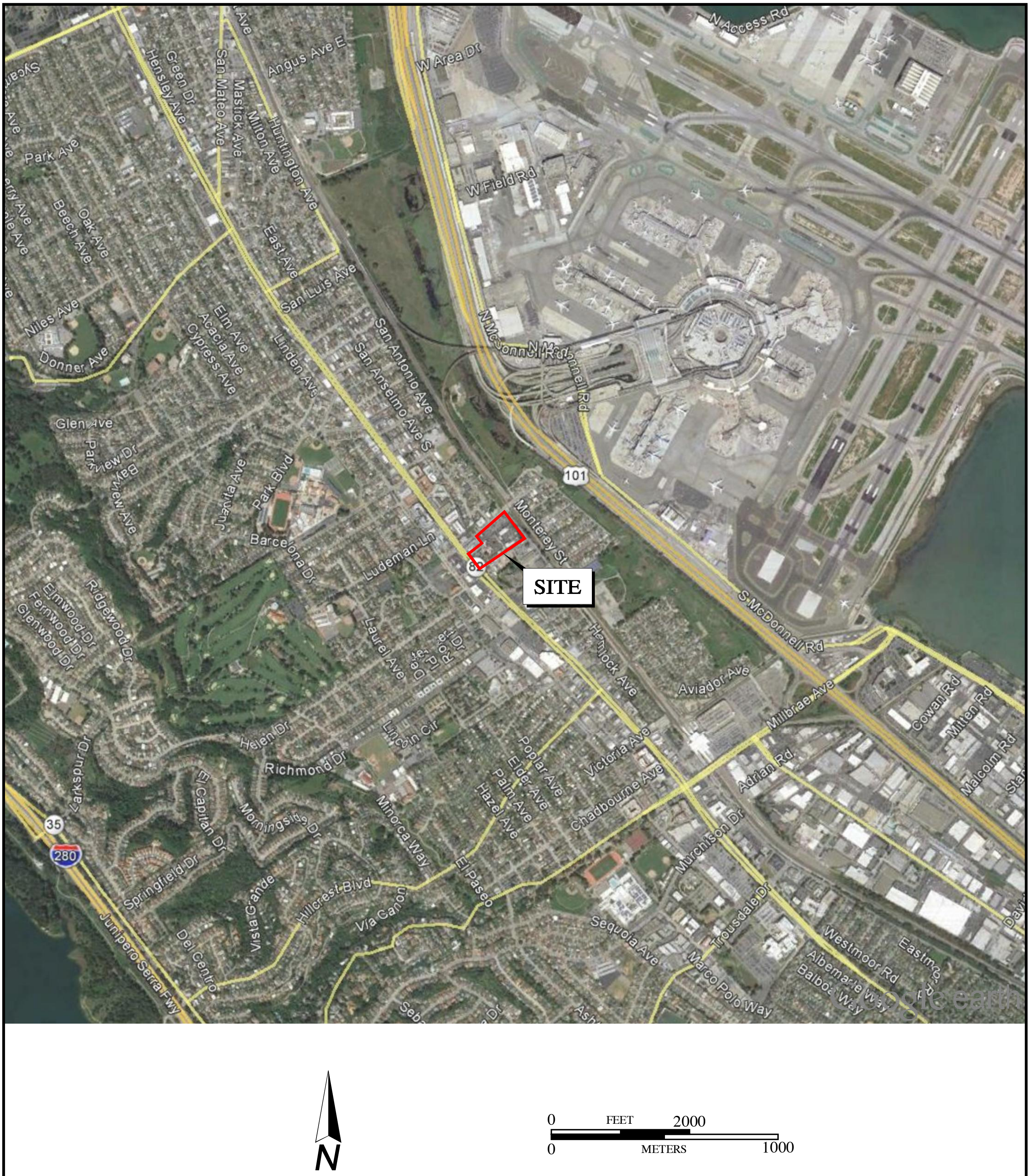

BASE MAP SOURCE: GOOGLE EARTH MAPPING SERVICE

ENGEO Expect Excellence	VICINITY MAP 1100 EL CAMINO REAL REDEVELOPMENT MILLBRAE, CALIFORNIA	PROJECT NO.: 13420.000.000		FIGURE NO.
		SCALE: AS SHOWN		1
		DRAWN BY: SRP	CHECKED BY: TPB	

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ORIGINAL FIGURE PRINTED IN COLOR

EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

1-B3 BORING (ENGEO, 2016)

1-CPT5 CONE PENETRATION TEST (ENGEO, 2016)

ZONE OF FORMER TIDAL MARSHLAND

BASE MAP SOURCE: KTGY, GOOGLE EARTH MAPPING SERVICE

ENGEO Expect Excellence

SITE PLAN

1100 EL CAMINO REAL REDEVELOPMENT

MILLBRAE, CALIFORNIA

PROJECT NO.: 13420.000.000		FIGURE NO. 2
SCALE: AS SHOWN		
DRAWN BY: JV	CHECKED BY: LC	

ORIGINAL FIGURE PRINTED IN COLOR

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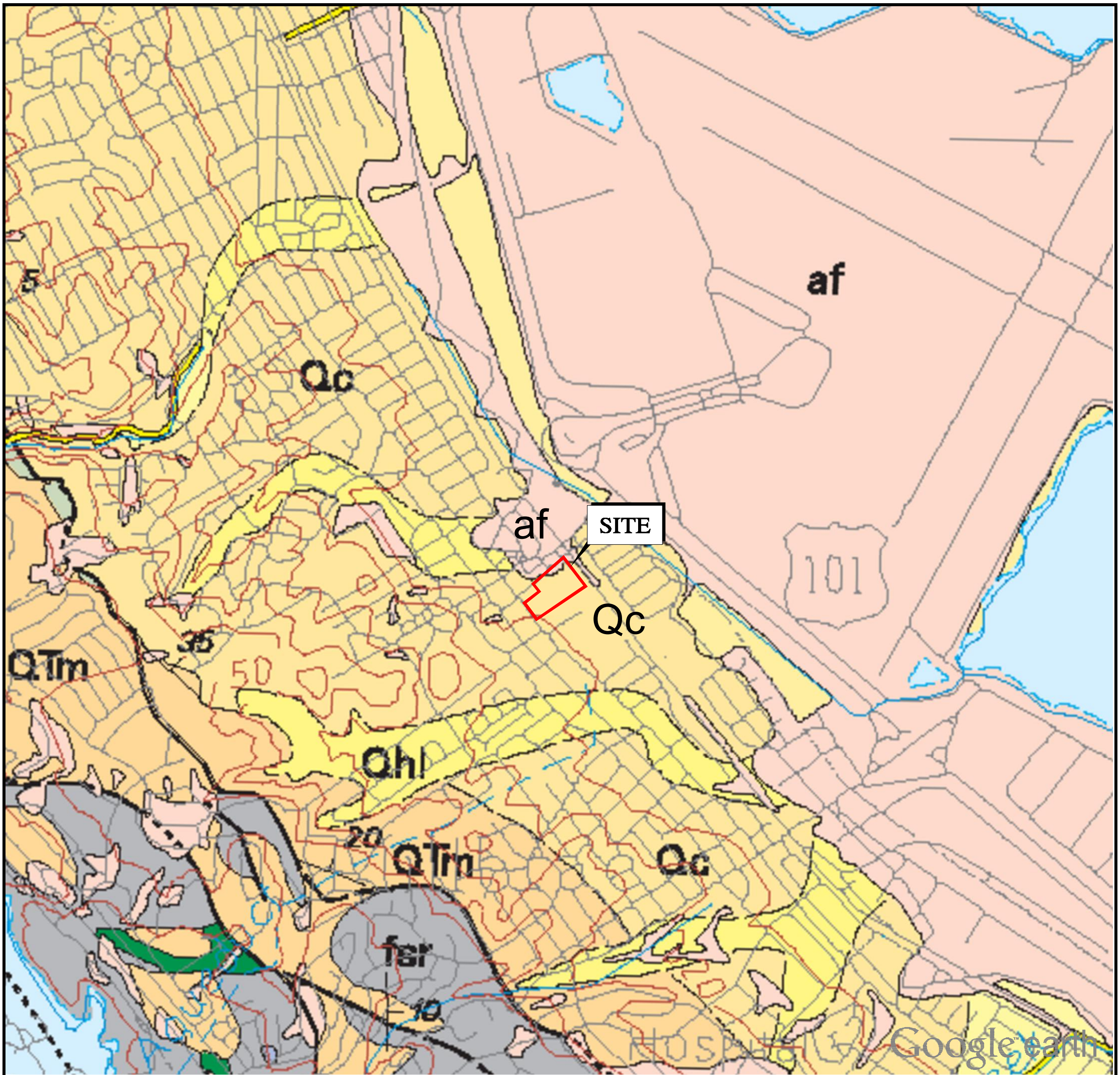

EXPLANATION

GEOLOGIC CONTACT-DASHED WHERE GRADATIONAL OR APPROXIMATELY LOCATED

FAULT-DASHED WHERE INFERRED, DOTTED WHERE CONCEALED, QUERIED WHERE EXISTENCE IS DOUBTFUL. SAWTEETH ARE ON UPPER PLATE OF LOW ANGLE THRUST FAULT.

af	ARTIFICIAL FILL
Qhl	NATURAL LEVEE DEPOSITS
Qc	COLMA FORMATION
QTm	MERCED FORMATION
fsr	METAMORPHIC ROCKS

N

0 FEET 2000
0 METERS 1000

BASE MAP SOURCE: GRAYMER, 1998

ENGEO
Expect Excellence

REGIONAL GEOLOGIC MAP
1100 EL CAMINO REAL REDEVELOPMENT
MILLBRAE, CALIFORNIA

PROJECT NO.: 13420.000.000
SCALE: AS SHOWN
DRAWN BY: SRP
CHECKED BY: TPB
FIGURE NO. 3

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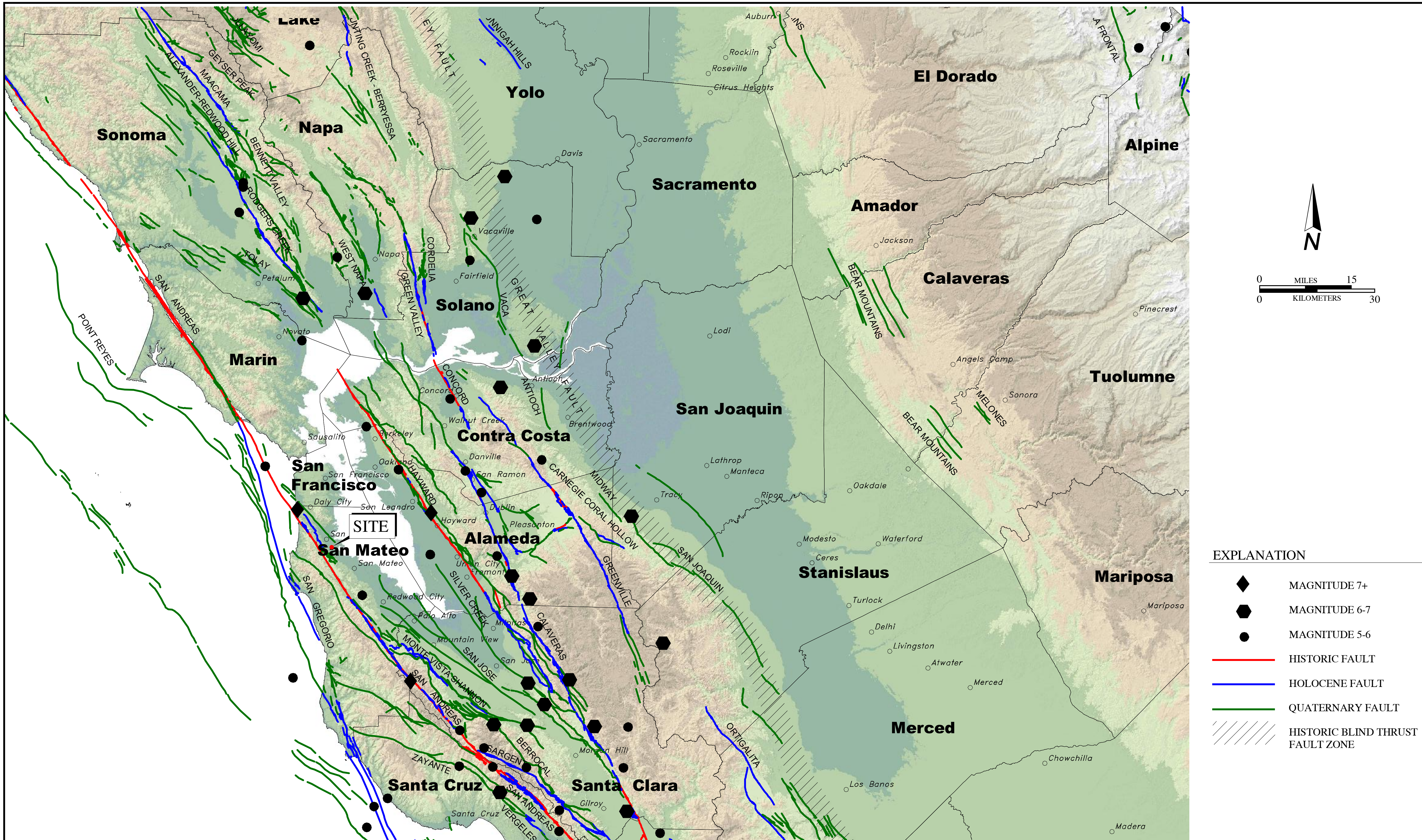
ORIGINAL FIGURE PRINTED IN COLOR



BASE MAP SOURCE:
COLOR HILLSHADE IMAGE BASED ON THE NATIONAL ELEVATION DATASET (NED) AT 30 METER RESOLUTION
U.S.G.S. QUATERNARY FAULT DATABASE, NOVEMBER, 2010
U.S.G.S. HISTORIC EARTHQUAKE DATABASE (1800–2000)

ENGEO — Expect Excellence

REGIONAL FAULTING AND SEISMICITY
1100 EL CAMINO REAL REDEVELOPMENT
MILLBRAE, CALIFORNIA

PROJECT NO.:	13420.000.000
SCALE:	AS SHOWN
DRAWN BY: SRP	CHECKED BY: TPB
FIGURE NO.	4

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ORIGINAL FIGURE PRINTED IN COLOR

APPENDIX A

Key to Boring Logs
Exploration Logs

APPENDIX A

KEY TO BORING LOGS

MAJOR TYPES			DESCRIPTION
COARSE-GRAINED SOILS MORE THAN HALF OF MAT'L LARGER THAN #200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LESS THAN 5% FINES	GW - Well graded gravels or gravel-sand mixtures
			GP - Poorly graded gravels or gravel-sand mixtures
		GRAVELS WITH OVER 12 % FINES	GM - Silty gravels, gravel-sand and silt mixtures
			GC - Clayey gravels, gravel-sand and clay mixtures
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 5% FINES	SW - Well graded sands, or gravelly sand mixtures
			SP - Poorly graded sands or gravelly sand mixtures
		SANDS WITH OVER 12 % FINES	SM - Silty sand, sand-silt mixtures
			SC - Clayey sand, sand-clay mixtures
FINE-GRAINED SOILS MORE THAN HALF OF MAT'L SMALLER THAN #200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50 % OR LESS		ML - Inorganic silt with low to medium plasticity
			CL - Inorganic clay with low to medium plasticity
			OL - Low plasticity organic silts and clays
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50 %		MH - Elastic silt with high plasticity
			CH - Fat clay with high plasticity
			OH - Highly plastic organic silts and clays
	HIGHLY ORGANIC SOILS		PT - Peat and other highly organic soils

For fine-grained soils with 15 to 29% retained on the #200 sieve, the words "with sand" or "with gravel" (whichever is predominant) are added to the group name.

For fine-grained soil with >30% retained on the #200 sieve, the words "sandy" or "gravelly" (whichever is predominant) are added to the group name.

GRAIN SIZES

U.S. STANDARD SERIES SIEVE SIZE: 200, 40, 10, 4

CLEAR SQUARE SIEVE OPENINGS: 3/4 ", 3", 12"

SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

RELATIVE DENSITY

SANDS AND GRAVELS	BLOWS/FOOT (S.P.T.)
VERY LOOSE	0-4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	OVER 50

CONSISTENCY

SILTS AND CLAYS	STRENGTH*
VERY SOFT	0-1/4
SOFT	1/4-1/2
MEDIUM STIFF	1/2-1
STIFF	1-2
VERY STIFF	2-4
HARD	OVER 4

SAMPLER SYMBOLS

- Modified California (3" O.D.) sampler
- California (2.5" O.D.) sampler
- S.P.T. - Split spoon sampler
- Shelby Tube
- Continuous Core
- Bag Samples
- Grab Samples
- NR No Recovery

MOISTURE CONDITION

Dry	Dusty, dry to touch
Moist	Damp but no visible water
Wet	Visible freewater

LINE TYPES

- Solid - Layer Break
- Dashed - Gradational or approximate layer break

GROUND-WATER SYMBOLS

- Groundwater level during drilling
- Stabilized groundwater level

(S.P.T.) Number of blows of 140 lb. hammer falling 30" to drive a 2-inch O.D. (1-3/8 inch I.D.) sampler

* Unconfined compressive strength in tons/sq. ft., asterisk on log means determined by pocket penetrometer

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LOG OF BORING 1-B1

Geotechnical Exploration
1100 El Camino Real, Millbrae
Milbrae, CA
13420.000.000

DATE DRILLED: 10/14/2016
HOLE DEPTH: 51.5 ft.
HOLE DIAMETER: 6.0 in.
SURF ELEV (NAVD 88): 18.5 ft.

LOGGED / REVIEWED BY: B. Hassett / JY
DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Mud Rotary
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Elevation in Feet	DESCRIPTION	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Shear Strength (psf) *field approximation	Unconfined Strength (tsf) *field approximation	Strength Test Type
		5" AC										
		10" AB										
		SANDY SILT (ML), dark brown, stiff, moist, 5 to 10% fine sand, trace fine gravel [FILL]	15									
	15	SANDY CLAY (CL), olive green, hard, moist, 5 to 10% fine-grained sand [COLMA FORMATION]										
5			41					20	109	4984		UC
	10											
10		CLAYEY SAND (SC), light reddish brown, medium dense, very moist, fine to medium-grained sand, 10 to 20% fines [COLMA FORMATION]	17	32	18	14	31	22				
		SANDY CLAY (CL), light reddish brown, stiff, very moist, 10 to 20% fine-grained sand [COLMA FORMATION]	11									
	5		18									
15		CLAYEY SAND (SC), light reddish brown, medium dense, very moist, fine to coarse grained sand, 5 to 10% fine subangular to subrounded gravels [COLMA FORMATION]	16	35	17	18	19	19				
	0											
20		Grades to yellowish brown	16									
	-5											
25												

ENGEO INCORPORATED

LOG OF BORING 1-B1

Geotechnical Exploration
1100 El Camino Real, Millbrae
Milbrae, CA
13420.000.000

DATE DRILLED: 10/14/2016
HOLE DEPTH: 51.5 ft.
HOLE DIAMETER: 6.0 in.
SURF ELEV (NAVD 88): 18.5 ft.

LOGGED / REVIEWED BY: B. Hassett / JY
DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Mud Rotary
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Shear Strength (psf) *field approximation	Unconfined Strength (tsf) *field approximation	Strength Test Type
	-10		CLAYEY SAND (SC), light reddish brown, medium dense, very moist, fine to coarse grained sand, 5 to 10% fine subangular to subrounded gravels [COLMA FORMATION]			50								4.5*	PP
30	-15		CLAY (CL), light olive, stiff, very moist [COLMA FORMATION]			10									
35	-20		SILTY CLAY (CL), olive, very stiff, very moist, light oxidation [COLMA FORMATION]			25					23	105	1590		UC
40	-25		SILTY SAND (SM), olive, medium dense, very moist, 10 to 20% fines [COLMA FORMATION]			26									
45	-30		SANDY CLAY (CL), olive, very stiff, very moist, 10 to 20% fine-grained sand [COLMA FORMATION]			27								3*	PP
50															

LOG OF BORING 1-B1

ENGEO INCORPORATED

Geotechnical Exploration
1100 El Camino Real, Millbrae
Milbrae, CA
13420.000.000

DATE DRILLED: 10/14/2016
HOLE DEPTH: 51.5 ft.
HOLE DIAMETER: 6.0 in.
SURF ELEV (NAVD 88): 18.5 ft.

LOGGED / REVIEWED BY: B. Hassett / JY
DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Mud Rotary
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Shear Strength (psf) *field approximation	Unconfined Strength (tsf) *field approximation	Strength Test Type
			CLAY (CL), olive, hard, very moist [COLMA FORMATION]			34								4.5+*	PP
			Bottom of boring at approximately 51.5 feet below ground surface. Groundwater not encountered at the time of drilling.												

SHEAR AND UNCONF STRENGTH W/ ELEV BORING LOGS.GPJ ENGEO INC.GDT 10/28/16

ENGEO INCORPORATED

LOG OF BORING 1-B2

Geotechnical Exploration
1100 El Camino Real, Millbrae
Milbrae, CA
13420.000.000

DATE DRILLED: 10/14/2016
HOLE DEPTH: 51.5 ft.
HOLE DIAMETER: 6.0 in.
SURF ELEV (NAVD 88): 25.5 ft.

LOGGED / REVIEWED BY: B. Hassett / JY
DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Mud Rotary
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Shear Strength (psf) *field approximation	Unconfined Strength (tsf) *field approximation	Strength Test Type
	25		9" AC												
			SILTY SAND (SM), dark yellowish brown, moist, medium dense, 10 to 20% fines [FILL]			25								4.25*	PP
			CLAYEY SAND (SC), dark olive brown, moist, medium dense, fine-grained sand, 10 to 20% fines, trace oxidation [COLMA FORMATION]												
5	20		SANDY CLAY (CL), olive, moist, stiff, 10 to 20% fine-grained sand, moderate oxidation [COLMA FORMATION]			13					20	108	1628		UC
10	15					100-550 psi					18	112	4239		UU
			Very stiff, trace fine subangular to subrounded gravel			23	34	17	17	59	20				
15	10														
			CLAYEY SAND TO SILTY SAND (SC-SM), olive, very moist, dense, fine-grained sand, 5 to 10% fines, trace oxidation, trace fine subrounded gravel [COLMA FORMATION]			45	28	22	6	34	19			2.5*	PP
			SILTY CLAY (CL), olive green, very moist, medium stiff, trace coarse sand [COLMA FORMATION]												
20	5		CLAY (CL), olive brown, very moist, stiff [COLMA FORMATION]			32	35	15	20					3.75*	PP
25															

ENGEO INCORPORATED

LOG OF BORING 1-B2

Geotechnical Exploration
1100 El Camino Real, Millbrae
Milbrae, CA
13420.000.000

DATE DRILLED: 10/14/2016
HOLE DEPTH: 51.5 ft.
HOLE DIAMETER: 6.0 in.
SURF ELEV (NAVD 88): 25.5 ft.

LOGGED / REVIEWED BY: B. Hassett / JY
DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Mud Rotary
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Shear Strength (psf) *field approximation	Unconfined Strength (tsf) *field approximation	Strength Test Type
	0		CLAY (CL), olive brown, very moist, stiff [COLMA FORMATION]			40									
30	-5		SANDY CLAY (CL), olive brown, very moist, stiff, 10 to 20% fine-grained sand [COLMA FORMATION]			47								4.25*	PP
35	-10					41					24	101	1423		UC
40	-15		SILTY SAND (SM), olive, very moist, dense, fine-grained sand, 10 to 20% fines [COLMA FORMATION]			33									
45	-20		SANDY SILT (ML), olive, very moist, very stiff, 10 to 20% fine-grained sand [COLMA FORMATION]			16									
50															

LOG OF BORING 1-B2

ENGEO INCORPORATED

Geotechnical Exploration
1100 El Camino Real, Millbrae
Milbrae, CA
13420.000.000

DATE DRILLED: 10/14/2016
HOLE DEPTH: 51.5 ft.
HOLE DIAMETER: 6.0 in.
SURF ELEV (NAVD 88): 25.5 ft.

LOGGED / REVIEWED BY: B. Hassett / JY
DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Mud Rotary
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet	Elevation in Feet	Sample Type	DESCRIPTION	Log Symbol	Water Level	Blow Count/Foot	Atterberg Limits: Liquid Limit	Atterberg Limits: Plastic Limit	Atterberg Limits: Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Shear Strength (psf) *field approximation	Unconfined Strength (tsf) *field approximation	Strength Test Type
	-25		SANDY CLAY (CL), olive, very moist, stiff, 5 to 10% fine-grained sand [COLMA FORMATION]			43									
			Bottom of boring at approximately 51.5 feet below ground surface. Groundwater not encountered at the time of drilling.												

ENGEO INCORPORATED

LOG OF BORING 1-B3

Geotechnical Exploration
1100 El Camino Real, Millbrae
Milbrae, CA
13420.000.000

DATE DRILLED: 10/14/2016
HOLE DEPTH: 16.5 ft.
HOLE DIAMETER: 6.0 in.
SURF ELEV (NAVD 88): 13 ft.

LOGGED / REVIEWED BY: B. Hassett / JY
DRILLING CONTRACTOR: Geo-Ex Subsurface
DRILLING METHOD: Mud Rotary
HAMMER TYPE: 140 lb. Auto Trip

Depth in Feet: 5, 10, 15
Elevation in Feet: 10, 5, 0

DESCRIPTION	Blow Count/Foot	Liquid Limit	Plastic Limit	Plasticity Index	Fines Content (% passing #200 sieve)	Moisture Content (% dry weight)	Dry Unit Weight (pcf)	Shear Strength (psf) *field approximation	Unconfined Strength (tsf) *field approximation	Strength Test Type
3" AC										
7" AB										
SANDY CLAY (CL), brown, medium stiff, moist, 10 to 20% fine-grained sand [FILL]	15								1.75*	PP
CLAY (CH), grayish green, soft, moist [FILL]										
Large piece of wood encountered from 5.5 to 8 feet depth										
CLAY grayish green, very soft, moist [YOUNG BAY MUD]	100 psi					19	111	2498		UU
SANDY CLAY (CL), olive brown, stiff, very moist, 5 to 10% fine-grained sand, moderate oxidation [COLMA FORMATION]										
Trace fine gravel	9									
	27								4*	PP

Bottom of boring at approximately 16.5 feet below ground surface.
Groundwater not encountered at the time of drilling.

APPENDIX B

Cone Penetration Test Data

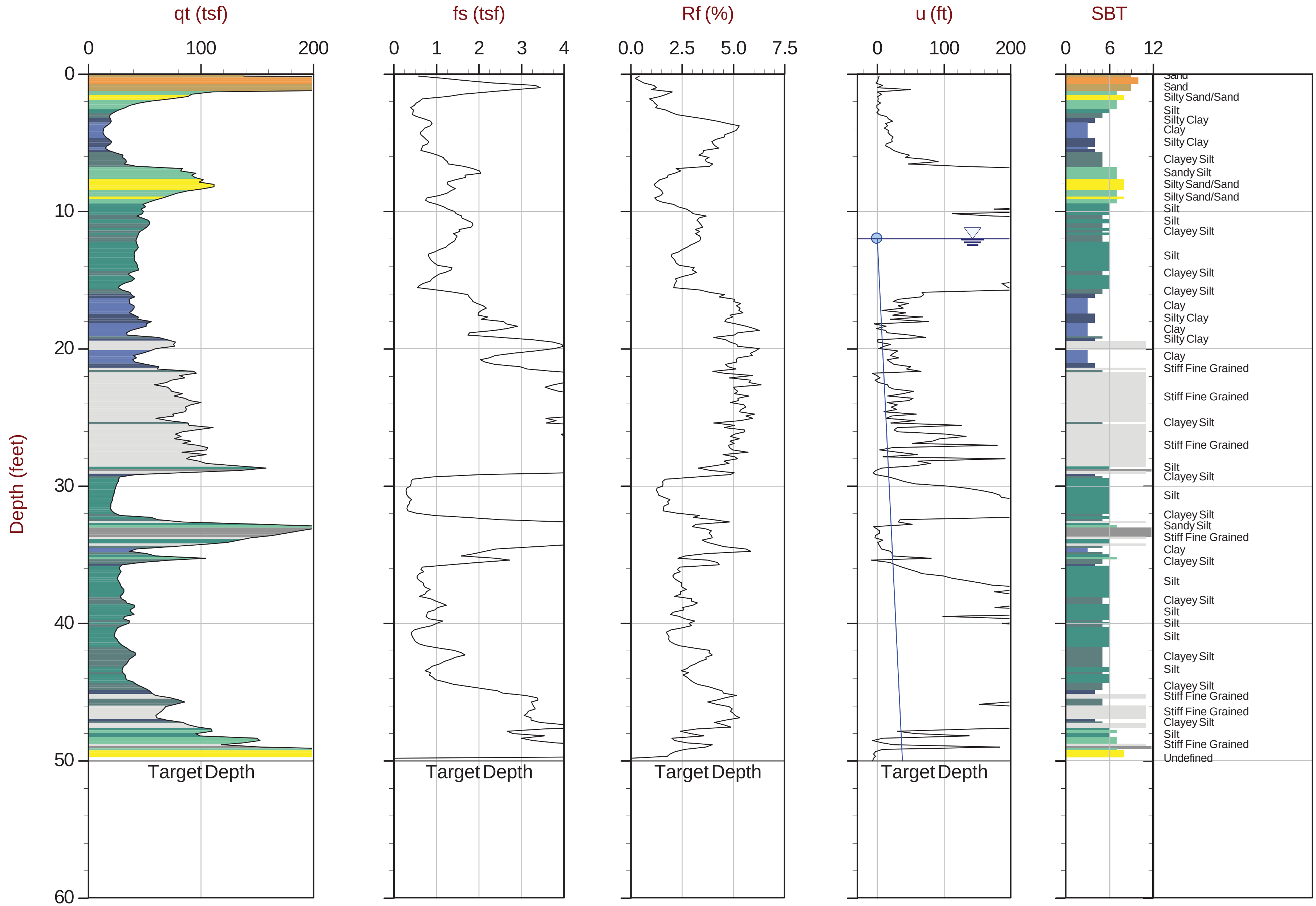
APPENDIX B

CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

ENGEO Inc.

Job No: 16-56076
Date: 10:12:16 14:59
Site: 1100 El Camino Real

Sounding: 1-CPT1
Cone: 448:T1500F15U500



Max Depth: 15.250 m / 50.03 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: Every Point

File: 16-56076_CP01.COR
Unit Wt: SBT Zones

SBT: Robertson and Campanella, 1986

Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Hydrostatic Line

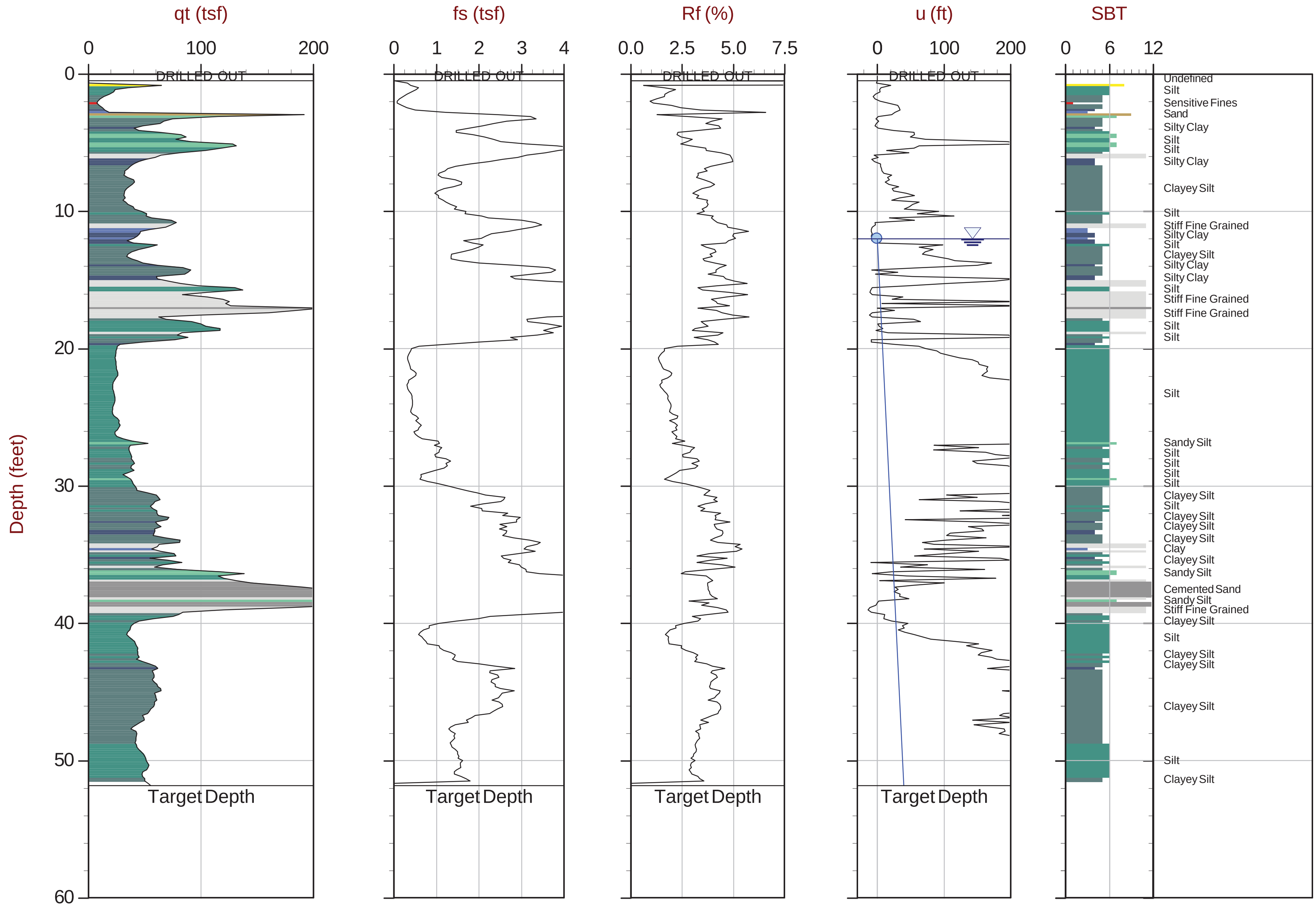
The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

ENGEO Inc.

Job No: 16-56076
Date: 10:12:16 14:13
Site: 1100 El Camino Real

Sounding: 1-CPT2
Cone: 448:T1500F15U500



Max Depth: 15.800 m / 51.84 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: Every Point

File: 16-56076_CP02.COR
Unit Wt: SBT Zones

SBT: Robertson and Campanella, 1986

Page No: 1 of 1

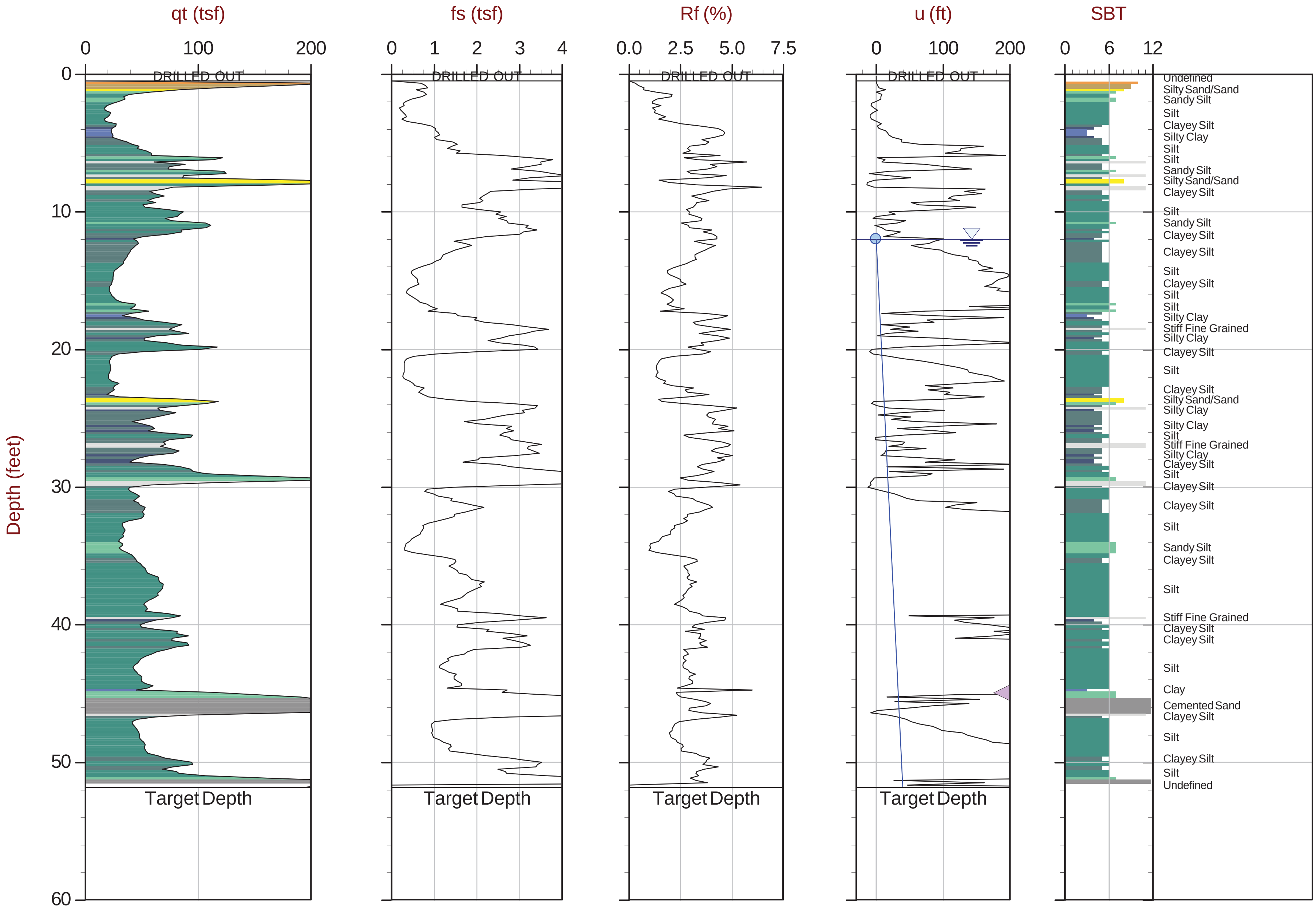
Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Hydrostatic Line

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

ENGEO Inc.

Job No: 16-56076
Date: 10:12:16 13:08
Site: 1100 El Camino Real
Sounding: 1-CPT3
Cone: 448:T1500F15U500



Max Depth: 15.800 m / 51.84 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: Every Point

File: 16-56076_CP03.COR
Unit Wt: SBT Zones

SBT: Robertson and Campanella, 1986

Page No: 1 of 1

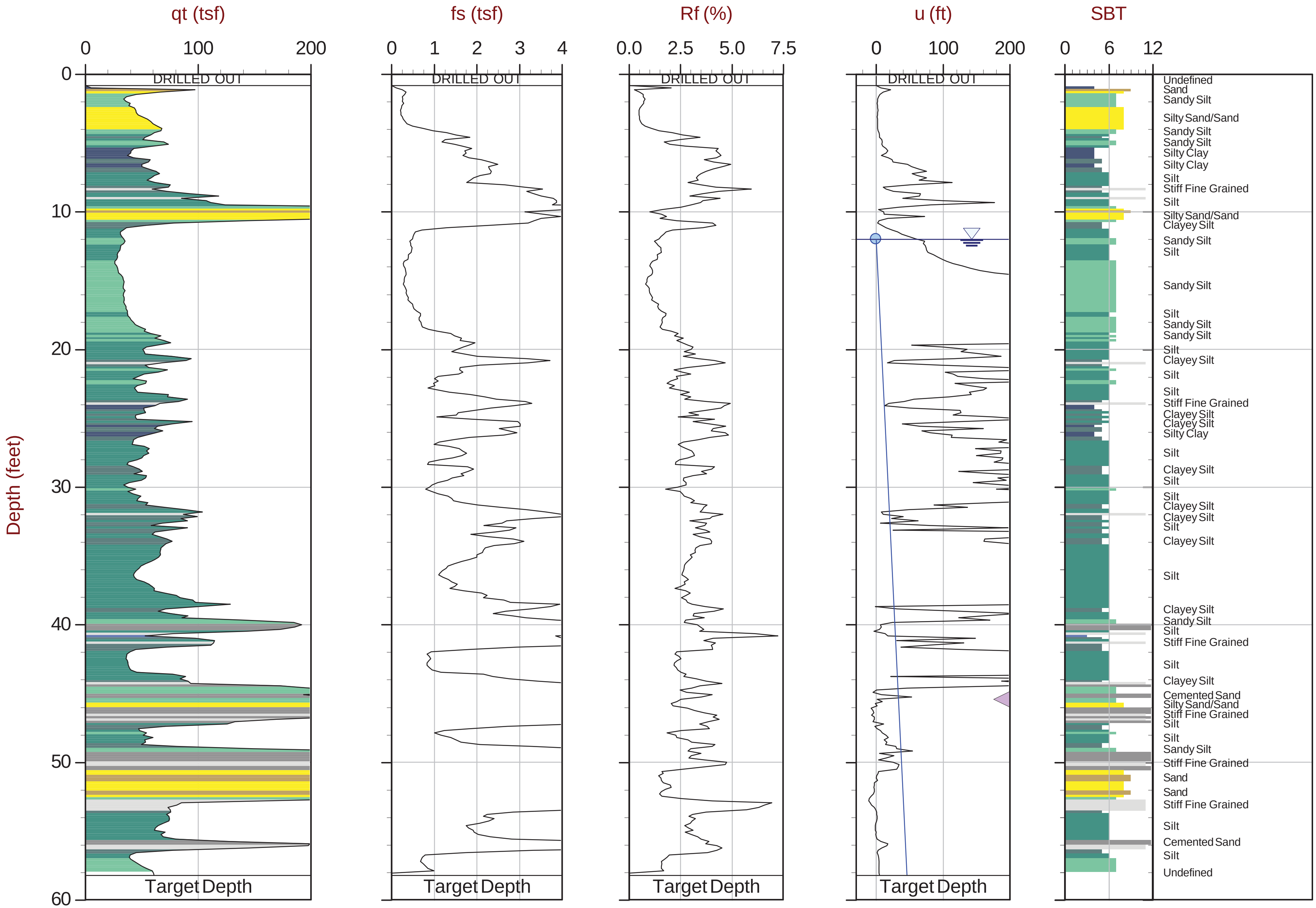
Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Hydrostatic Line

The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

ENGEO Inc.

Job No: 16-56076
Date: 10:12:16 11:56
Site: 1100 El Camino Real
Sounding: 1-CPT4
Cone: 448:T1500F15U500



Max Depth: 17.750 m / 58.23 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: Every Point

File: 16-56076_CP04.COR
Unit Wt: SBT Zones

SBT: Robertson and Campanella, 1986

Page No: 1 of 1

Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Hydrostatic Line

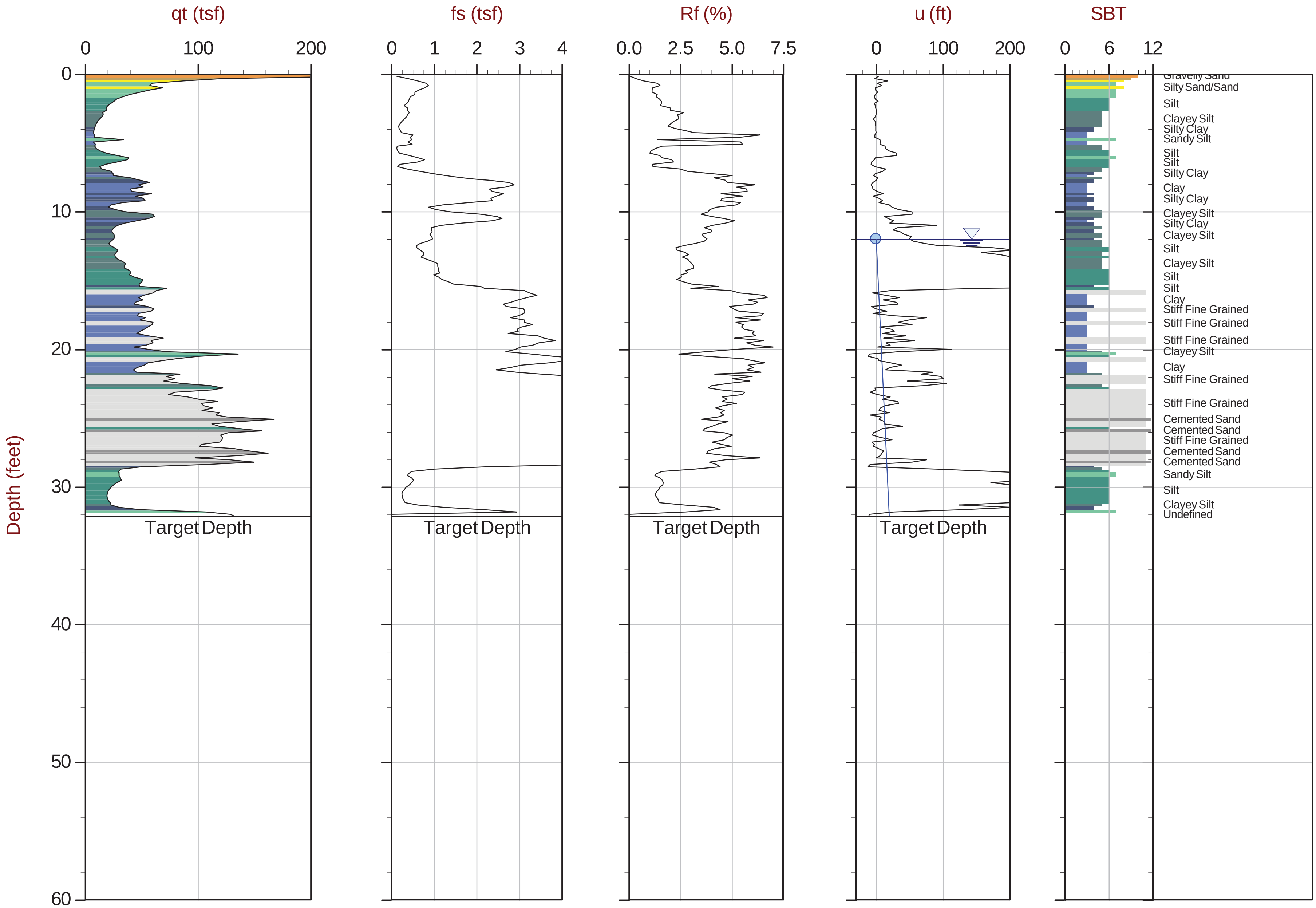
The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CALIFORNIA PUSH TECHNOLOGIES INCORPORATED

ENGEO Inc.

Job No: 16-56076
Date: 10:12:16 15:47
Site: 1100 El Camino Real

Sounding: 1-CPT6
Cone: 448:T1500F15U500



Max Depth: 9.800 m / 32.15 ft
Depth Inc: 0.050 m / 0.164 ft
Avg Int: Every Point

File: 16-56076_CP06.COR
Unit Wt: SBT Zones

SBT: Robertson and Campanella, 1986

Page No: 1 of 1

Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Hydrostatic Line

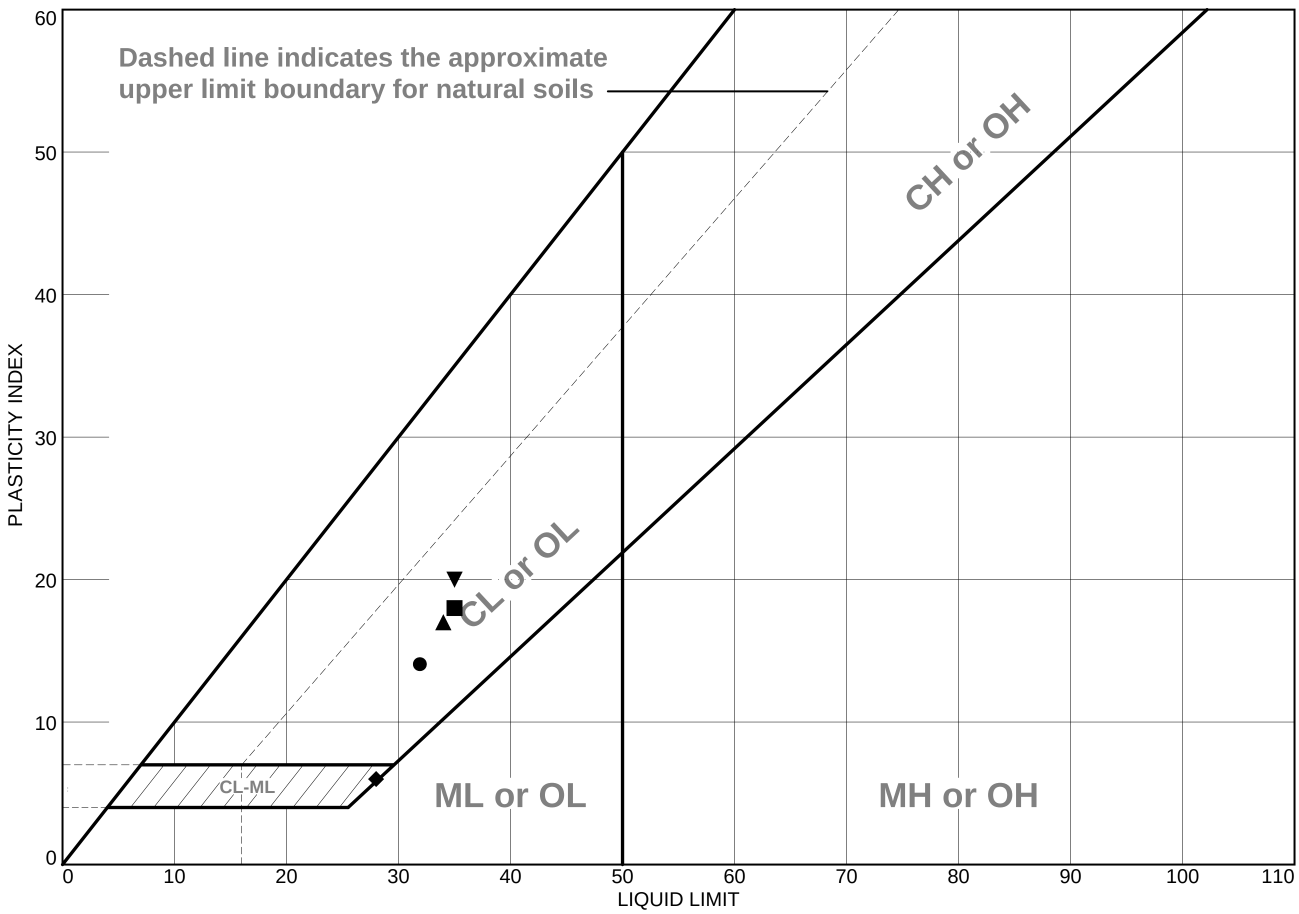
The reported coordinates were acquired from consumer grade GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

APPENDIX C

Laboratory Test Data

APPENDIX C

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	See exploration logs	32	18	14			
■	See exploration logs	35	17	18			
▲	See exploration logs	34	17	17			
◆	See exploration logs	28	22	6			
▼	See exploration logs	35	15	20			

Project No. 13420.000.000 **Client:** Anton Development Company

Project: 1100 El Camino Real

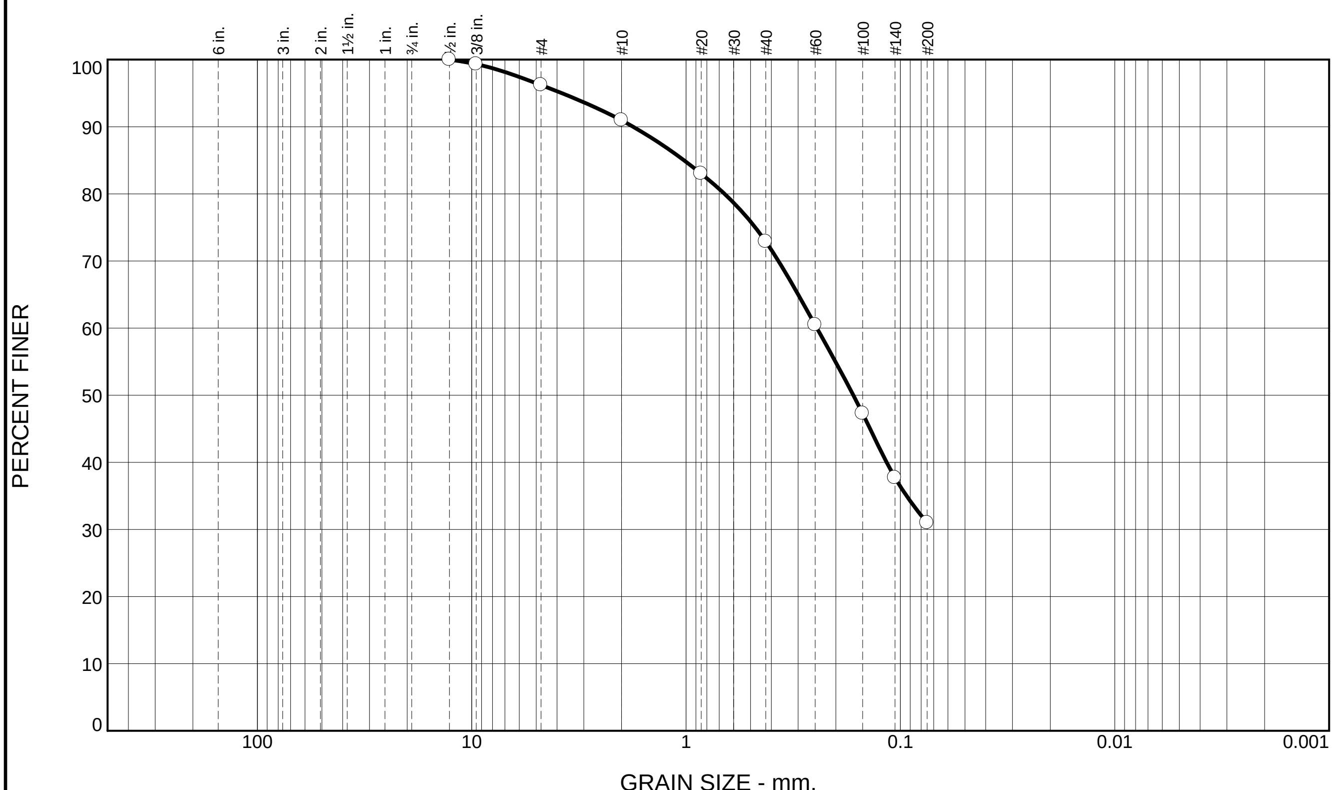
●**Depth:** 11.0-11.5 feet **Sample Number:** 1-B1 @ 11-11.5
■**Depth:** 15.0-16.5 feet **Sample Number:** 1-B1 @ 15-16.5
▲**Depth:** 14.5 feet **Sample Number:** 1-B2 @ 14.5
◆**Depth:** 18.5-19.0 feet **Sample Number:** 1-B2 @ 18.5
▼**Depth:** 21.0-21.5 feet **Sample Number:** 1-B2 @ 21-21.5

Remarks:
●ASTM D4318, Wet method
■ASTM D4318, Wet method
▲ASTM D4318, Wet method
◆ASTM D4318, Wet method
▼ASTM D4318, Wet method

ENGEO INCORPORATED

Tested By: M. Quasem **Checked By:** D. Seibold

Particle Size Distribution Report



% +75mm	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.8	5.2	18.1	41.9	31.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2	100.0		
3/8	99.3		
#4	96.2		
#10	91.0		
#20	83.0		
#40	72.9		
#60	60.5		
#100	47.3		
#140	37.7		
#200	31.0		

* (no specification provided)

Soil Description

See exploration logs

Atterberg Limits

PL= 18 LL= 32 PI= 14

Coefficients

D_{90}= 1.7664 D_{85}= 1.0228 D_{60}= 0.2455
D_{50}= 0.1657 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC AASHTO= A-2-6(1)

Remarks

GS: ASTM D6913
PI: ASTM D4318, Wet method
USCS: ASTM D2487

Sample Number: 1-B1 @ 11-11.5 **Depth:** 11.0-11.5 feet

Date: 10/24/16

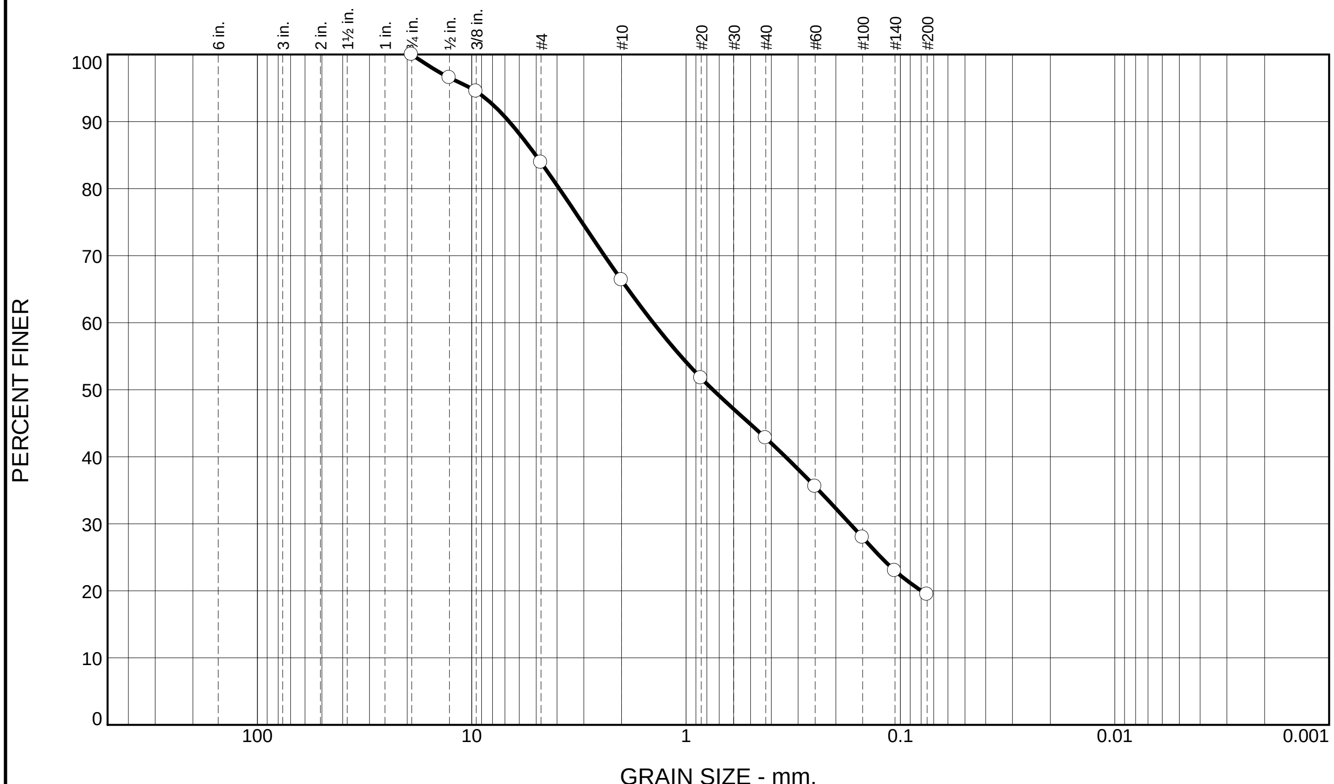
ENGEO INCORPORATED

Client: Anton Development Company
Project: 1100 El Camino Real

Project No: 13420.000.000

Tested By: M. Quasem **Checked By:** D. Seibold

Particle Size Distribution Report



% +75mm	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	16.1	17.6	23.5	23.4	19.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	96.5		
3/8	94.5		
#4	83.9		
#10	66.3		
#20	51.7		
#40	42.8		
#60	35.5		
#100	27.9		
#140	23.0		
#200	19.4		

* (no specification provided)

Soil Description

See exploration logs

Atterberg Limits

PL= 17 LL= 35 PI= 18

Coefficients

D_{90}= 6.6846 D_{85}= 5.0355 D_{60}= 1.4244
D_{50}= 0.7498 D_{30}= 0.1718 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC AASHTO= A-2-6(0)

Remarks

GS: ASTM D6913
PI: ASTM D4318, Wet method
USCS: ASTM D2487

Sample Number: 1-B1 @ 15-16.5 **Depth:** 15.0-16.5 feet

Date: 10/24/16

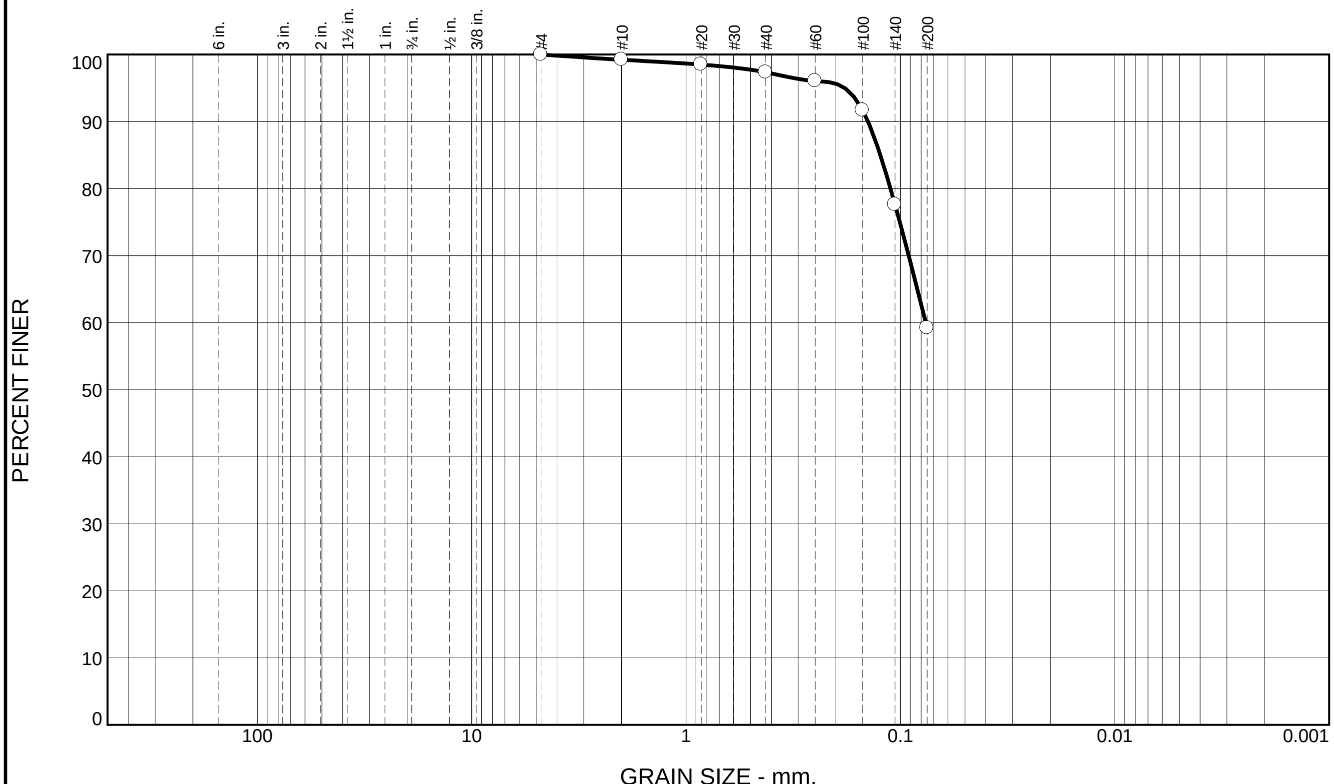
ENGEO INCORPORATED

Client: Anton Development Company
Project: 1100 El Camino Real

Project No: 13420.000.000

Tested By: M. Quasem **Checked By:** D. Seibold

Particle Size Distribution Report



% +75mm	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.8	1.9	38.1	59.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.2		
#20	98.5		
#40	97.3		
#60	96.0		
#100	91.7		
#140	77.6		
#200	59.2		

* (no specification provided)

Soil Description

See exploration logs

Atterberg Limits

PL= 17 LL= 34 PI= 17

Coefficients

D_{90}= 0.1416 D_{85}= 0.1241 D_{60}= 0.0761
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(7)

Remarks

GS: ASTM D6913
PI: ASTM D4318, Wet method
USCS: ASTM D2487

Sample Number: 1-B2 @ 14.5 **Depth:** 14.5 feet

Date: 10/24/16

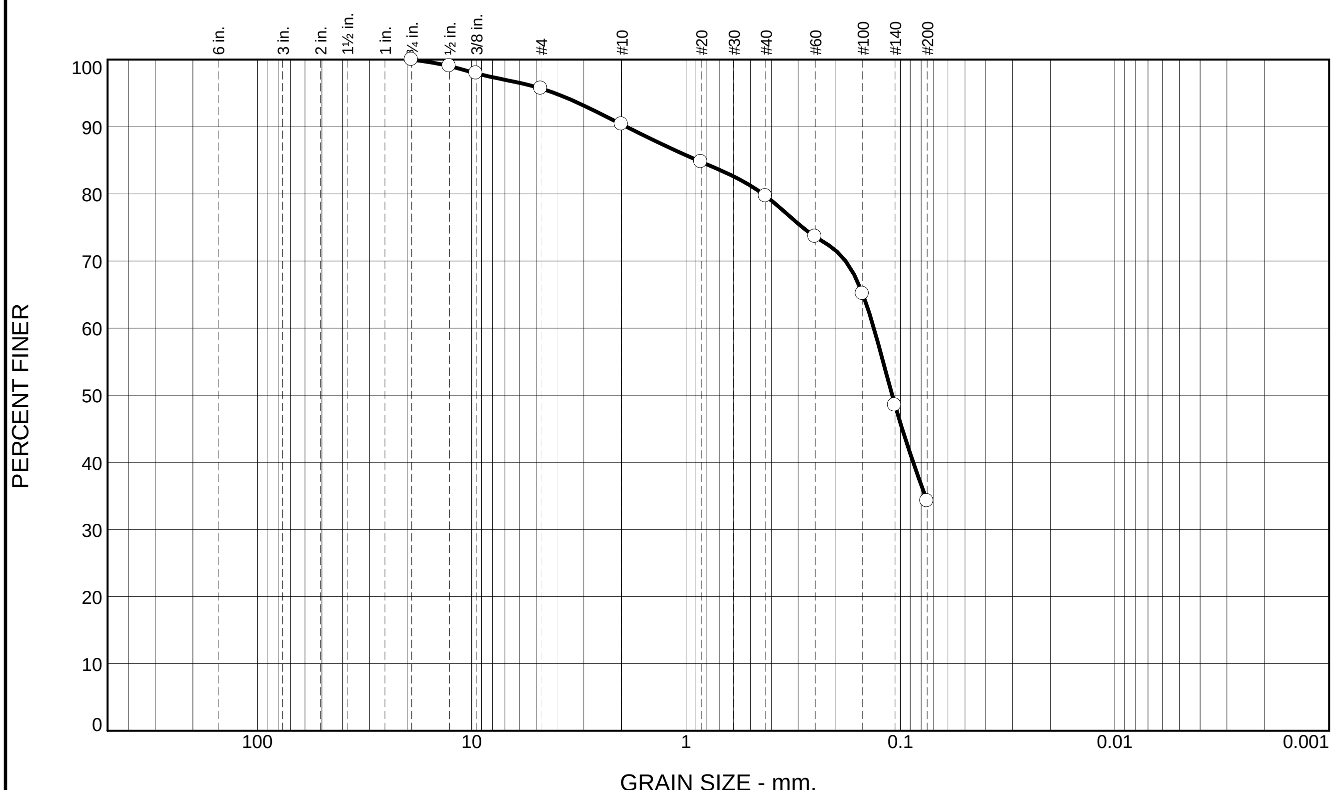
ENGEO INCORPORATED

Client: Anton Development Company
Project: 1100 El Camino Real

Project No: 13420.000.000

Tested By: M. Quasem **Checked By:** D. Seibold

Particle Size Distribution Report



% +75mm	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.3	5.3	10.7	45.5	34.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4	100.0		
1/2	99.0		
3/8	98.0		
#4	95.7		
#10	90.4		
#20	84.8		
#40	79.7		
#60	73.6		
#100	65.1		
#140	48.5		
#200	34.2		

* (no specification provided)

Soil Description

See exploration logs

Atterberg Limits

PL= 22 LL= 28 PI= 6

Coefficients

D_{90}= 1.8984 D_{85}= 0.8852 D_{60}= 0.1331
D_{50}= 0.1093 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC-SM AASHTO= A-2-4(0)

Remarks

GS: ASTM D6913
PI: ASTM D4318, Wet method
USCS: ASTM D2487

Sample Number: 1-B2 @ 18.5 **Depth:** 18.5-19.0 feet

Date: 10/24/16

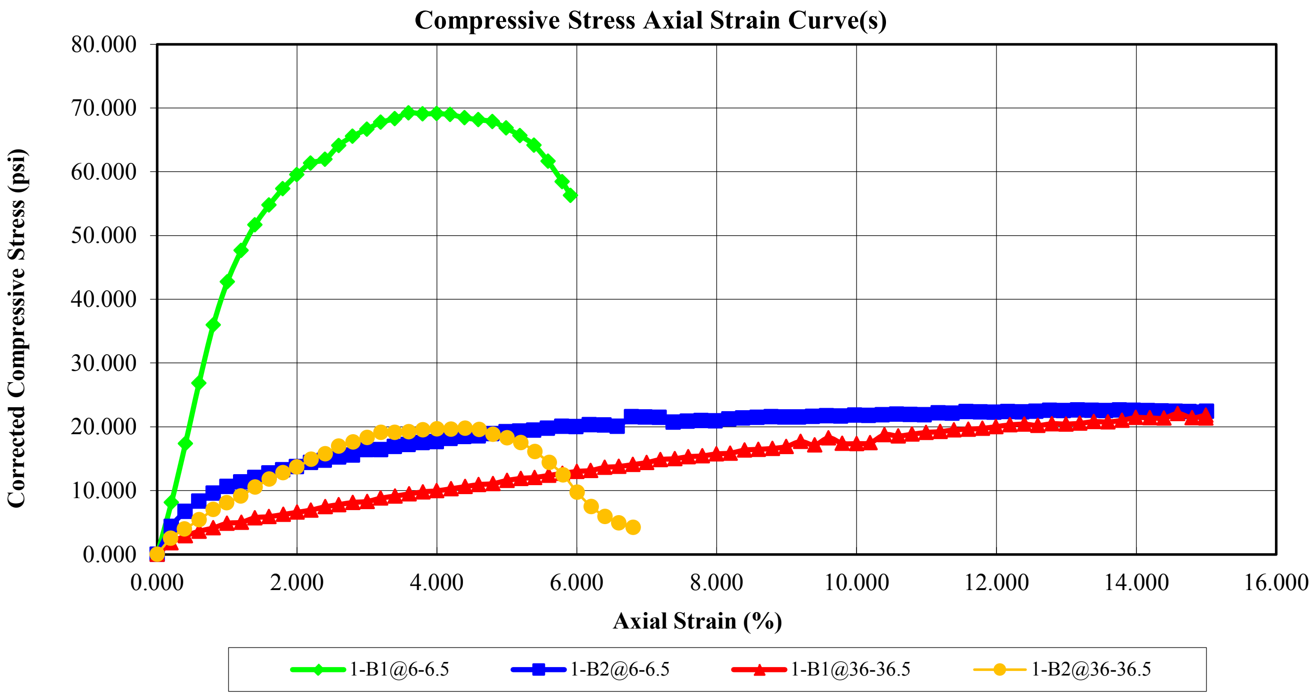
ENGEO INCORPORATED

Client: Anton Development Company
Project: 1100 El Camino Real

Project No: 13420.000.000

Tested By: M. Quasem **Checked By:** D. Seibold

UNCONFINED COMPRESSION TEST REPORT
(ASTM D2166)



	SPECIMEN			
BEFORE TEST	**1-B1@6-6.5**	**1-B2@6-6.5**	**1-B1@36-36.5**	**1-B2@36-36.5**
Moisture Content (%)	19.5	20.4	22.8	24.0
Dry Density (pcf)	108.6	107.5	104.7	101.1
Saturation (%)	98.75	100.00	98.91	100.00
Void Ratio	0.52	0.54	0.61	0.64
Diameter (in)	2.406	2.401	2.401	2.406
Height (in)	5.051	5.056	5.043	5.035
Height-To-Diameter Ratio	2.099	2.106	2.100	2.093
TEST DATA				
Unconfined Compressive Strength (psf)	9968.355	3256.097	3179.776	2845.494
Undrained Shear Strength (psf)	4984.177	1628.048	1589.888	1422.747
Strain Rate (in./min.)	0.05	0.05	0.05	0.05
Specific Gravity (Assumed)	2.650	2.650	2.650	2.650
Strain at Failure (%)	3.59	13.76	14.60	4.41
Liquid Limit				
Plastic Limit				
Test Remarks				

SPECIMEN	DESCRIPTION
1-B1@6-6.5	See exploration logs
1-B2@6-6.5	See exploration logs
1-B1@36-36.5	See exploration logs
1-B2@36-36.5	See exploration logs

PROJECT NAME: 1100 El Camino Real
PROJECT NO: 13420.000.000
CLIENT: Anton Development Company
LOCATION: Millbrae, CA
PHASE NO: 002

Test Date: 10/19/16
Tested By: M. Quasem
Reviewed By: D. Seibold

ENGEO Expect Excellence

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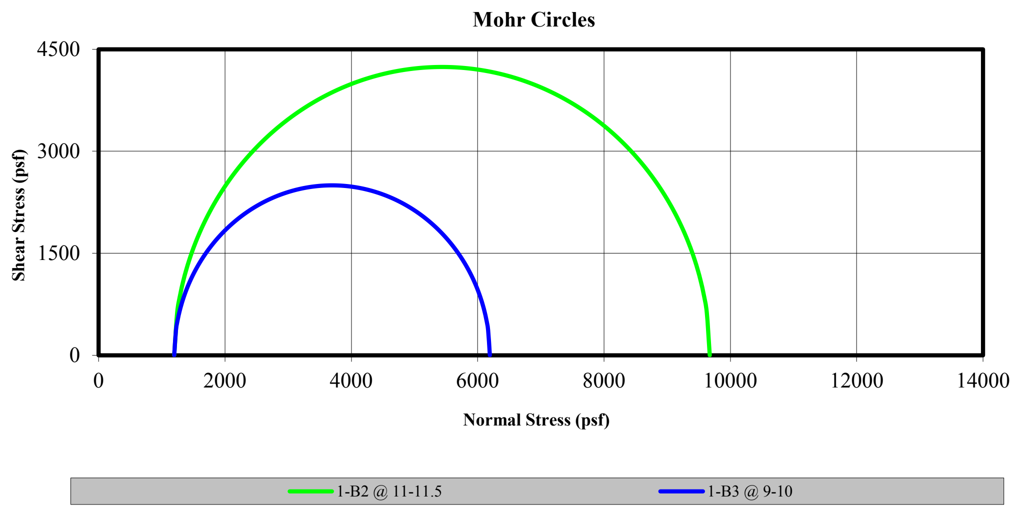
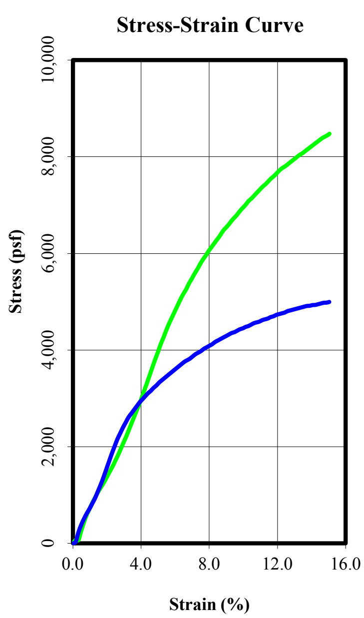
Unconsolidated Undrained Triaxial Test (ASTM D2850)





Before Test	Specimen 1-B2 @ 11	1-B3 @ 9		
Water Content (%)	16.87	18.66		
Dry Density (pcf)	114.05	110.91		
Saturation (%)	99.23	100.00		
Void Ratio	0.45	0.49		
Diameter (in)	2.851	2.846		
Height (in)	6.058	6.160		
Liquid Limit	-	-		
Plastic Limit	-	-		
Specific Gravity (Assumed)	2.650	2.650		
Height-to-Diameter Ratio	2.125	2.164		
After Test	**1-B2 @ 11**	**1-B3 @ 9**		
Water Content (%)	16.87	18.66		
Saturation (%)	99.23	100.00		
Strain Rate (in/min)	0.05	0.05		
Peak Deviator Stress (psf)	8477.9	4996.8		
Axial Strain @ Failure (%)	15.048	15.035		
	Cell Pressure			
Cell (psf)	1195.2	1195.2		
Back (psf)	n/a	n/a		
	Principle Stresses at Failure			
σ1 (psf)	9673.1	6192.0		
σ3 (psf)	1195.2	1195.2		

Mohr-Coulomb Parameters with a Non-zero Friction Angle (Ø≠0)			Cohesion at Failure with a Zero Friction Angle (Ø=0)			
Cohesion, c (psf)	0.0		4238.9	2498.4		
Friction Angle Ø	0.00		n/a	n/a		

Project Information			
Project Name:	1100 El Camino Real		
Project Number:	13420.000.000	Job Number:	13420.000.000
Location:	Millbrae, CA	Boring Number:	Multiple
Client:	Anton Development Company	Sample Number:	Multiple
Description:	See exploration logs		

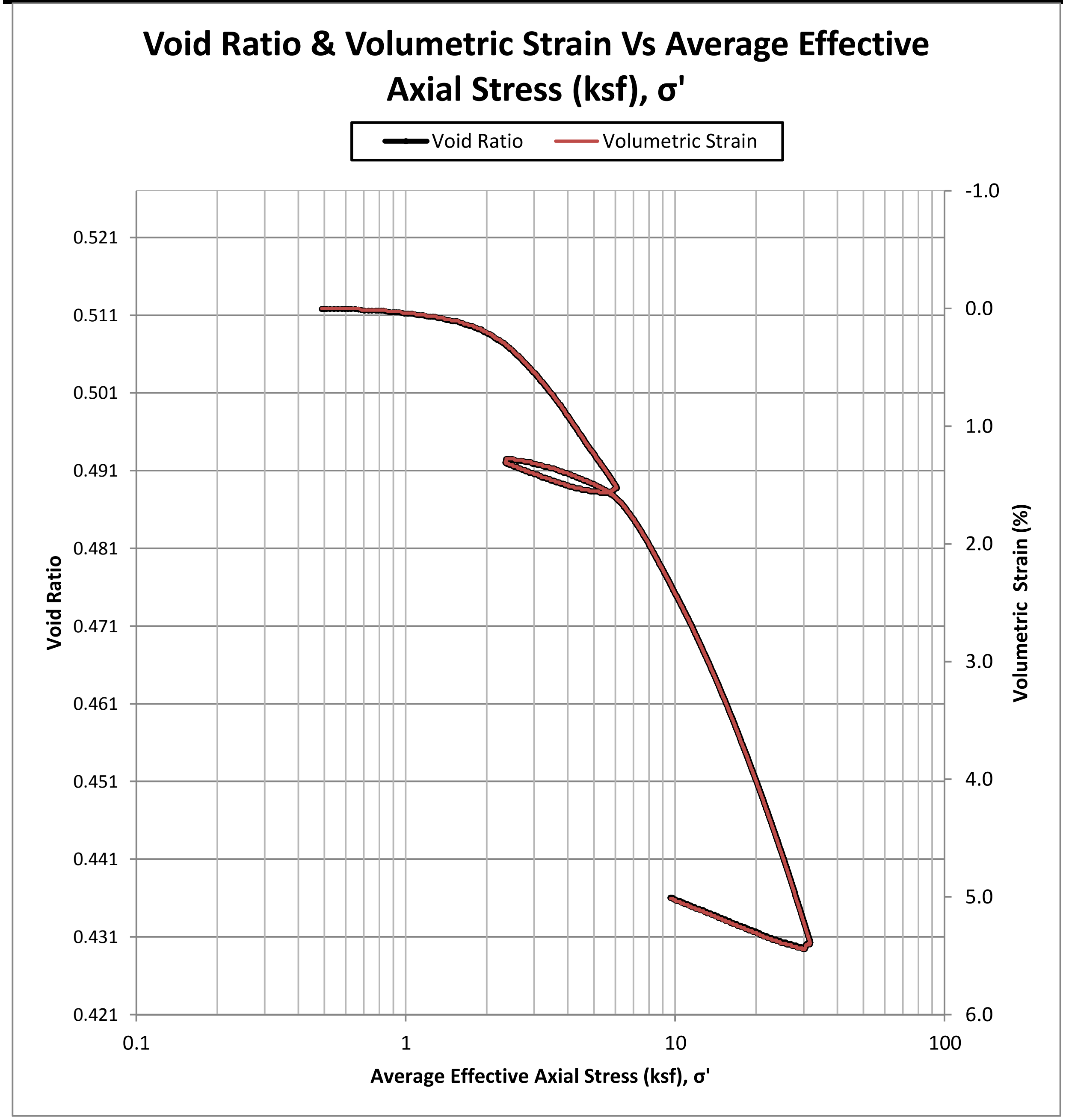
Date: 10/19/16

Checked By: D. Seibold

Date: 10/19/16

Tested By: M. Quasem

Constant Rate of Strain Consolidation
ASTM D4186



	Initial	Final
Moisture (%):	18.29%	16.72%
Dry Density (pcf):	111.87	117.78
Saturation (%):	96.88%	100.00%
Void Ratio:	0.5122	0.4355

ASTM D4318 - Wet Method **Test Date:** 10/19/16

Liquid Limit:	
Plastic Limit:	

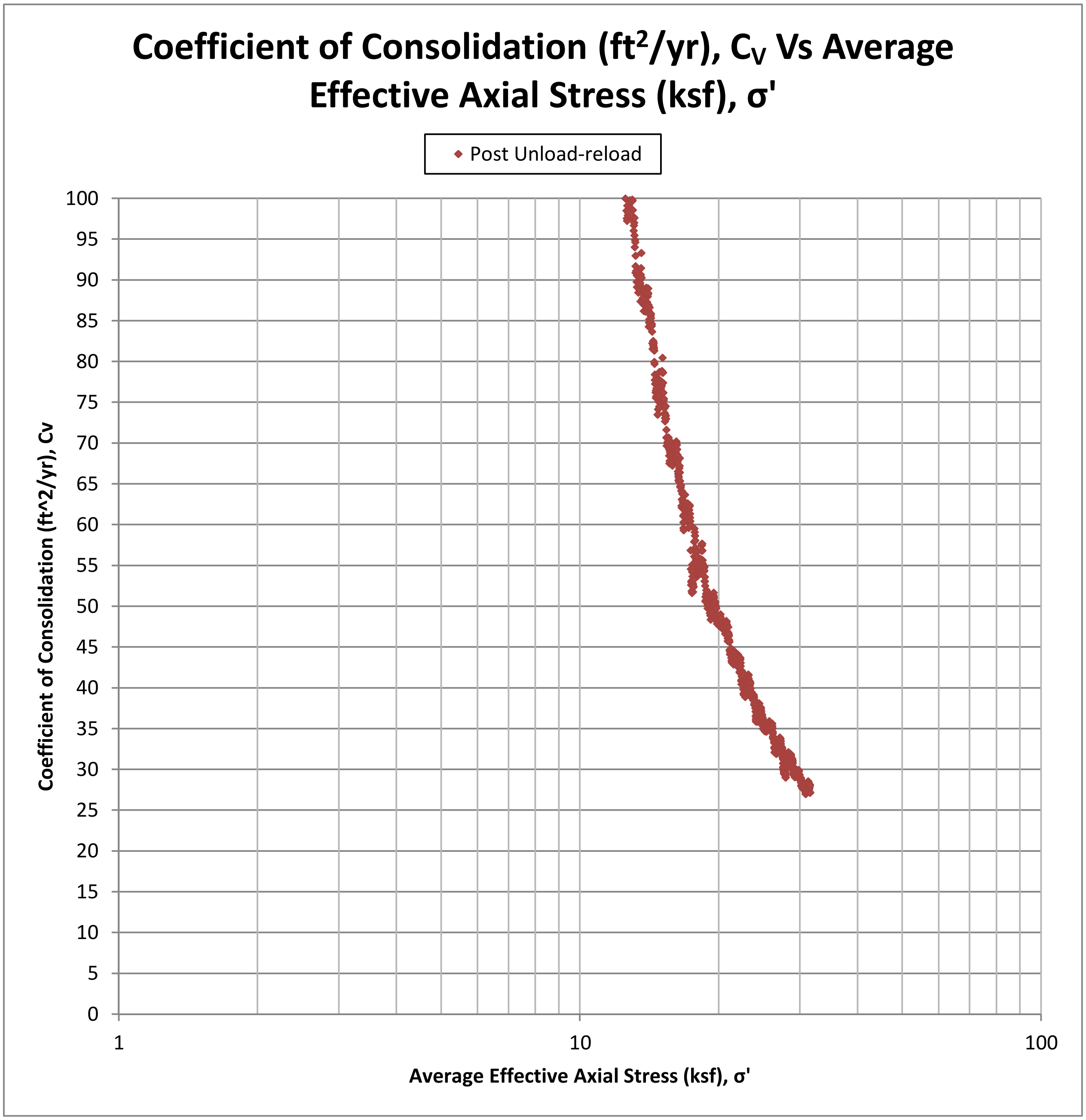
ASTM D854 - Measured

Specific Gravity:	2.713
Soil Description:	See exploration logs

Project Number:	13420.000.000	**Depth:**	11-11.5 ft.
Sample Number:	1-B2 @ 11-11.5	**Boring #:**	1-B2
Project Name:	1100 El Camino Real		
Client:	Anton Development Company		
Location:	Millbrae, California		
Tested By:	D. Seibold	**Reviewed By:**	J. Yang

ENGEO Expect Excellence

Constant Rate of Strain Consolidation
ASTM D4186



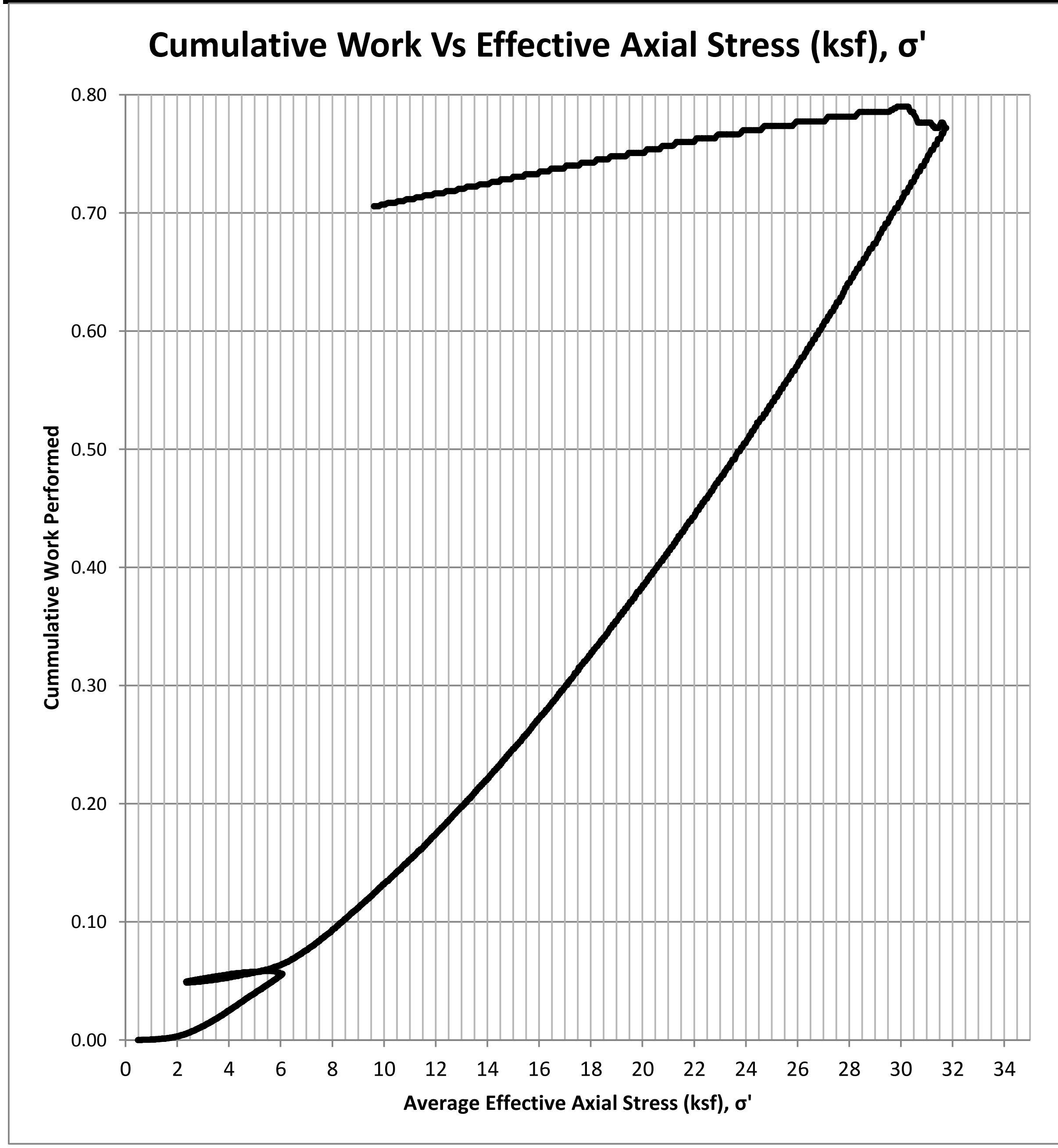
	Initial	Final	ASTM D4318 - Wet Method		Test Date: 10/19/16
Moisture (%):	18.29%	16.72%	Liquid Limit:		
Dry Density (pcf):	111.87	117.78	Plastic Limit:		
Saturation (%):	96.88%	100.00%	ASTM D854 - Measured		
Void Ratio:	0.5122	0.4355	Specific Gravity:	2.713	
			Soil Description:	See exploration logs	

Project Number:	13420.000.000	**Depth:**	11-11.5 ft.
Sample Number:	1-B2 @ 11-11.5	**Boring #:**	1-B2
Project Name:	1100 El Camino Real		
Client:	Anton Development Company		
Location:	Millbrae, California		
Tested By:	D. Seibold	**Reviewed By:**	J. Yang

ENGEO
Expect Excellence

Lab Address: 3420 Fostoria Way, Suite E, San Ramon, CA 94583. Phone No. (925) 355-9047.

Constant Rate of Strain Consolidation
ASTM D4186



	Initial	Final
Moisture (%):	18.29%	16.72%
Dry Density (pcf):	111.87	117.78
Saturation (%):	96.88%	100.00%
Void Ratio:	0.5122	0.4355

ASTM D4318 - Wet Method **Test Date:** 10/19/16

Liquid Limit:	
Plastic Limit:	

ASTM D854 - Measured

Specific Gravity:	2.713
Soil Description:	See exploration logs

Project Number:	13420.000.000	**Depth:**	11-11.5 ft.
Sample Number:	1-B2 @ 11-11.5	**Boring #:**	1-B2
Project Name:	1100 El Camino Real		
Client:	Anton Development Company		
Location:	Millbrae, California		
Tested By:	D. Seibold	**Reviewed By:**	J. Yang

ENGEO
Expect Excellence

WATER SOLUBLE SULFATES IN SOILS

ASTM C1580

Sample number	Sample Location / ID	Matrix	Water Soluble Sulfate % by mass
1	1-B2 @ 0-5	soil	ND

Remarks: Results are reported to the nearest 0.01% by mass. Anything less than 0.005% will be reported as 'ND' for Not-Detectable.

PROJECT NAME: 1100 El Camino Real
PROJECT NUMBER: 13420.000.000
CLIENT: Anton Development Company
PHASE NUMBER: 002

DATE: 10/21/16

ENGEO
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Tested by: M. Quasem
Reviewed by: D. Seibold

APPENDIX D

Liquefaction Analysis

APPENDIX D

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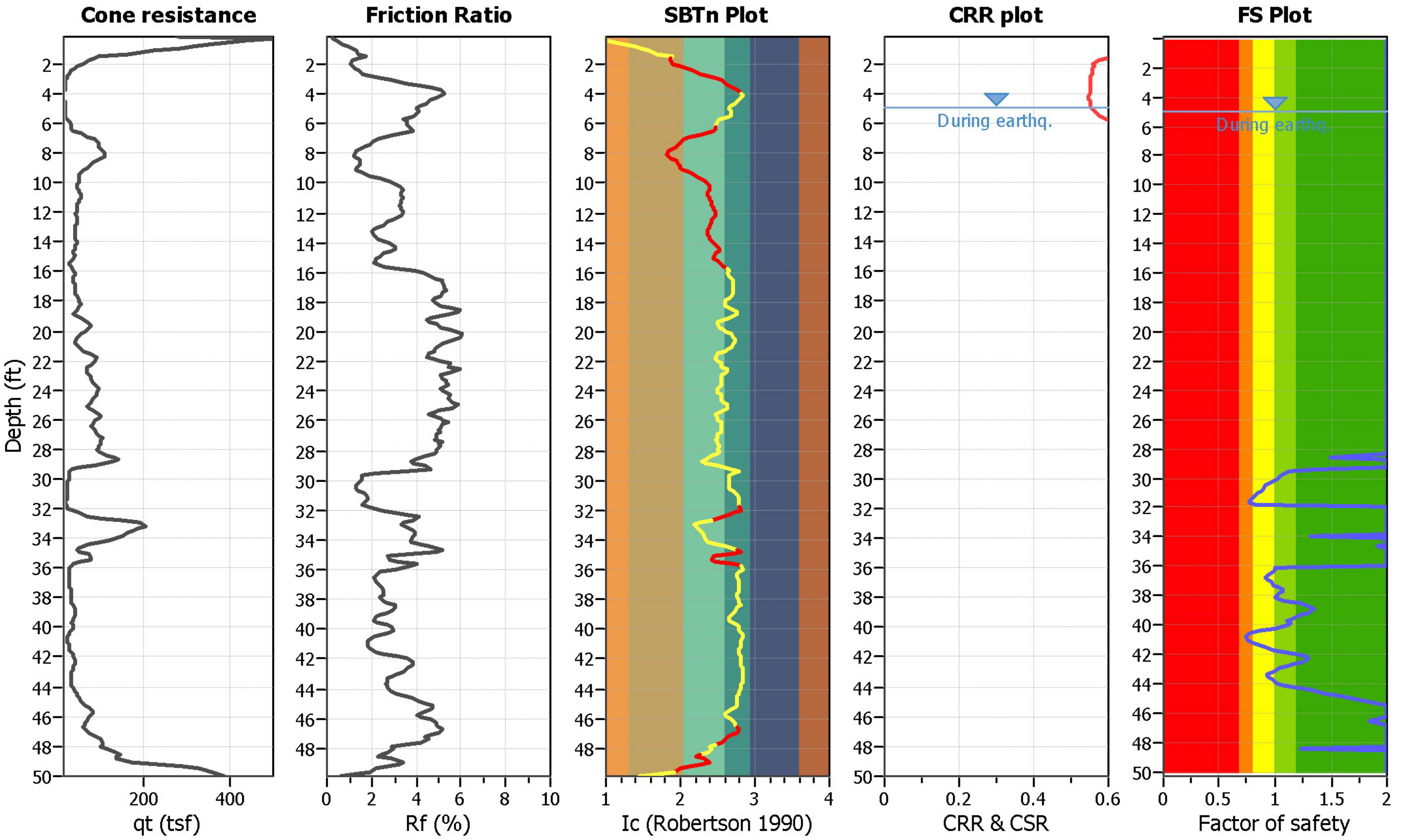
LIQUEFACTION ANALYSIS REPORT

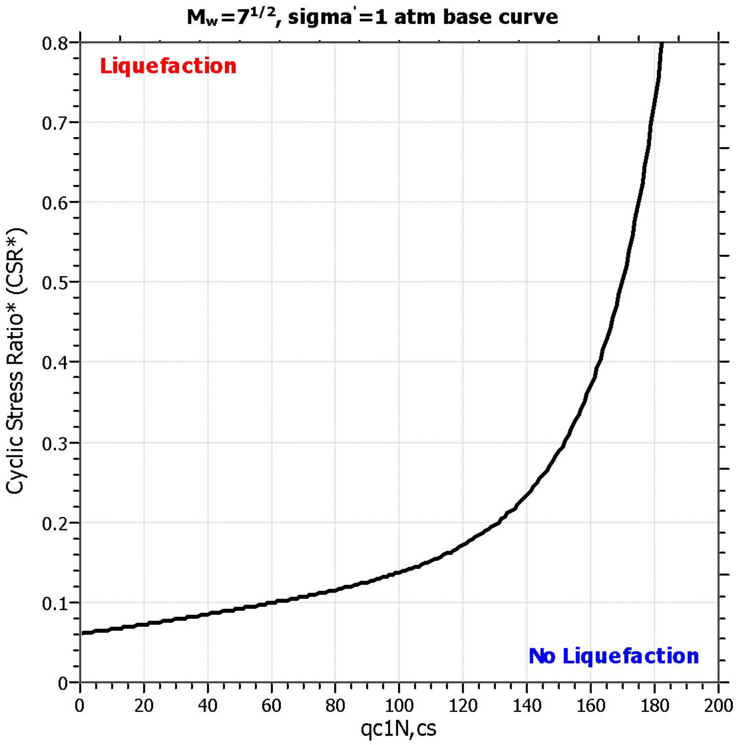
Project title : 1100 El Camino Real **Location : Millbrae, CA**

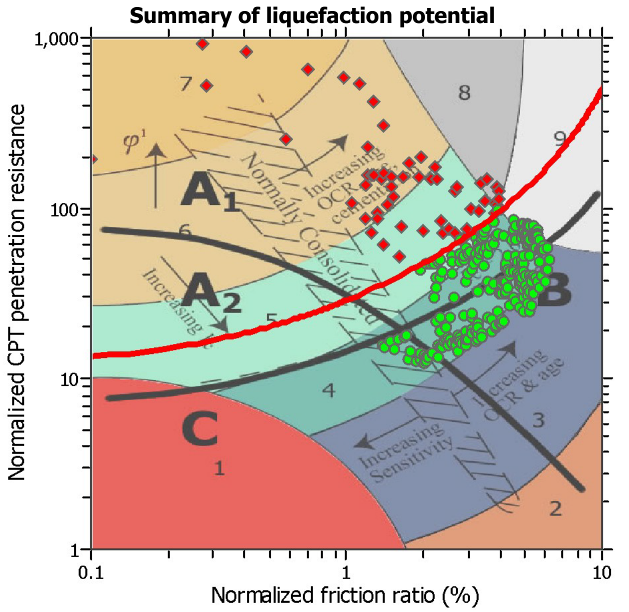
CPT file : 1-CPT1

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	15.00 ft	Use fill:	No	Clay like behavior applied:	Sand & Clay
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.90	Ic cut-off value:	2.35	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.91	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

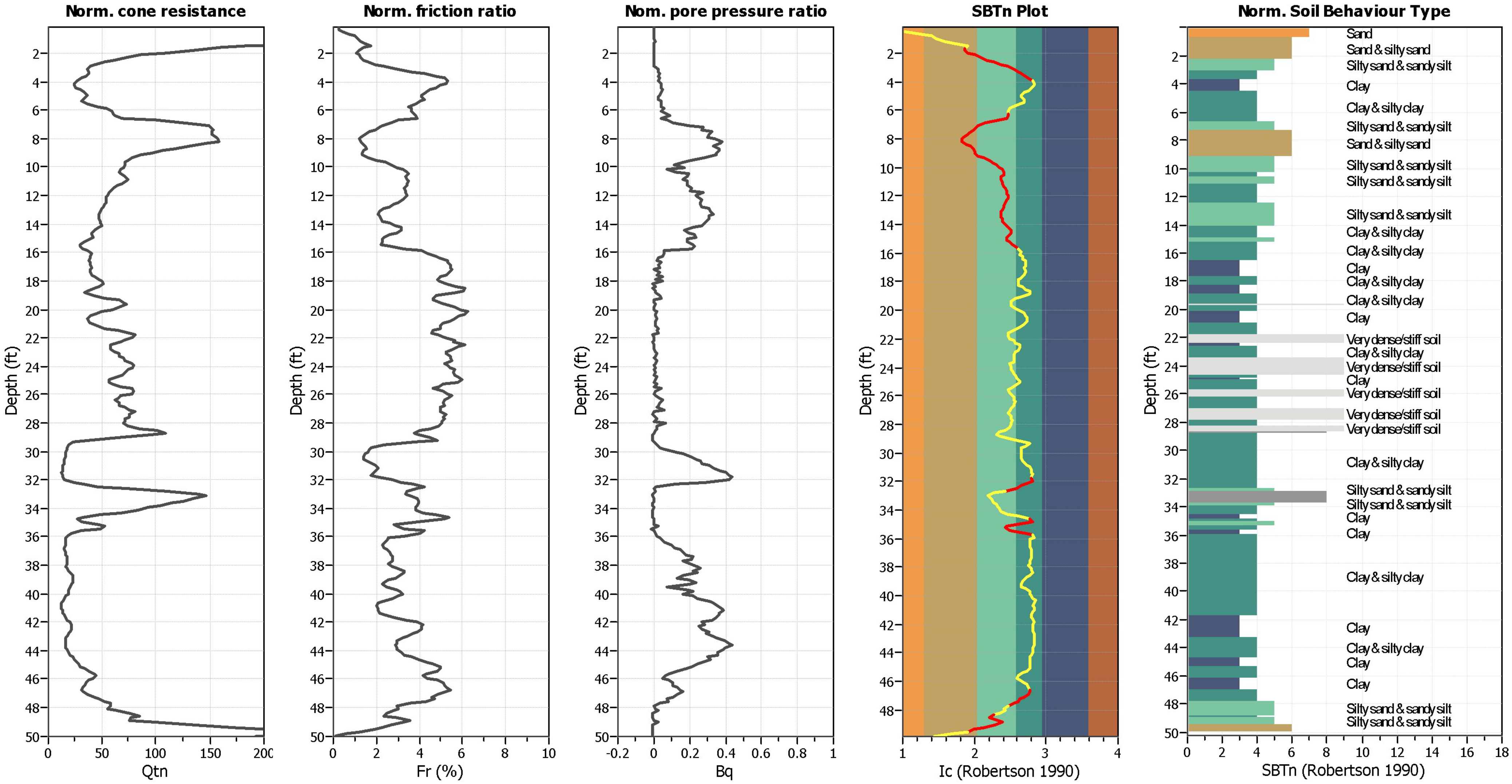






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots (normalized)



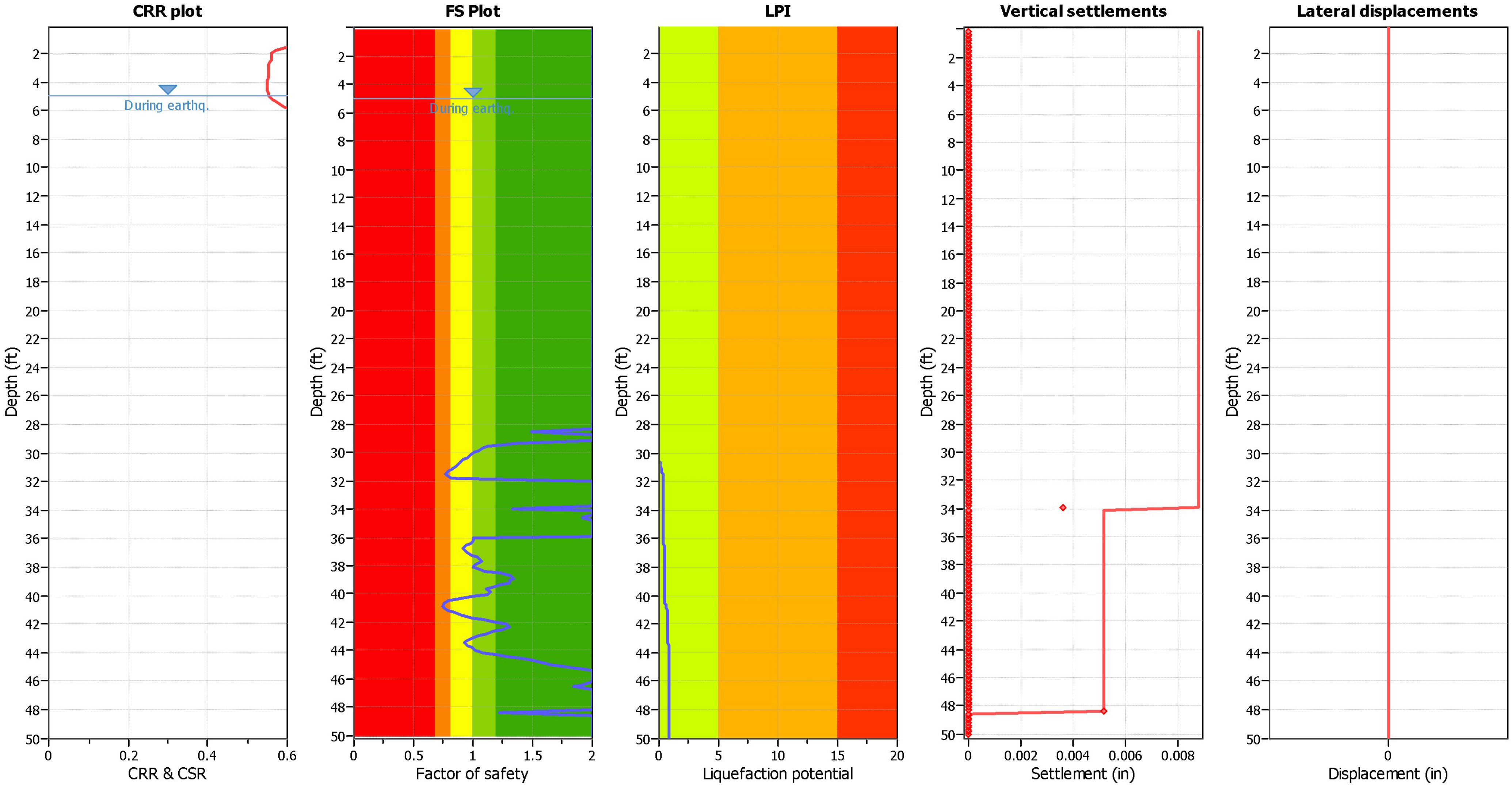
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

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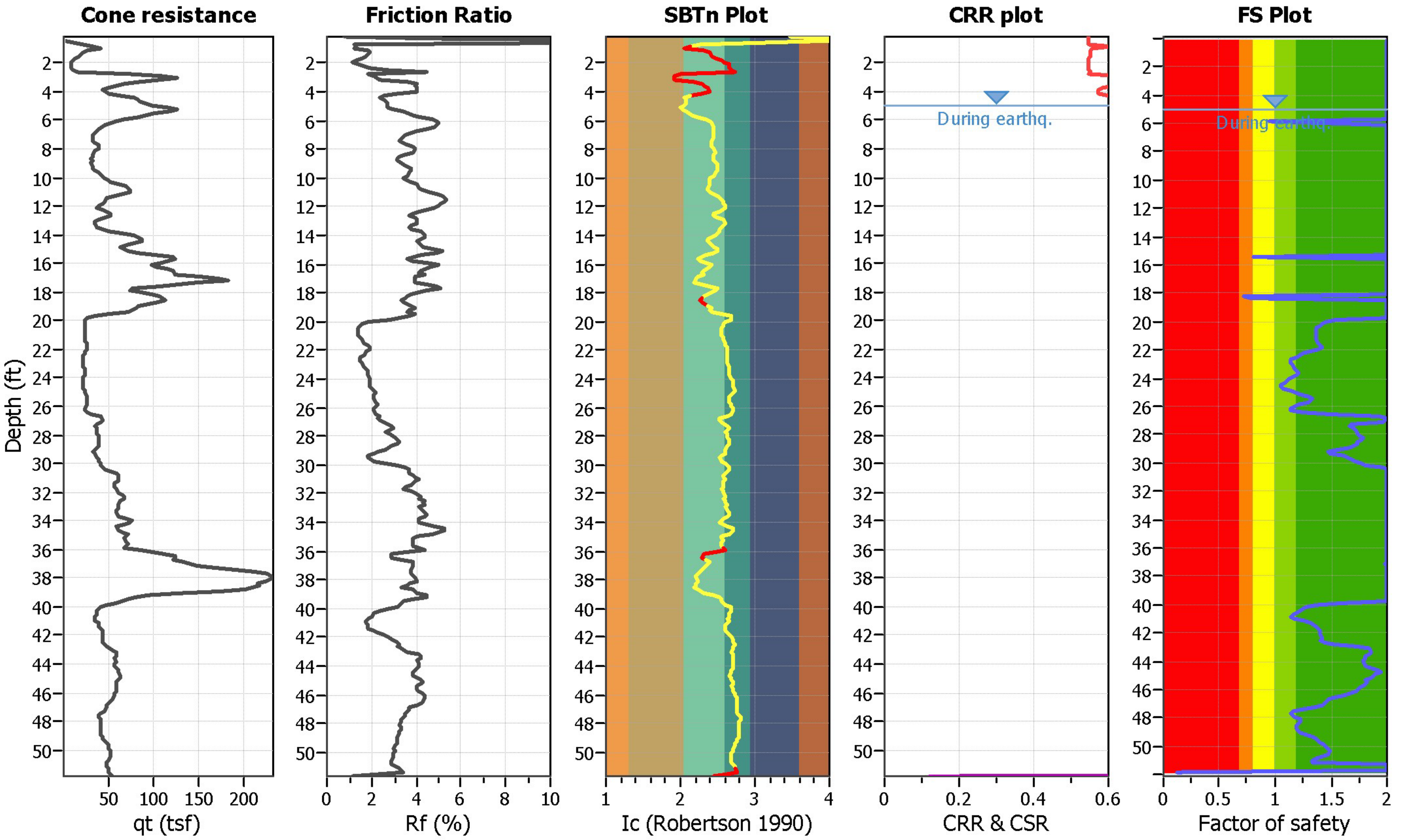
LIQUEFACTION ANALYSIS REPORT

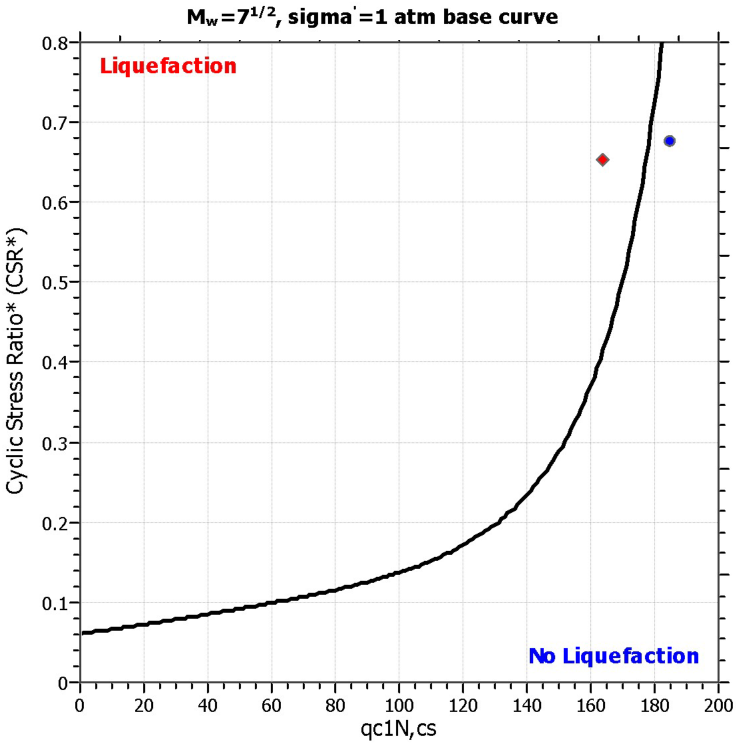
Project title : 1100 El Camino Real **Location : Millbrae, CA**

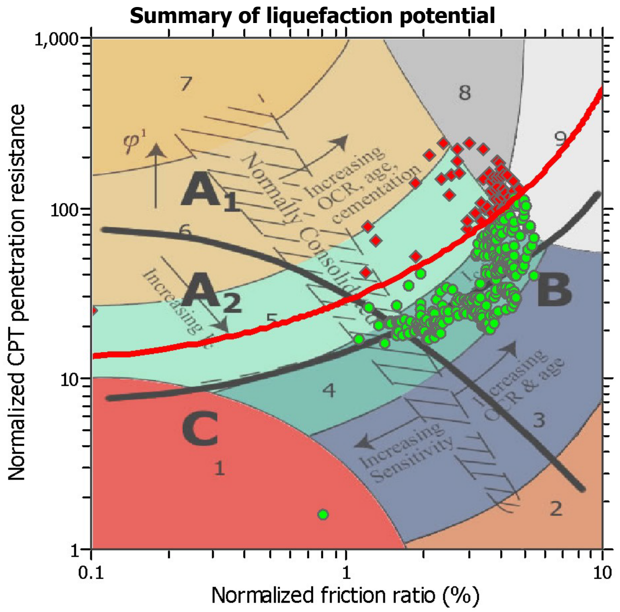
CPT file : 1-CPT2

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	15.00 ft	Use fill:	No	Clay like behavior applied:	Sand & Clay
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.90	Ic cut-off value:	2.35	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.91	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

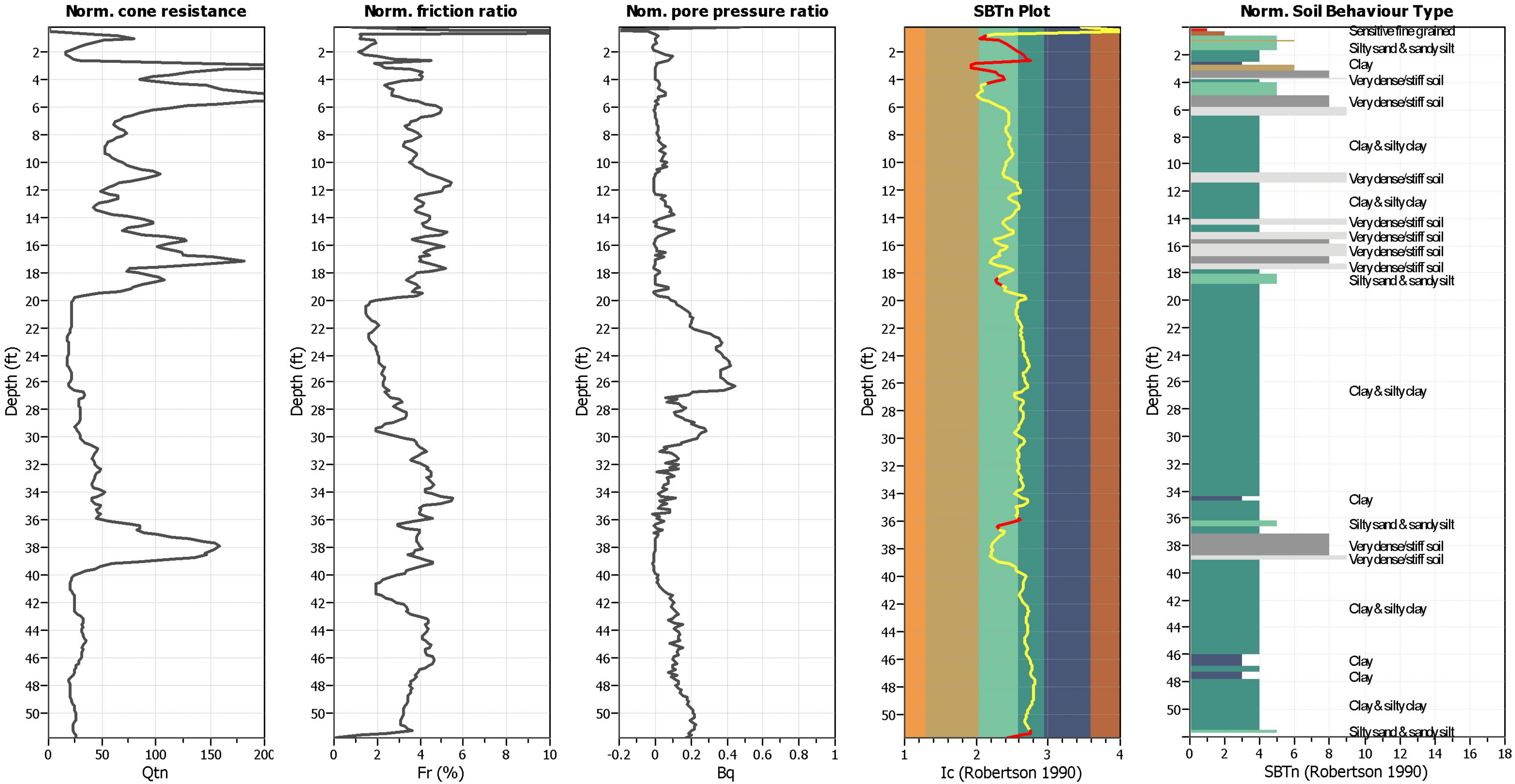






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots (normalized)



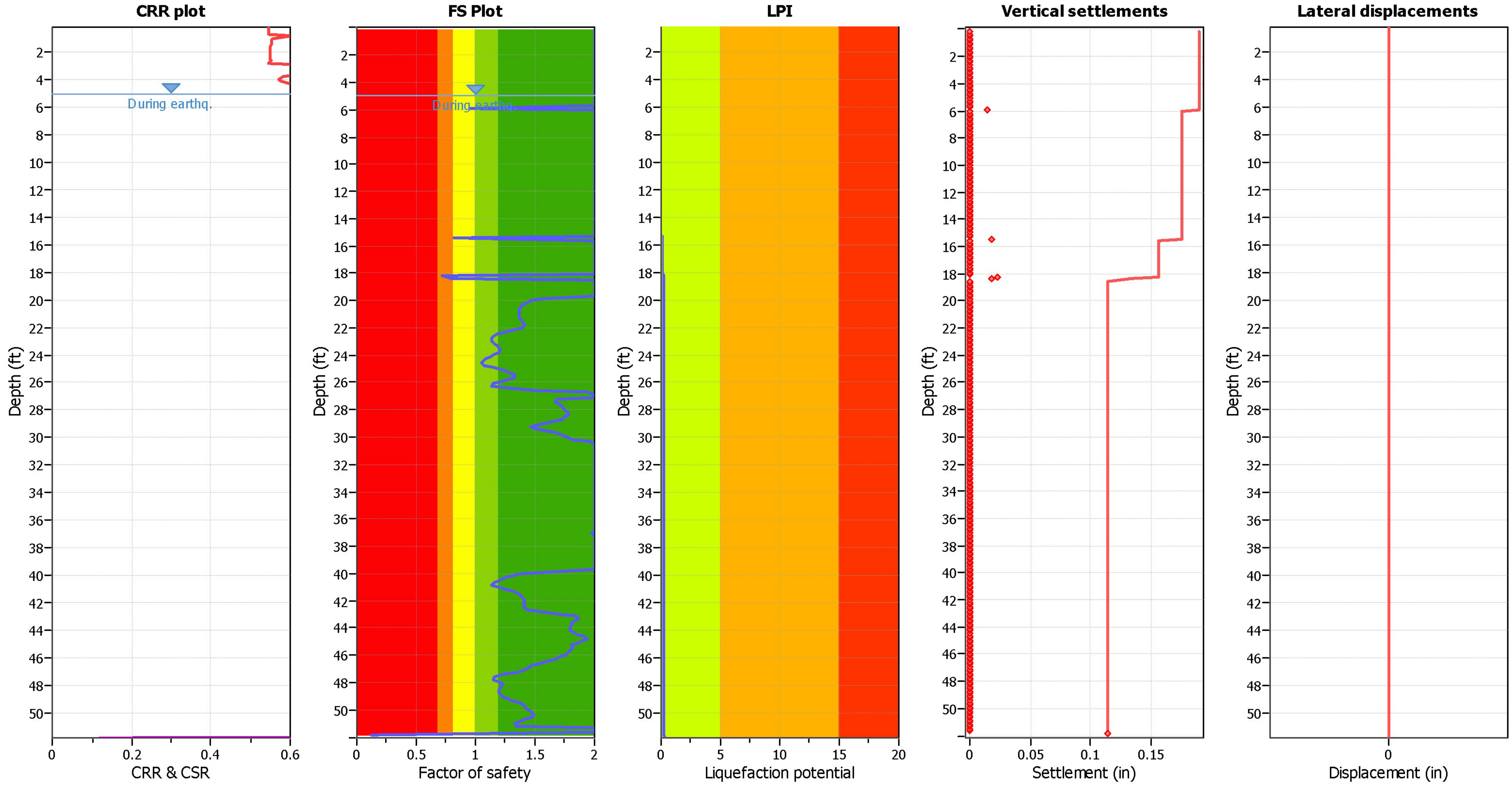
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

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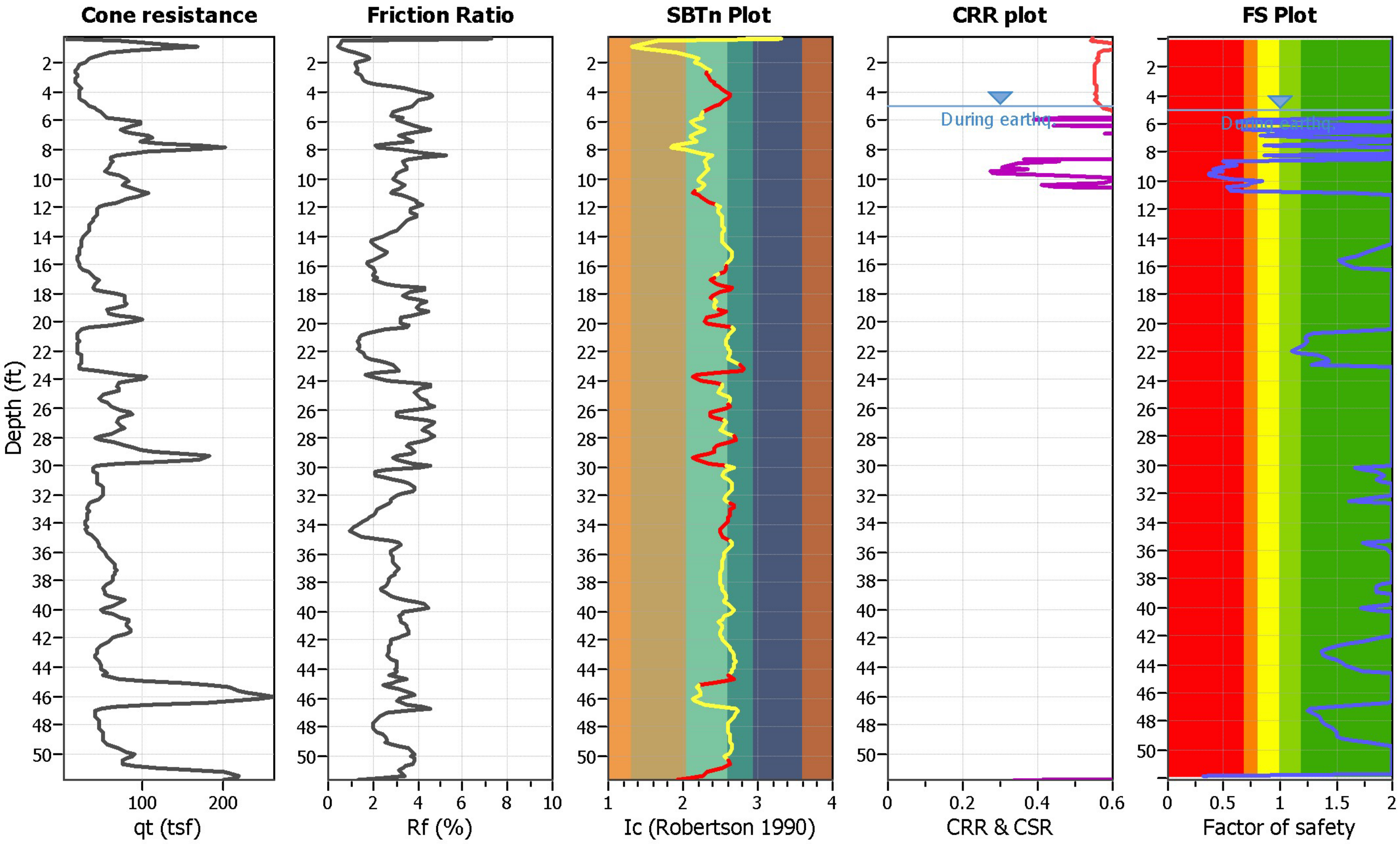
LIQUEFACTION ANALYSIS REPORT

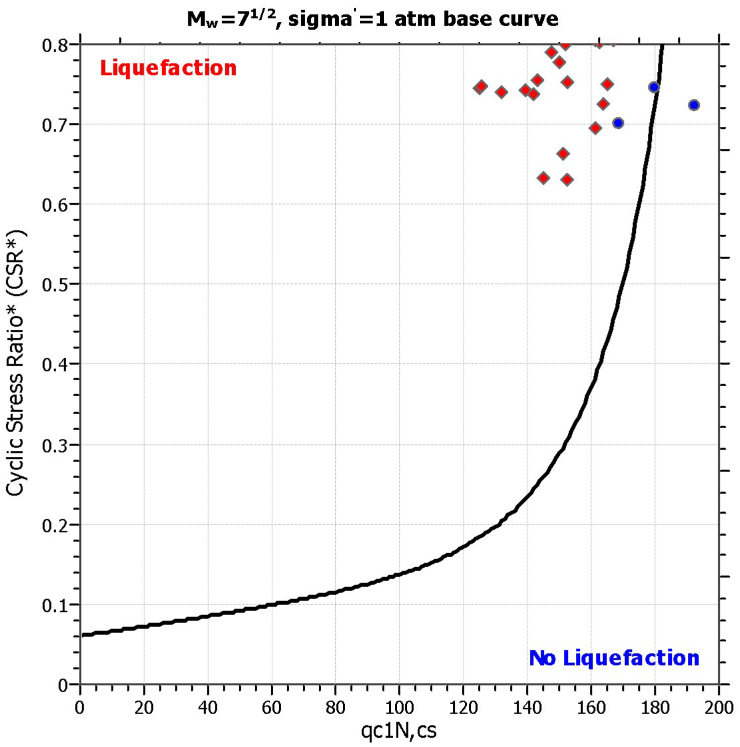
Project title : 1100 El Camino Real **Location : Millbrae, CA**

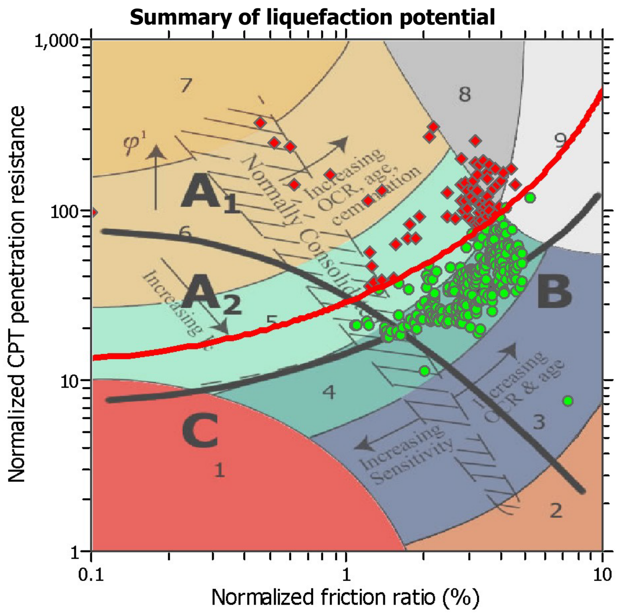
CPT file : 1-CPT3

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	15.00 ft	Use fill:	No	Clay like behavior applied:	Sand & Clay
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.90	Ic cut-off value:	2.35	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.91	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

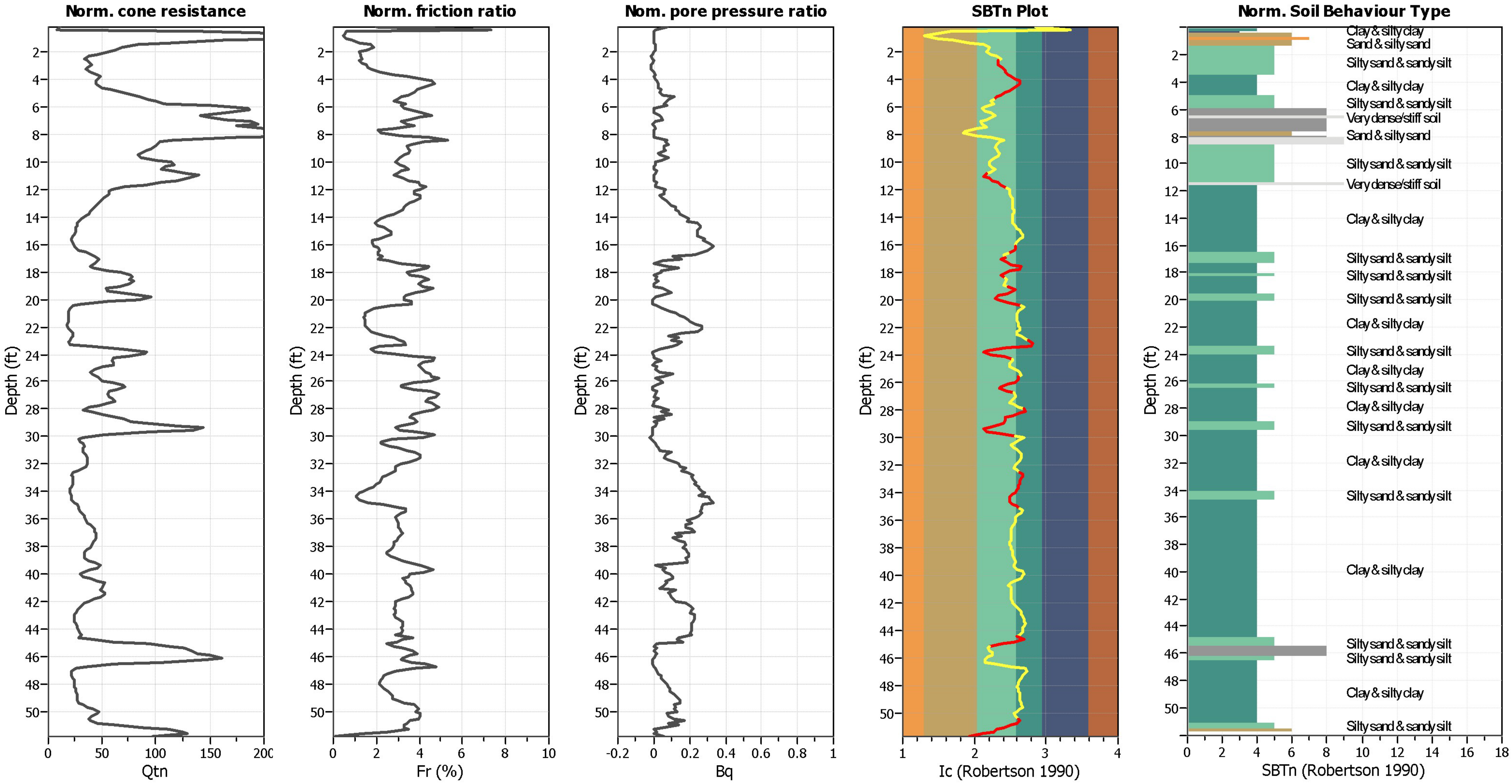






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots (normalized)



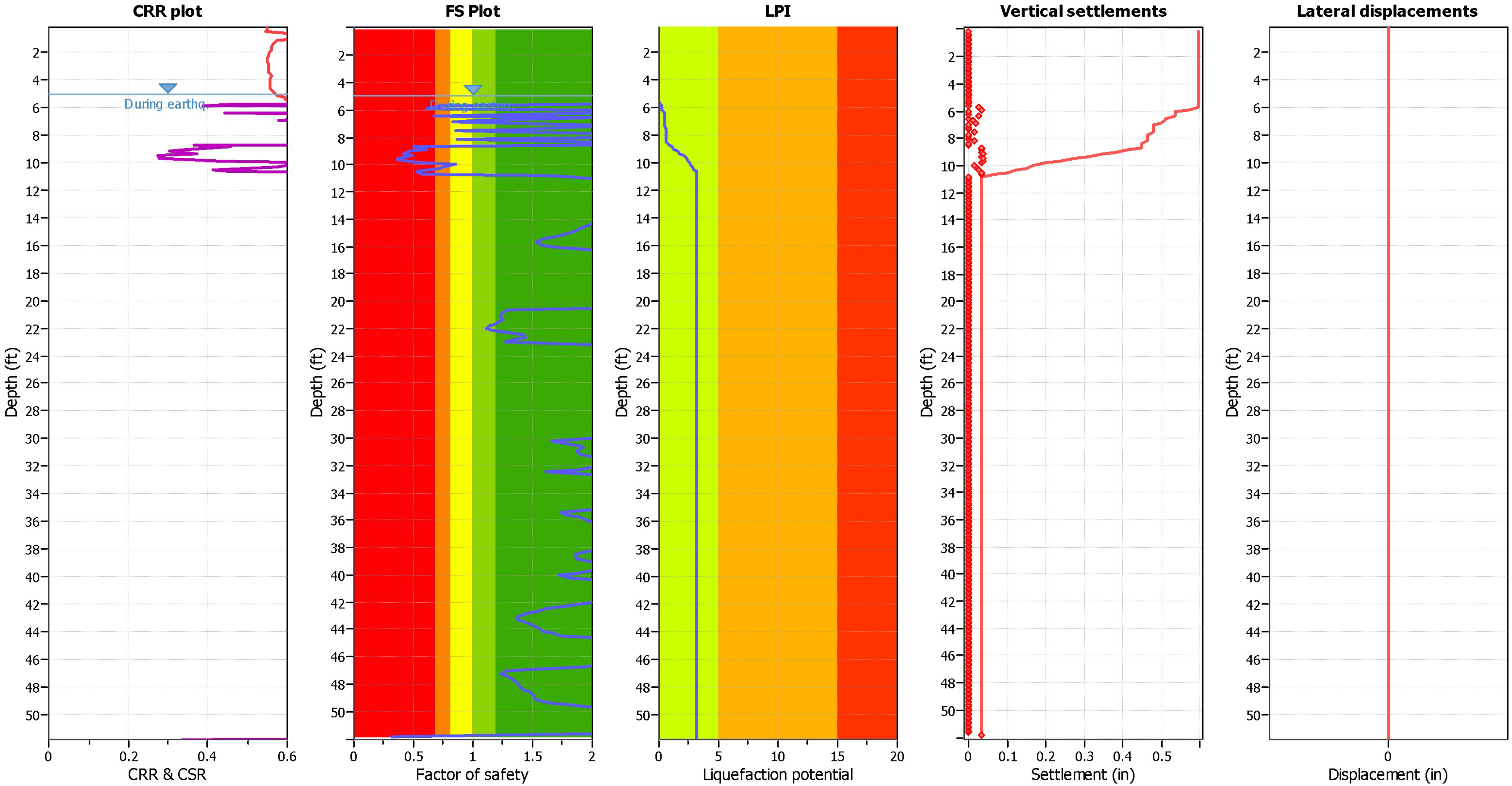
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

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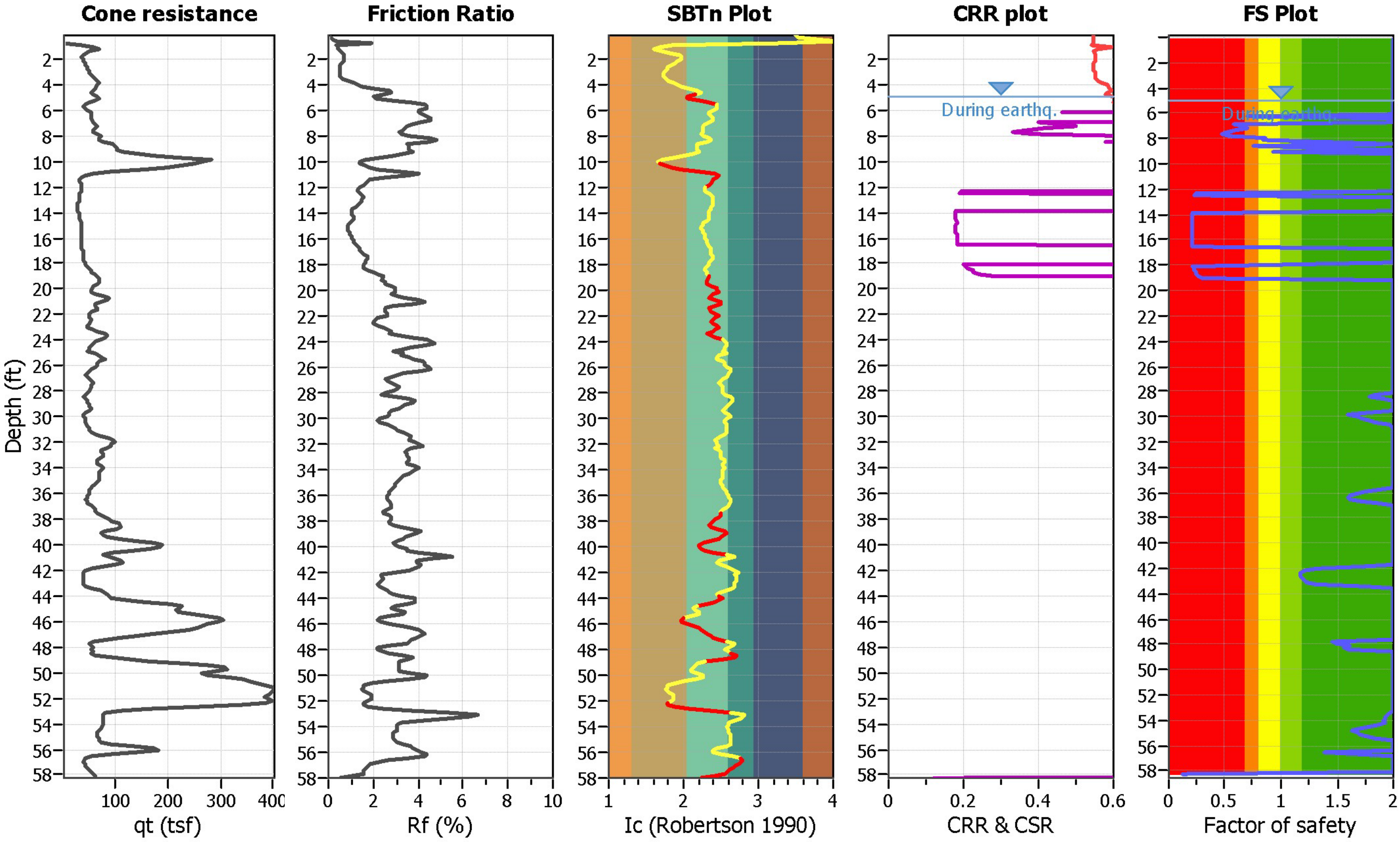
LIQUEFACTION ANALYSIS REPORT

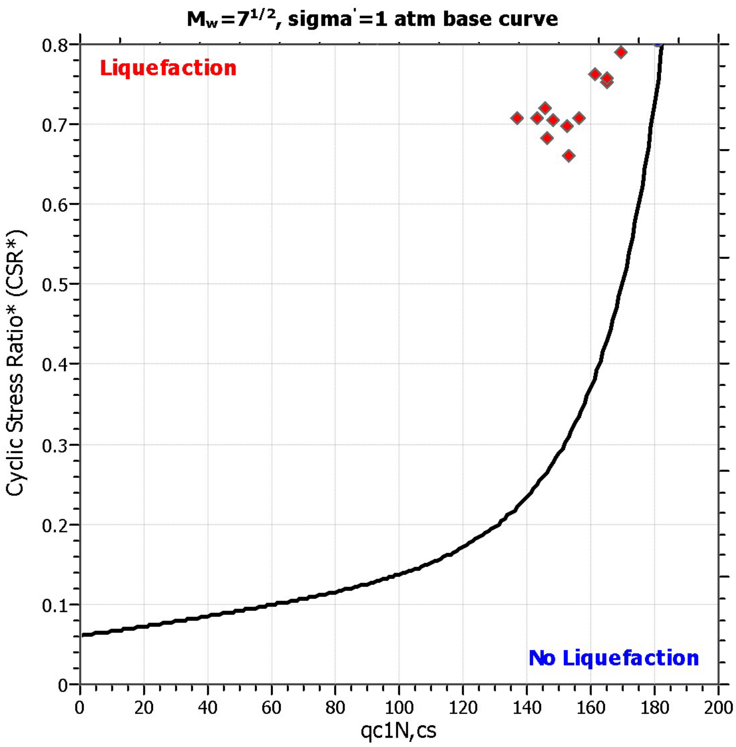
Project title : 1100 El Camino Real **Location : Millbrae, CA**

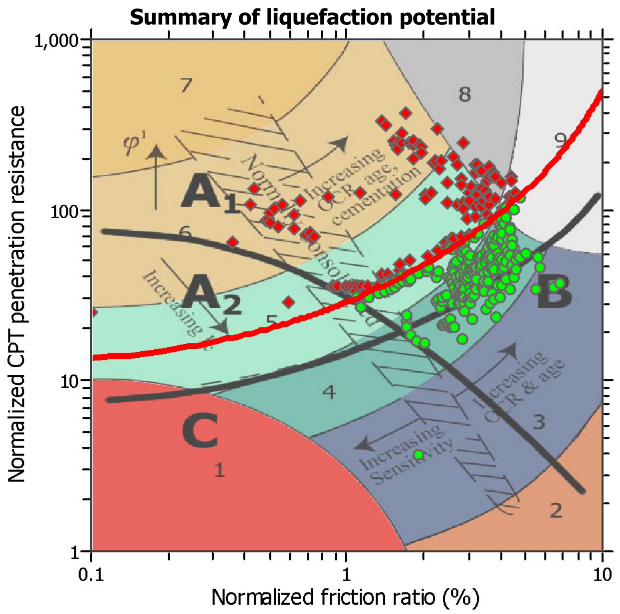
CPT file : 1-CPT4

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	15.00 ft	Use fill:	No	Clay like behavior applied:	Sand & Clay
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.90	Ic cut-off value:	2.35	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.91	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

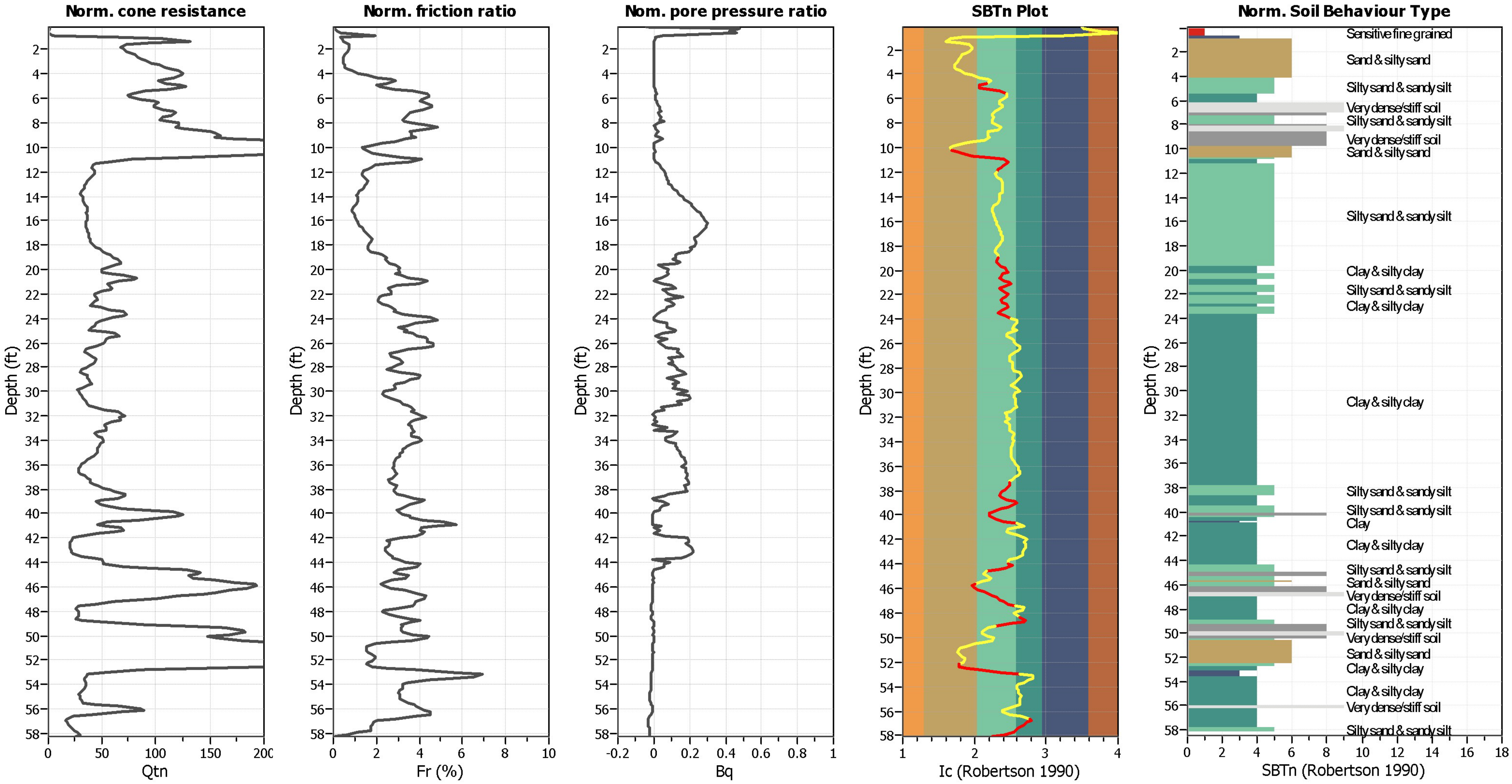






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots (normalized)



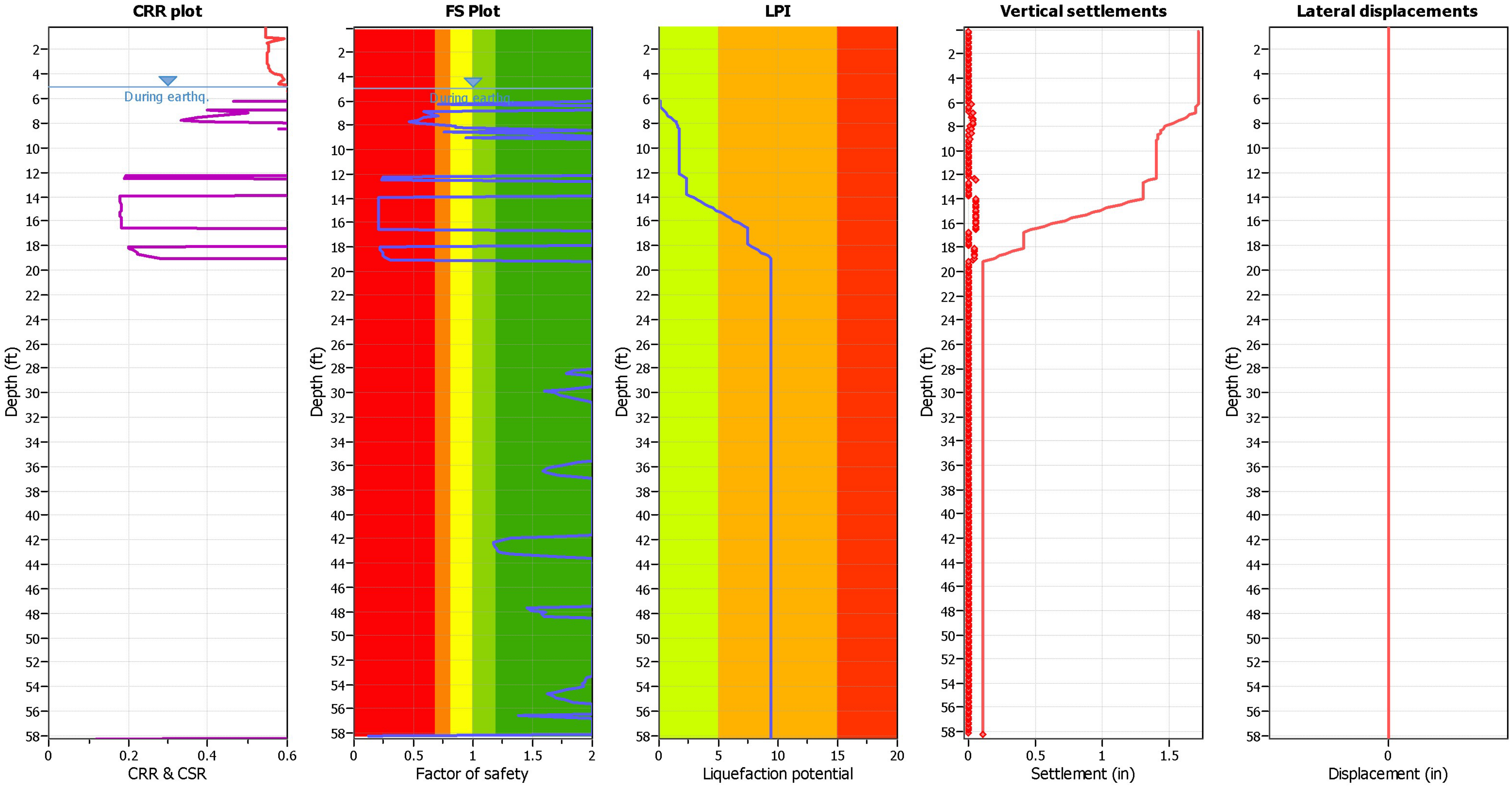
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

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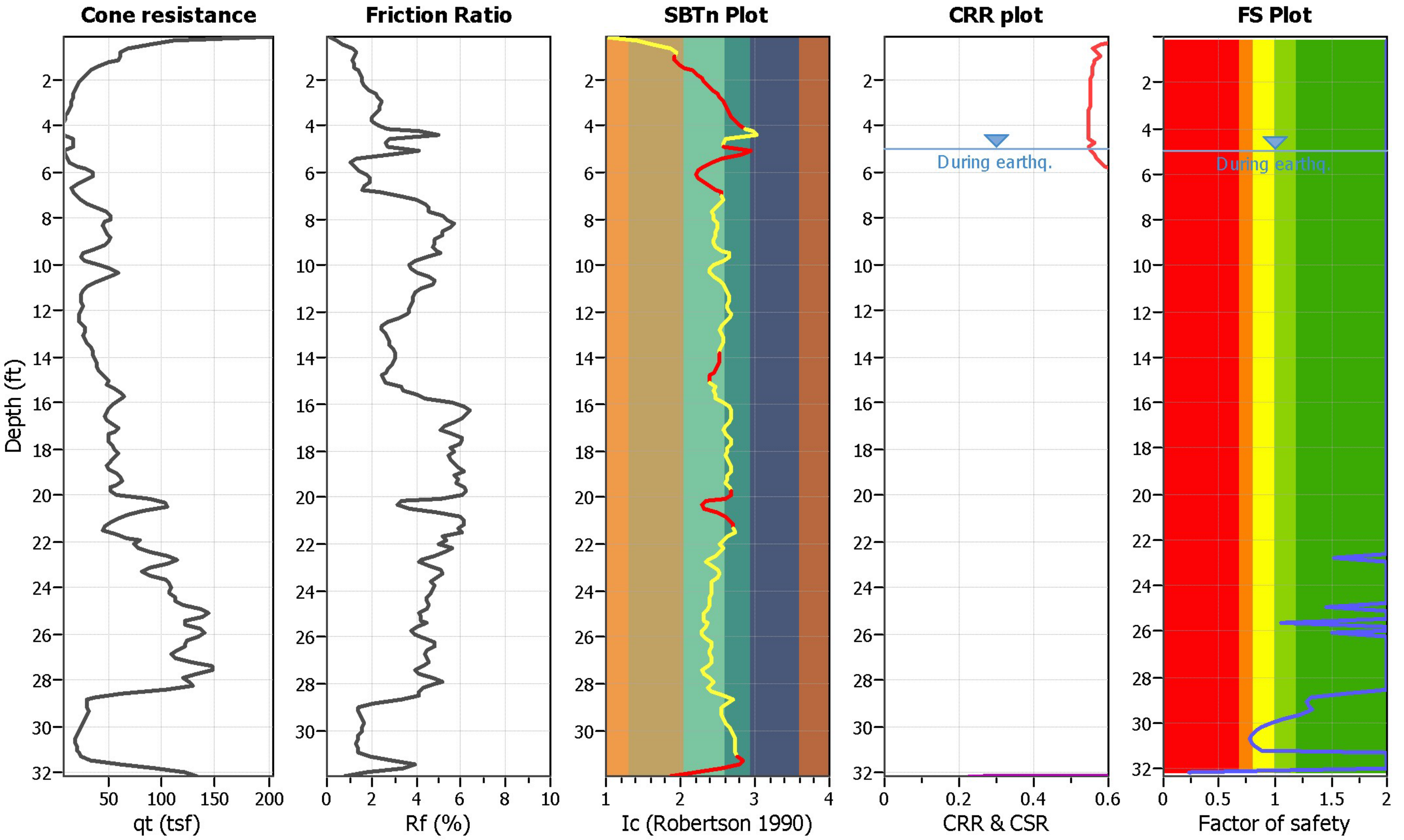
LIQUEFACTION ANALYSIS REPORT

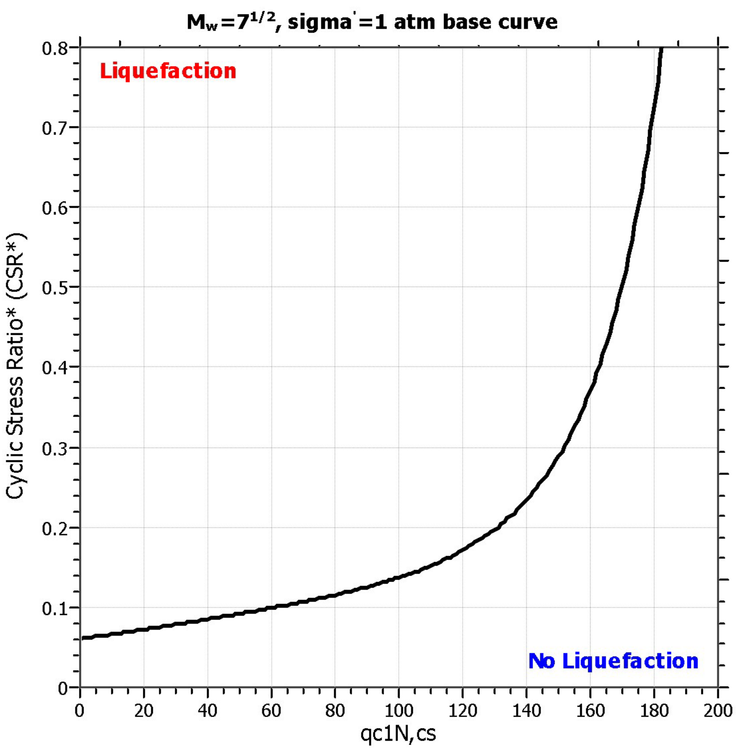
Project title : 1100 El Camino Real **Location : Millbrae, CA**

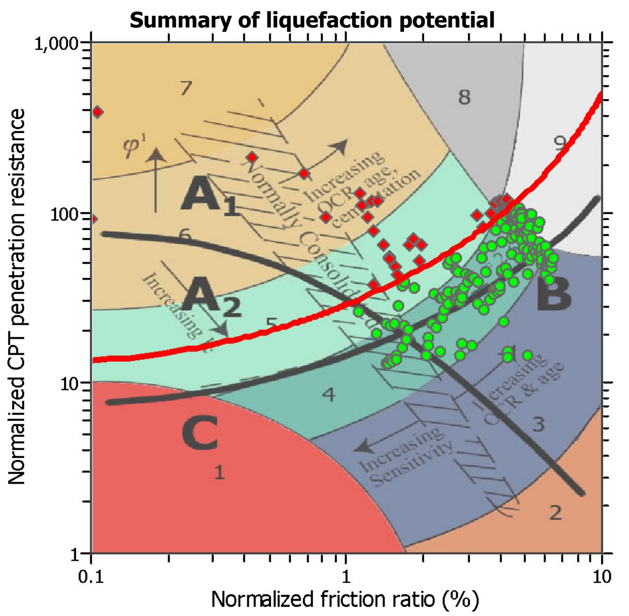
CPT file : 1-CPT5

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	15.00 ft	Use fill:	No	Clay like behavior applied:	Sand & Clay
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	5.00 ft	Fill height:	N/A		
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth applied:	No
Earthquake magnitude M_w:	7.90	Ic cut-off value:	2.35	Trans. detect. applied:	Yes	Limit depth:	N/A
Peak ground acceleration:	0.91	Unit weight calculation:	Based on SBT	K_σ applied:	Yes	MSF method:	Method based

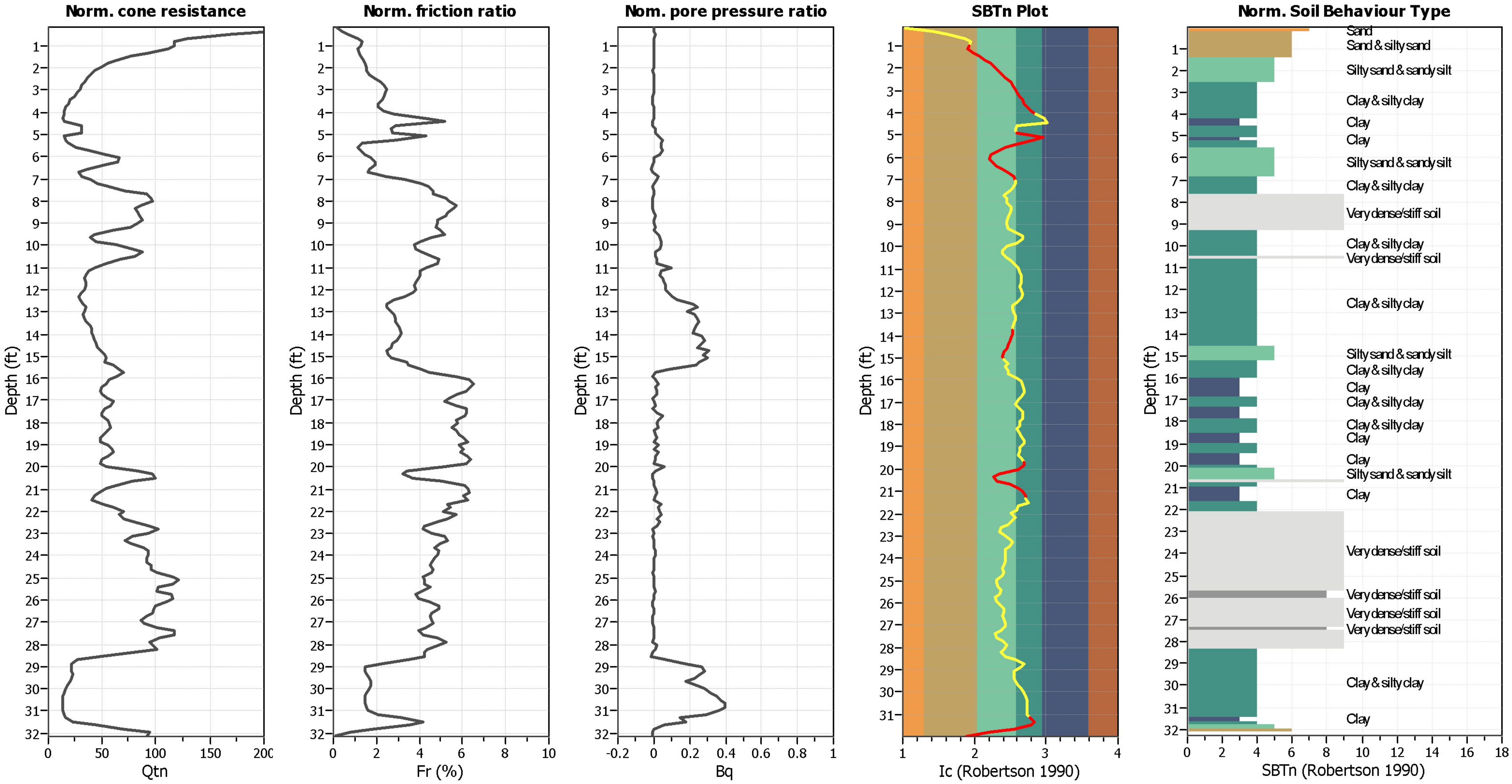






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots (normalized)



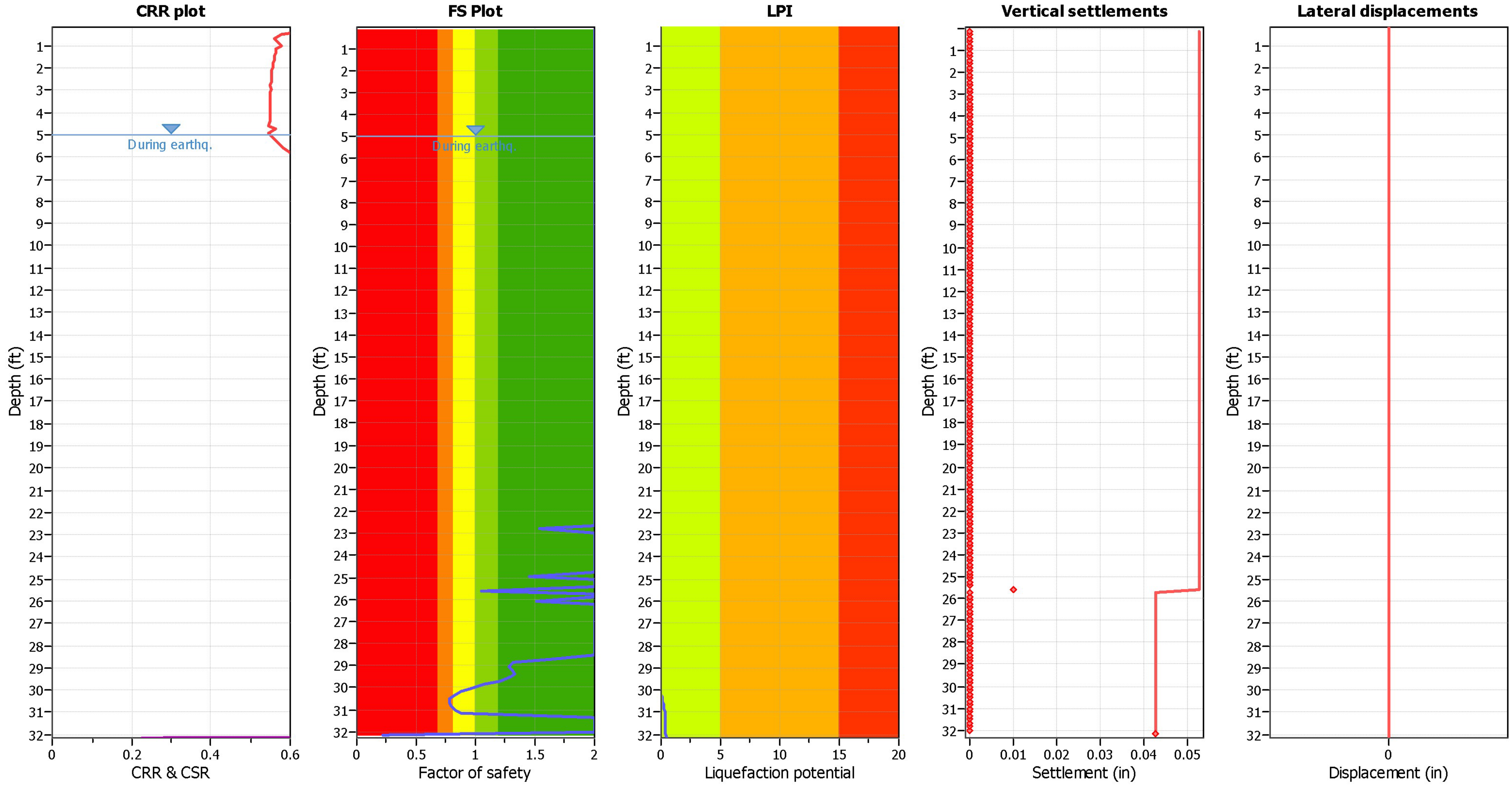
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.35	K_σ applied:	Yes
Earthquake magnitude M_w:	7.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sand & Clay
Peak ground acceleration:	0.91	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	15.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)
Fines correction method:	B&I (2014)
Points to test:	Based on Ic value
Earthquake magnitude M_w:	7.90
Peak ground acceleration:	0.91
Depth to water table (insitu):	15.00 ft
Depth to GWT (erthq.):	5.00 ft
Average results interval:	3
Ic cut-off value:	2.35
Unit weight calculation:	Based on SBT
Use fill:	No
Fill height:	N/A
Fill weight:	N/A
Transition detect. applied:	Yes
K_σ applied:	Yes
Clay like behavior applied:	Sand & Clay
Limit depth applied:	No
Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

APPENDIX E

Supplemental Recommendations

APPENDIX E

SUPPLEMENTAL RECOMMENDATIONS

TABLE OF CONTENTS

GENERAL INFORMATION

PREFACE

These supplemental recommendations are intended as a guide for earthwork and are in addition to any previous earthwork recommendations made by the Geotechnical Engineer. If there is a conflict between these supplemental recommendations and any previous recommendations, it should be immediately brought to the attention of ENGEO. Testing standards identified in this document shall be the most current revision (unless stated otherwise).

DEFINITIONS

Backfill	Soil, rock or soil-rock material used to fill excavations and trenches.
Drawings	Documents approved for construction which describe the work.
The Geotechnical Engineer	The project geotechnical engineering consulting firm, its employees, or its designated representatives.
Engineered Fill	Fill upon which the Geotechnical Engineer has made sufficient observations and tests to confirm that the fill has been placed and compacted in accordance with geotechnical engineering recommendations.
Fill	Soil, rock, or soil-rock materials placed to raise the grades of the site or to backfill excavations.
Imported Material	Soil and/or rock material which is brought to the site from offsite areas.
Onsite Material	Soil and/or rock material which is obtained from the site.
Optimum Moisture	Water content, percentage by dry weight, corresponding to the maximum dry density as determined by ASTM D-1557.
Relative Compaction	The ratio, expressed as a percentage, of the in-place dry density of the fill or backfill material as compacted in the field to the maximum dry density of the same material as determined by ASTM D-1557.
Select Material	Onsite and/or imported material which is approved by the Geotechnical Engineer as a specific-purpose fill.

PART I - EARTHWORK

1.1 GENERAL

1.1.1 WORK COVERED

Supplemental recommendations for performing earthwork and grading. Activities include:

- ✓ Site Preparation and Demolition
- ✓ Excavation
- ✓ Grading
- ✓ Backfill of Excavations and Trenches
- ✓ Engineered Fill Placement, Moisture Conditioning, and Compaction

1.1.2 CODES AND STANDARDS

The contractor should perform their work complying with applicable occupational safety and health standards, rules, regulations, and orders. The Occupational Safety and Health Standards (OSHA) Board is the only agency authorized in the State to adopt and enforce occupational safety and health standards (Labor Code § 142 et seq.). The owner, their representative and contractor are responsible for site safety; ENGEO representatives are not responsible for site safety.

Excavating, trenching, filling, backfilling, shoring and grading work should meet the minimum requirements of the applicable Building Code, and the standards and ordinances of state and local governing authorities.

1.1.3 TESTING AND OBSERVATION

Site preparation, cutting and shaping, excavating, filling, and backfilling should be carried out under the testing and observation of ENGEO. ENGEO shall be retained to perform appropriate field and laboratory tests to check compliance with the recommendations. Any fill or backfill that does not meet the supplemental recommendations shall be removed and/or reworked, until the supplemental recommendations are satisfied.

Tests for compaction shall be made in accordance with test procedures outlined in ASTM D-1557, as applicable, unless other testing methods are deemed appropriate by ENGEO. These and other tests shall be performed in accordance with accepted testing procedures, subject to the engineering discretion of ENGEO.

1.2 MATERIALS

1.2.1 STANDARD

Materials, tools, equipment, facilities, and services as required for performing the required excavating, trenching, filling and backfilling should be furnished by the Contractor.

1.2.2 ENGINEERED FILL AND BACKFILL

Material to be used for engineered fill and backfill should be free from organic matter and other deleterious substances, and of such quality that it will compact thoroughly without excessive voids when watered and rolled.

Unless specified elsewhere by ENGEO, engineered fill and backfill shall be free of significant organics, or any other unsatisfactory material. In addition, engineered fill and backfill shall comply with the grading requirements shown in the following table:

TABLE 1.2.2-1
Engineered Fill and Backfill Requirements

US Standard Sieve	Percentage Passing
3"	100
No. 4	35–100
No. 30	20–100

Earth materials to be used as engineered fill and backfill shall be cleared of debris, rubble and deleterious matter. Rocks and aggregate exceeding the maximum allowable size shall be removed from the site. Rocks of maximum dimension in excess of two-thirds of the lift thickness shall be removed from any fill material to the satisfaction of ENGEO.

ENGEO shall be immediately notified if potential hazardous materials or suspect soils exhibiting staining or odor are encountered. Work activities shall be discontinued within the area of potentially hazardous materials. ENGEO shall be notified at least 72 hours prior to the start of filling and backfilling operations. Materials to be used for filling and backfilling shall be submitted to ENGEO no less than 10 days prior to intended delivery to the site. Unless specified elsewhere by ENGEO, where conditions require the importation of low expansive fill material, the material shall be an inert, low to non-expansive soil, or soil-rock material, free of organic matter and meeting the following requirements:

TABLE 1.2.2-2
Imported Fill Material Requirements

	SIEVE SIZE	PERCENT PASSING
GRADATION (ASTM D-421)	2-inch	100
	#200	15 - 70
PLASTICITY (ASTM D-4318)	Plasticity Index < 12	
ORGANIC CONTENT (ASTM D-2974)	Less than 2 percent	

A sample of the proposed import material should be submitted to ENGEO no less than 10 days prior to intended delivery to the site.

1.2.3 SUBDRAINS

A subdrain system is an underground network of piping used to remove water from areas that collect or retain surface water or subsurface water. Subsurface water is collected by allowing water into the pipe through perforations. Subdrain systems may drain and discharge to an appropriate outlet such as storm drain, natural swales or drainage, etc.. Details for subdrain systems may vary depending on many items, including but not limited to site conditions, soil types, subdrain spacing, depth of the pipe and pervious medium, as well as pipe diameter.

1.2.3A Pipe

Subdrain pipe shall conform with these supplemental recommendations unless specified elsewhere by ENGEO. Perforated pipe for various depths shall be manufactured in accordance with the following requirements:

TABLE 1.2.3A-1
Perforated Pipe Requirements

Pipe Type	Standard	Typical Sizes (inches)	Pipe Stiffness (psi)
Pipe Stiffness above 200 psi (Below 50 feet of Finished Grade)			
ABS SDR 15.3		4 to 6	450
PVC Schedule 80	ASTM D1785	3 to 10	530
Pipe Stiffness between 100 psi and 150 psi (Between 15 and 50 feet of Finished Grade)			
ABS SDR 23.5	ASTM D2751	4 to 6	150
PVC SDR 23.5	ASTM D3034	4 to 6	153
PVC Schedule 40	ASTM D1785	3 to 10	135
ABS Schedule 40/DWV	ASTM D1527 & D2661	3 to 10	
Pipe Stiffness between 45 psi and 50 psi* (Between 0 to 15 feet of Finished Grade)			
PVC A-2000	ASTM F949	4 to 10	50
PVC SDR 35	ASTM D3034	4 to 8	46
ABS SDR 35	ASTM D2751	4 to 8	45
Corrugated PE	AASHTO M294 Type S	4 to 10	45

*Pipe with a stiffness less than 45 psi should not be used.

Other pipes not listed in the table above shall be submitted for review by the Geotechnical Engineer not less 72 hours before proposed use.

1.2.3B Outlets and Risers

Subdrain outlets and risers must be fabricated from the same material as the subdrain pipe. Outlet and riser pipe and fittings must not be perforated. Covers must be fitted and bolted into the riser pipe or elbow. Covers must seat uniformly and not be subject to rocking.

1.2.3C Permeable Material

Permeable material shall generally conform to Caltrans Standard Specification unless specified otherwise by ENGEO. Class 2 permeable material shall comply with the gradation requirements shown in the following table.

TABLE 1.2.3C-1

Class 2 Permeable Material Grading Requirements

Sieve sizes	Percentage passing
1"	100
3/4"	90 to 100
3/8"	40 to 100
No. 4	25 to 40
No. 8	18 to 33
No. 30	5 to 15
No. 50	0 to 7
No. 200	0 to 3

1.2.3D Filter Fabric

Filter fabric shall meet the following Minimum Average Roll Values unless specified elsewhere by ENGEO.

Grab Strength (ASTM D-4632) .... 180 lbs
Mass per Unit Area (ASTM D-4751)...................................... 6 oz/yd^2
Apparent Opening Size (ASTM D-4751)............ 70-100 U.S. Std. Sieve
Flow Rate (ASTM D-4491)..80 gal/min/ft^2
Puncture Strength (ASTM D-4833) .... 80 lbs

Areas to receive filter fabric must comply with the compaction and elevation tolerance specified for the material involved. Handle and place filter fabric under the manufacturer's instructions. Align and place filter fabric without wrinkles.

Overlap adjacent roll ends of filter fabric in accordance with manufacturer’s recommendations. The preceding roll must overlap the following roll in the direction that the permeable material is being spread. Completely replace torn or punctured sections damaged during placement or repair by placing a piece of filter fabric that is large enough to cover the damaged area and comply with the overlap specified. Cover filter fabric with the thickness of overlying material shown within 72 hours of placing the fabric.

1.2.4 GEOCOMPOSITE DRAINAGE

Geocomposite drainage is a prefabricated material that includes filter fabric and plastic pipe. Filter fabric must be Class A. The drain shall be of composite construction consisting of a supporting structure or drainage core material surrounded by a geotextile. The geotextile shall encapsulate the drainage core and prevent random soil intrusion into the drainage structure. The drainage core material shall consist of a three-dimensional polymeric material with a structure that permits flow along the core laterally. The core structure shall also be constructed to permit flow regardless of the water inlet surface. The drainage core shall provide support to the geotextile.

A geotextile flap shall be provided along drainage core edges. This flap shall be of sufficient width for sealing the geotextile to the adjacent drainage structure edge to prevent soil intrusion into the structure during and after installation. The geotextile shall cover the full length of the core. The geocomposite core shall be furnished with an approved method of constructing and connecting with outlet pipes. If the fabric on the geocomposite drain is torn or punctured, replace the damaged section completely. The specific drainage composite material and supplier shall be preapproved by ENGEO.

The Contractor shall submit a manufacturer's certification that the geocomposite meets the design properties and respective index criteria measured in full accordance with applicable test methods. The manufacturer's certification shall include a submittal package of documented test results that confirm the design values. In case of dispute over validity of design values, the Contractor will supply design property test data from a laboratory approved by ENGEO, to support the certified values submitted.

Geocomposite material suppliers shall provide a qualified and experienced representative onsite to assist the Contractor and ENGEO at the start of construction with directions on the use of drainage composite. If there is more than one application on a project, this criterion will apply to construction of the initial application only. The representative shall also be available on an as-needed basis, as requested by ENGEO, during construction of the remaining applications. The soil surface against which the geocomposite is to be placed shall be free of debris and inordinate irregularities that will prevent intimate contact between the soil surface and the drain.

Edge seams shall be formed by utilizing the flap of the geotextile extending from the geocomposite's edge and lapping over the top of the fabric of the adjacent course. The fabric flap shall be securely fastened to the adjacent fabric by means of plastic tape or non-water-soluble construction adhesive, as recommended by the supplier. To prevent soil intrusion, exposed edges of the geocomposite drainage core edge must be covered.

Approved backfill shall be placed immediately over the geocomposite drain. Backfill operations should be performed to not damage the geotextile surface of the drain. Also during operations, avoid excessive settlement of the backfill material. The geocomposite drain, once installed, shall not be exposed for more than 7 days prior to backfilling.

PART II - GEOGRID SOIL REINFORCEMENT

Geogrid soil reinforcement (geogrid) shall be submitted to ENGEO and should be approved before use. The geogrid shall be a regular network of integrally connected polymer tensile elements with aperture geometry sufficient to permit significant mechanical interlock with the surrounding soil or rock. The geogrid structure shall be dimensionally stable and able to retain its geometry under construction stresses and shall have high resistance to damage during construction to ultraviolet degradation and to chemical and biological degradation encountered in the soil being reinforced. The geogrids shall have an Allowable Tensile Strength (T_a) and Pullout Resistance, for the soil type(s) as specified on design plans.

The contractor shall submit a manufacturer's certification that the geogrids supplied meet plans and project specifications. The contractor shall check the geogrid upon delivery to ensure that the proper material has been received. During periods of shipment and storage, the geogrid shall be protected from temperatures greater than 140°F, mud, dirt, dust, and debris. Manufacturer's recommendations in regard to protection from direct sunlight must also be followed. At the time of installation, the geogrid will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. If approved by ENGEO, torn or punctured sections may be repaired by placing a patch over the damaged area. Any geogrid damaged during storage or installation shall be replaced by the Contractor at no additional cost to the owner.

Geogrid material suppliers shall provide a qualified and experienced representative onsite at the initiation of the project, for a minimum of three days, to assist the Contractor and ENGEO personnel at the start of construction. If there is more than one slope on a project, this criterion will apply to construction of the initial slope only. The representative shall also be available on an as-needed basis, as requested by ENGEO, during construction of the remaining slope(s). Geogrid reinforcement may be joined with mechanical connections or overlaps as recommended and approved by the manufacturer. Joints shall not be placed within 6 feet of the slope face, within 4 feet below top of slope, nor horizontally or vertically adjacent to another joint.

The geogrid reinforcement shall be installed in accordance with the manufacturer's recommendations. The geogrid reinforcement shall be placed within the layers of the compacted soil as shown on the plans or as directed. The geogrid reinforcement shall be placed in continuous longitudinal strips in the direction of main reinforcement. However, if the Contractor is unable to complete a required length with a single continuous length of geogrid, a joint may be made with the manufacturer's approval. Only one joint per length of geogrid shall be allowed. This joint shall be made for the full width of the strip by using a similar material with similar strength. Joints in geogrid reinforcement shall be pulled and held taut during fill placement.

Adjacent strips, in the case of 100 percent coverage in plan view, need not be overlapped. The minimum horizontal coverage is 50 percent, with horizontal spacing between reinforcement no greater than 40 inches. Horizontal coverage of less than 100 percent shall not be allowed unless specifically detailed in the construction drawings. Adjacent rolls of geogrid reinforcement shall be overlapped or mechanically connected where exposed in a wrap around face system, as applicable.

The Contractor may place only that amount of geogrid reinforcement required for immediately pending work to prevent undue damage. After a layer of geogrid reinforcement has been placed, the next succeeding layer of soil shall be placed and compacted as appropriate. After the specified soil layer has been placed, the next geogrid reinforcement layer shall be installed. The process shall be repeated for each subsequent layer of geogrid reinforcement and soil. Geogrid reinforcement shall be placed to lay flat and pulled tight prior to backfilling. After a layer of geogrid reinforcement has been placed, suitable means, such as pins or small piles of soil, shall be used to hold the geogrid reinforcement in position until the subsequent soil layer can be placed.

Under no circumstances shall a track-type vehicle be allowed on the geogrid reinforcement before at least 6 inches of soil have been placed. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and the geogrid reinforcement. If approved by the Manufacturer, rubber-tired equipment may pass over the geosynthetic reinforcement at slow speeds, less than 10 mph. Sudden braking and sharp turning shall be avoided. During construction, the surface of the fill should be kept approximately horizontal. Geogrid reinforcement shall be placed directly on the compacted horizontal fill surface. Geogrid reinforcements are to be placed as shown on plans, and oriented correctly.

PART III - GEOTEXTILE SOIL REINFORCEMENT

The specific geotextile material and supplier shall be preapproved by ENGEO. The contractor shall submit a manufacturer's certification that the geotextiles supplied meet the respective index criteria set when geotextile was approved by ENGEO, measured in full accordance with specified test methods and standards.

The contractor shall check the geotextile upon delivery to ensure that the proper material has been received. During periods of shipment and storage, the geotextile shall be protected from temperatures greater than 140°F, mud, dirt, dust, and debris. Manufacturer's recommendations in regard to protection from direct sunlight must also be followed. At the time of installation, the geotextile will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. If approved by ENGEO, torn or punctured sections may be repaired by placing a patch over the damaged area. Any geotextile damaged during storage or installation shall be replaced by the Contractor at no additional cost to the owner.

Geotextile material suppliers shall provide a qualified and experienced representative onsite at the initiation of the project to assist the Contractor and ENGEO personnel at the start of construction. The geotextile reinforcement shall be installed in accordance with the manufacturer's recommendations. The geotextile reinforcement shall be placed within the layers of the compacted soil as shown on the plans or as directed, secured with staples, pins, or small piles of backfill, placed without wrinkles, and aligned with the primary strength direction perpendicular to slope contours. Cover geotextile reinforcement with backfill within the same work shift. Place at least 6 inches of backfill on the geotextile reinforcement before operating or driving equipment or vehicles over it, except those used under the conditions specified below for spreading backfill.

Adjacent strips, in the case of 100 percent coverage in plan view, need not be overlapped. The minimum horizontal coverage is 50 percent, with horizontal spacing between reinforcement no greater than 40 inches. Horizontal coverage of less than 100 percent shall not be allowed unless specifically detailed in the construction drawings. Adjacent rolls of geotextile reinforcement shall be overlapped or mechanically connected where exposed in a wraparound face system, as applicable.

The contractor may place only that amount of geotextile reinforcement required for immediately pending work to prevent undue damage. After a layer of geotextile reinforcement has been placed, the succeeding layer of soil shall be placed and compacted as appropriate. After the specified soil layer has been placed, the next geotextile reinforcement layer shall be installed. The process shall be repeated for each subsequent layer of geotextile reinforcement and soil.

Geotextile reinforcement shall be placed to lay flat and be pulled tight prior to backfilling. After a layer of geotextile reinforcement has been placed, suitable means, such as pins or small piles of soil, shall be used to hold the geotextile reinforcement in position until the subsequent soil layer can be placed. Under no circumstances shall a track-type vehicle be allowed on the geotextile reinforcement before at least six inches of soil has been placed. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and the geotextile reinforcement. If approved by the Manufacturer, rubber-tired equipment may pass over the geotextile reinforcement as slow speeds, less than 10 mph. Sudden braking and sharp turning shall be avoided.

During construction, the surface of the fill should be kept approximately horizontal. Geotextile reinforcement shall be placed directly on the compacted horizontal fill surface. Geotextile reinforcements are to be placed within three inches of the design elevations and extend the length as shown on the elevation view unless otherwise directed by ENGEO.

Replace or repair any geotextile reinforcement damaged during construction. Grade and compact backfill to ensure the reinforcement remains taut. Geotextile soil reinforcement must be tested to the required design values using the following ASTM test methods.

TABLE III-1
Geotextile Soil Reinforcements

Property	Test
Elongation at break, percent	ASTM D 4632
Grab breaking load, lb, 1-inch grip (min) in each direction	ASTM D 4632
Wide width tensile strength at 5 percent strain, lb/ft (min)	ASTM D 4595
Wide width tensile strength at ultimate strength, lb/ft (min)	ASTM D 4595
Tear strength, lb (min)	ASTM D 4533
Puncture strength, lb (min)	ASTM D 6241
Permittivity, sec^{-1} (min)	ASTM D 4491
Apparent opening size, inches (max)	ASTM D 4751
Ultraviolet resistance, percent (min) retained grab break load, 500 hours	ASTM D 4355

PART IV - EROSION CONTROL MAT

Work shall consist of furnishing and placing a synthetic erosion control mat and/or degradable erosion control blanket for slope face protection and lining of runoff channels. The specific erosion control material and supplier shall be pre-approved by ENGEO.

The Contractor shall submit a manufacturer's certification that the erosion mat/blanket supplied meets the criteria specified when the material was approved by ENGEO. The manufacturer's certification shall include a submittal package of documented test results that confirm the property values. Jute mesh shall consist of processed natural jute yarns woven into a matrix, and netting shall consist of coconut fiber woven into a matrix. Erosion control blankets shall be made of processed natural fibers that are mechanically, structurally, or chemically bound together to form a continuous matrix that is surrounded by two natural nets.

The Contractor shall check the erosion control material upon delivery to ensure that the proper material has been received. During periods of shipment and storage, the erosion mat shall be protected from temperatures greater than 140°F, mud, dirt, and debris. Manufacturer's recommendations in regard to protection from direct sunlight must also be followed. At the time of installation, the erosion mat/blanket shall be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, or storage. If approved by ENGEO, torn or punctured sections may be removed by cutting out a section of the mat. The remaining ends should be overlapped and secured with ground anchors. Any erosion mat/blanket damaged during storage or installation shall be replaced by the Contractor at no additional cost to the Owner.

Erosion control material suppliers shall provide a qualified and experienced representative onsite, to assist the Contractor and ENGEO personnel at the start of construction. If there is more than one slope on a project, this criterion will apply to construction of the initial slope only. The representative shall be available on an as-needed basis, as requested by ENGEO, during construction of the remaining slope(s). The erosion control material shall be placed and anchored on a smooth graded, firm surface approved by the Engineer. Anchoring terminal ends of the erosion control material shall be accomplished through use of key trenches. The material in the trenches shall be anchored to the soil on maximum 1½ foot centers. Topsoil, if required by construction drawings, placed over final grade prior to installation of the erosion control material shall be limited to a depth not exceeding 3 inches.

Erosion control material shall be anchored, overlapped, and otherwise constructed to ensure performance until vegetation is well established. Anchors shall be as designated on the construction drawings, with a minimum of 12 inches length, and shall be spaced as designated on the construction drawings, with a maximum spacing of 4 feet.

Appendix H
Phase I Environmental Site Assessment

AEI Consultants
Environmental & Engineering Services

October 14, 2016

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

Property Identification:
Anton Millbrae
1100 & 1150 El Camino Real and 33 & 35 Center Street
Millbrae, San Mateo County, California 94030

AEI Project No. 363712

Prepared For:
Anton Development Company, LLC
950 Tower Lane, 1225
Foster City, California 94404

Prepared By:
AEI Consultants
2500 Camino Diablo, Suite 100
Walnut Creek, California 94597
(925) 746-6000

AEI Consultants

Environmental & Engineering Services

October 14, 2016

Anton Development Company, LLC
950 Tower Lane, 1225
Foster City, California 94404

Subject: **PHASE I ENVIRONMENTAL SITE ASSESSMENT**
Anton Millbrae
1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030
AEI Project No. 363712

Dear Megan Crummett:

AEI Consultants is pleased to provide the Phase I Environmental Site Assessment (Phase I ESA) report of the above referenced address. This assessment was authorized and performed in accordance with the scope of services outlined in the MSA, the scope and limitations of ASTM Standard Practice E1527-13, and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).

We appreciate the opportunity to provide services to you. If you have any questions concerning this report, or if we may assist you in any other matter, please contact me at (925) 746-6004 or pmcintyre@aeiconsultants.com.

Sincerely,

Peter McIntyre, PG
AEI Consultants

PROJECT SUMMARY

Anton Millbrae
1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, San Mateo County, California 94030

Report Section		No Further Action	REC	CREC	HREC	Other Environmental Considerations	Recommended Action
2.1	Site Location and Description	✔					
2.2	Site and Vicinity Characteristics	✔					
3.1	Historical Summary	✔					
4.0	Regulatory Agency Records Review	✔			✔		
5.0	Regulatory Database Records Review	✔			✔		
5.2	Vapor Migration	✔					
6.3	Previous Reports and Other Provided Documentation	✔					
7.1	Subject Property Reconnaissance Findings	✔					
7.2	Adjacent Property Reconnaissance Findings	✔					
8.1	Asbestos-Containing Building Materials					✔	O&M Plan
8.2	Lead-Based Paint					✔	O&M Plan
8.3	Radon	✔					
8.4	Drinking Water Sources and Lead in Drinking Water	✔					
8.5	Mold/Indoor Air Quality Issues	✔					

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TABLE OF APPENDICES

LIST OF COMMONLY USED ACRONYMS

AST	Aboveground Storage Tank
AUL	Activity and Use Limitation
APCD	Air Pollution Control District
AHERA	Asbestos Hazard Emergency Response Act
AQMD	Air Quality Management District
ACM	Asbestos-Containing Material
APN	Assessor's Parcel Number
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
COC	Contaminant of Concern
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CREC	Controlled Recognized Environmental Condition
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
HAZNET	Facility and Manifest Data
GPR	Ground-Penetrating Radar
HWS	Hazardous Waste Site
HVAC	Heating, Ventilation and Air Conditioning
HREC	Historical Recognized Environmental Condition
LLP	Landowner Liability Protection
LQG	Large Quantity Generator
LBP	Lead-Based Paint
LCP	Lead Containing Paint
LUST	Leaking Underground Storage Tank
MSDS	Material Safety Data Sheet
MCL	Maximum Contaminant Level
MTBE	Methyl Tertiary Butyl Ether
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
NESHAP	National Emission Standards for Hazardous Air Pollutants
NPL	National Priorities List
NFA	No Further Action
ND	None Detected
NOV	Notice of Violation
NTC	Notice to Comply
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
ppb	Parts per Billion
ppm	Parts per Million
PCE	Perchloroethylene, Tetrachloroethylene, Tetrachloroethene, PERC
PTO	Permit to Operate
pCi/L	PicoCuries per Liter
PCB	Polychlorinated Biphenyl
REC	Recognized Environmental Condition
RCRA	Resource Conservation and Recovery Act
RP	Responsible Party
SVOC	Semi-Volatile Organic Compound
SQG	Small Quantity Generator
SLIC	Spills, Leaks, Investigation, and Cleanup
SEMS	Superfund Enterprise Management System
TPH	Total Petroleum Hydrocarbons
TPHd	Total Petroleum Hydrocarbons (diesel range)
TPHg	Total Petroleum Hydrocarbons (gasoline range)
TPHo	Total Petroleum Hydrocarbons (oil range)
TRPH	Total Recoverable Petroleum Hydrocarbons
TCE	Trichloroethylene, Trichloroethene

UST	Underground Storage Tank
USDA	United States Department of Agriculture
USGS	United States Geological Survey
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

AEI Consultants (AEI) was retained by Anton Development Company, LLC to conduct a Phase I ESA in conformance with the MSA and the scope and limitations of ASTM Standard Practice E1527-13 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, San Mateo County, California. Any exceptions to, or deletions from, this practice are described in Sections 1.4, 1.5, and 1.6 of this report.

PROPERTY DESCRIPTION

PROPERTY INFORMATION	
Property Name	Anton Millbrae
Street Addresses	1100 & 1150 El Camino Real and 33 & 35 Center Street
City	Millbrae
State	California
Location	Bordered by El Camino Real to the southwest and Center Street to the northwest
Vicinity Characteristics	Commercial, residential
Approximate Site Acreage/Source	6.75 acres/User-provided information
Property Type	Mixed Use
Subject Property Uses	Hotel, restaurant, and residences
Assessor Parcel Numbers	021-324-190, 021-324-310, and 021-324-320
SITE AND BUILDING INFORMATION	
Number of Buildings	10 (Buildings 1 through 10)
Years of Construction	Building 10 - 1935 Buildings 1 and 2 - 1949 Building 9 - 1950 Buildings 3 and 5 - 1951 Building 4 - 1956 Building 6 - 1969 Buildings 7 and 8 - 1978
Number of Floors/Stories	Building 1 - One Buildings 2 through 7, 9, and 10 - Two Building 8 - Three
Basement or Subgrade Areas	Buildings 1 through 3 and 5 through 10 - None identified Building 4 - Yes, partial basement level
Building Area (Square Feet)/Source	69,000/User-provided information
Building Descriptions	Building 1 - Single-story, slab-on-grade commercial building with no subgrade areas Buildings 2, 3, 5, 6, 7, 9, and 10 - Two-story, slab-on-grade commercial buildings with no subgrade areas Building 4 - Two-story commercial building with a partial basement level Building 8 - Three-story, slab-on-grade commercial building with no subgrade areas

Building Occupants	Buildings 1, 2, 3, 5, 6, 7, and 8 - Best Western Plus El Rancho Inn Building 4 - Best Western Plus El Rancho Inn and Terrace Cafe Building 9 - Residential tenants Building 10 - Vacant
Additional Improvements	Swimming pool, trash enclosures, parking areas, and landscaping
Current On-site Operations	Hospitality services, administrative activities, food preparation, dining activities, and typical residential activities
Current Use of Hazardous Substances	None identified
UTILITY PROVIDER INFORMATION	
Natural Gas Provider	Pacific Gas & Electric (PG&E)
Electricity Provider	PG&E
Potable Water Provider or Source	City of Millbrae
Sewage Disposal Provider or Treatment System	City of Millbrae
REGULATORY INFORMATION	
Regulatory Database Listings	LUST (twice), Historical UST, Recovered Government Archive (RGA) LUST; refer to Section 5.1
Institutional Controls	None identified
Engineering Controls	None identified
Environmental Liens	None identified

Based on a review of historical sources, the subject property was developed with several residences from at least 1943 to 1984 and two commercial buildings, which were occupied by a veterinary hospital and a motel from 1949 to 1992. Building 10 was constructed in 1935 for use as a residence; Buildings 1 and 2 were constructed in 1949 and for use as a motel; Building 9 was constructed in 1950 and has since been occupied by residential tenants; Buildings 3 and 5 were constructed in 1951 for use as a motel; Building 4 was constructed in 1956 for use as a motel; Building 6 was constructed in 1969 for use as a motel; and Buildings 7 and 8 were constructed in 1978 for use as a motel.

The following historical addresses were associated with the subject property: 19, 91, and 95 Center Street; 26 Elm Street; and 26 Oak Street. These addresses were also researched as part of this assessment.

The immediately surrounding properties consist of the following:

Direction from Site	Tenant/Use (Address)	Regulatory Database Listing(s)
Northeast	San Francisco Water Department parking area (APNs 093-351-020 and 093-351-040)	None identified

Direction from Site	Tenant/Use (Address)	Regulatory Database Listing(s)
Southeast	Orchard Supply Hardware (900 El Camino Real) KFC (950 El Camino Real) San Francisco Water Department (1000 El Camino Real)	SLIC, LUST (three times), UST, AST, RCRA-SQG, San Mateo County Business Inventory (BI) (three times), HAZNET, Statewide Environmental Evaluation and Planning System (SWEEPS) UST (twice), Facility Index System (FINDS), Enforcement and Compliance History Information (ECHO), National Pollutant Discharge Elimination System (NPDES), Historical UST (twice), Emissions Inventory Data (EMI)
Southwest	El Camino Real, followed by: McDonald's (1101 El Camino Real) Cosmo Prof (1111 El Camino Real) Red Wing Shoes (1135 El Camino Real) AA Kitchen Appliance (1145 El Camino Real) America's Tire (1155 El Camino Real)	RCRA-SQG, San Mateo County BI (three times), Historical Hazardous Waste & Substance Site (HIST CORTESE), Environmental Data Resources (EDR) Historical Auto Station (twice), Historical UST (twice), FINDS, HAZNET (twice), ECHO
West	Zen Peninsula (1180 El Camino Real)	None identified
Northwest	Center Street, followed by: Residences/Apartments (16 - 42 Center Street and 1101 San Anselmo Avenue) Millbrae Nursery School (86 - 92 Center Street)	None identified

If the surrounding properties are listed in the regulatory database, please refer to Section 5.1 for discussion.

Based upon groundwater data for the subject property obtained from the San Mateo County Environmental Health Department (SMCEHD), groundwater beneath the subject property is inferred to flow to the east and has been encountered at an estimated depth of seven feet bgs.

FINDINGS

Recognized Environmental Condition (REC) is defined by the ASTM Standard Practice E1527-13 as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

- AEI did not identify evidence of RECs during the course of this assessment.

<u>Controlled Recognized Environmental Condition (CREC)</u> is defined by the ASTM Standard Practice E1527-13 as a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

- AEI did not identify evidence of CRECs during the course of this assessment.

<u>Historical Recognized Environmental Condition (HREC)</u> is defined by the ASTM Standard Practice E1527-13 as a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

- According to files with the SMCEHD, the subject property previously operated two 1,000-gallon gasoline USTs. The USTs were removed from the subject property on February 13, 1987. One groundwater sample was collected during the removal activities. The sample detected TPH-g at 850,000 ppb, benzene at 4,400 ppb, toluene at 30,000 ppb, and xylenes at 8,400 ppb. Based on the analytical results, the SMCEHD required additional investigation. On March 11, 1998, one soil sample and one groundwater sample were collected from the beneath the former USTs. Concentrations of TPH-g, BTEX, and MTBE were not detected above laboratory reporting limits in the soil or groundwater samples. The groundwater sample detected lead at 30 ppb. Based on the analytical results, the SMCEHD granted the subject property closure on February 24, 2000. Based on the most recent 1998 test results, petroleum contaminants were below current regulatory screening levels. AEI understands that the former USTs are in an area that will be developed as a parking or drive area and is some distance from planned site buildings. Based on the regulatory status, location of the former USTs relative to site development, and 1998 results, remaining petroleum impact, if any, is expected to be minimal and should not preclude the planned development.

<u>Other Environmental Considerations</u> warrant discussion, but do not qualify as RECs as defined by the ASTM Standard Practice E1527-13. These include, but are not limited to, de minimis conditions and/or environmental considerations such as the presence of ACMs, LBP, radon, mold, and lead in drinking water, which can affect the liabilities and financial obligations of the client, the health and safety of site occupants, and the value and marketability of the subject property.

- Due to the age of the subject property buildings, there is a potential that ACMs are present. All observed suspect ACMs at the subject property were in good condition at the time of the site reconnaissance and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Based on the potential presence of ACMs, AEI recommends the implementation of an O&M Plan which stipulates that the repair and maintenance of damaged materials should be performed to protect the health and safety of the building occupants. In the event that building renovation or demolition activities are planned, a thorough asbestos survey to identify asbestos-containing building materials is required in accordance with the EPA NESHAP 40 CFR Part 61 prior to demolition or renovation activities that may disturb suspect ACMs.

- Due to the age of Buildings 1 through 8, there is a potential that LBP is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to LBP in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an x-ray fluorescence (XRF) survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.
- Due to the age of Buildings 9 and 10, there is a potential that LBP is present. All painted surfaces were observed in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. However, based on the potential presence of LBP and nature of occupancy, AEI recommends the property owner implement an O&M Plan to protect the health and safety of the building occupants. Local regulations may apply to LBP in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an x-ray fluorescence (XRF) survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

CONCLUSIONS, OPINIONS, AND RECOMMENDATIONS

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM Standard Practice E1527-13 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) of 1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, San Mateo County, California, the *subject property*. Any exceptions to, or deletions from, this practice are described in Sections 1.4, 1.5, and 1.6 of this report.

AEI did not identify evidence of RECs or CRECs in connection with the subject property during the course of this assessment. AEI understands that the property is planned for residential and hotel development; the findings of this report did not identify conditions that would preclude the planned development. AEI recommends no further investigation for the subject property at this time. Prior to building demolition proper surveys should be conducted for lead and asbestos as noted above.

1.0 INTRODUCTION

This report documents the methods and findings of the Phase I ESA performed in conformance with the MSA and scope and limitations of ASTM Standard Practice E1527-13 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located at 1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, San Mateo County, California (Appendix A: Figures and Appendix B: Property Photographs).

1.1 SCOPE OF WORK

The purpose of the Phase I ESA is to assist the client in identifying potential RECs, in accordance with ASTM E1527-13, associated with the presence of any hazardous substances or petroleum products, their use, storage, and disposal at and in the vicinity of the subject property. Property assessment activities focused on: 1) a review of federal, state, tribal, and local databases that identify and describe underground fuel tank sites, leaking underground fuel tank sites, hazardous waste generation sites, and hazardous waste storage and disposal facility sites within the ASTM approximate minimum search distance; 2) a property and surrounding site reconnaissance, and interviews with the past and present owners and current occupants and operators to identify potential environmental contamination; and 3) a review of historical sources to help ascertain previous land use at the site and in the surrounding area.

1.2 ADDITIONAL SERVICES

Other Environmental Considerations such as ACMs, LBP, lead in drinking water, radon, mold, and wetlands can result in business environmental risks for property owners which may disrupt current or planned operations or cash flow and are generally beyond the scope of a Phase I assessment as defined by ASTM E1527-13. Based upon the agreed-on scope of services this ESA did not include subsurface or other invasive assessments, business environmental risks, or other services not specifically identified and discussed herein.

1.3 SIGNIFICANT ASSUMPTIONS

The following assumptions are made by AEI in this report. AEI relied on information derived from secondary sources including governmental agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, and personal interviews. AEI has reviewed and evaluated the thoroughness and reliability of the information derived from secondary sources including government agencies, the client, designated representatives of the client, property contact, property owner, property owner representatives, computer databases, or personal interviews. It appears that all information obtained from outside sources and reviewed for this assessment is thorough and reliable. However, AEI cannot guarantee the thoroughness or reliability of this information.

Groundwater flow, unless otherwise specified by on-site well data or well data from the subject property or nearby sites, is inferred from contour information depicted on the USGS topographic maps. AEI assumes the property has been correctly and accurately identified by the client, designated representative of the client, property contact, property owner, and property owner's representatives.

1.4 LIMITATIONS

Property conditions, as well as local, state, tribal, and federal regulations can change significantly over time. Therefore, the recommendations and conclusions presented as a result of this assessment apply strictly to the environmental regulations and property conditions existing at the time the assessment was performed. Available information has been analyzed using currently accepted assessment techniques and it is believed that the inferences made are reasonably representative of the property. AEI makes no warranty, expressed or implied, except that the services have been performed in accordance with generally accepted environmental property assessment practices applicable at the time and location of the assessment.

Considerations identified by ASTM as beyond the scope of a Phase I ESA that may affect business environmental risk at a given property include the following: ACMs, radon, LBP, lead in drinking water, wetlands, regulatory compliance, cultural and historical resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, mold, and high voltage lines. These environmental issues or conditions may warrant assessment based on the type of the property transaction; however, they are considered non-scope issues under ASTM Standard Practice E1527-13.

If requested by the client, these non-scope issues are discussed herein. Otherwise, the purpose of this assessment is solely to satisfy one of the requirements for qualification of the innocent landowner defense, contiguous property owner or bona fide prospective purchaser under CERCLA. ASTM Standard Practice E1527-13 and the United States EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) constitute the "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in:

1. 42 U.S.C. § 9601(35)(B), referenced in the ASTM Standard Practice E1527-13.
2. Sections 101(35)(B) (ii) and (iii) of CERCLA and referenced in the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312).
3. 42 U.S.C. § 9601(40) and 42 U.S.C. § 9607(q).

The Phase I ESA is not, and should not be construed as, a warranty or guarantee about the presence or absence of environmental contaminants that may affect the property. Neither is the assessment intended to assure clear title to the property in question. The sole purpose of assessment into property title records is to ascertain a historical basis of prior land use. All findings, conclusions, and recommendations stated in this report are based upon facts, circumstances, and industry-accepted procedures for such services as they existed at the time this report was prepared (i.e., federal, state, and local laws, rules, regulations, market conditions, economic conditions, political climate, and other applicable matters). All findings, conclusions, and recommendations stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the property reconnaissance.

Responses received from local, state, or federal agencies or other secondary sources of information after the issuance of this report may change certain facts, findings, conclusions, or circumstances to the report. A change in any fact, circumstance, or industry-accepted procedure upon which this report was based may adversely affect the findings, conclusions, and recommendations expressed in this report.

AEI's limited radon screening, if included, is intended to provide a preliminary screening to evaluate the potential presence of elevated radon concentrations at the site. The proposed scope is not intended to define the full extent of the presence of radon at the subject property. As such, the results should be used for lending purposes only. The recommendations and conclusions presented as a result of the limited preliminary radon screening apply strictly to the property conditions existing at the time the sampling was performed. The sample analytical results are only valid for the time, place, and condition of the site at the time of collection and AEI does not warrant that the results will be repeatable or are representative of past or future conditions.

1.5 LIMITING CONDITIONS/DEVIATIONS

The performance of this Phase I ESA was limited by the following:

- AEI requested an interview with the subject property owner; however, the subject property owner has not responded as of this report date. Based on the quality of information obtained from other sources, this limitation is not expected to alter the overall Findings of this assessment.
- The User did not complete the ASTM User Questionnaire or provide the User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this assessment.
- Due to the size of the property, a representative sample of guest rooms was inspected by AEI. Due to the nature of occupancy, this limited inspection method is expected to be adequate for the purposes of this assessment. AEI inspected the following units: 122, 125, 126, 201, 204, 205, 206, 233, 235, 244, 250, 301, 303, 308, 555, 557, 563, 611, 613, 615, 700, and 720 (10% of total rooms).
- AEI was unable to access the interior of Building 9 during the site reconnaissance. Based on the residential nature of occupancy, the limited access is not expected to significantly alter the Findings of this assessment.

1.6 DATA GAPS AND DATA FAILURE

According to ASTM E1527-13, data gaps occur when the Environmental Professional is unable to obtain information required by the Standard, despite good faith efforts to gather such information. Pursuant to ASTM E1527-13, only significant data gaps, defined as those that affect the ability of the Environmental Professional to identify RECs, need to be documented.

Data failure is one type of data gap. According to ASTM E1527-13, data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Pursuant to ASTM E1527-13, historical sources are required to document property use back to the property's first developed use or back to 1940, whichever is earlier, or periods of five years or greater.

1.6.1 DATA FAILURE

The following data failure was identified during the course of this assessment:

Data Failure	The earliest historical resource obtained during this assessment was an aerial photograph from 1943. The lack of historical sources for the subject property dating back to first developed use represents historical data source failure. In the 1943 aerial photograph, the subject property was developed with several residences. Thus, it is assumed that prior to 1943 the subject property would have been utilized for residential purposes, if not undeveloped. Therefore, this data failure is not expected to significantly alter the Findings of this assessment.
Information/Sources Consulted	Aerial photographs

1.6.2 DATA GAPS

AEI did not identify significant data gaps which affected our ability to identify RECs.

1.7 RELIANCE

All reports, both verbal and written, are for the benefit of Anton Development Company, LLC. This report has no other purpose and may not be relied upon by any other person or entity without the written consent of AEI. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with AEI granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any course of action against AEI, its officers, employees, vendors, successors, or assigns. Reliance is provided in accordance with AEI's MSA and Standard Terms and Conditions executed by Anton Development Company, LLC on September 26, 2016. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

2.0 SITE AND VICINITY DESCRIPTION

2.1 SITE LOCATION AND DESCRIPTION

PROPERTY INFORMATION	
Property Name	Anton Millbrae
Street Addresses	1100 & 1150 El Camino Real and 33 & 35 Center Street
City	Millbrae
State	California
Location	Bordered by El Camino Real to the southwest and Center Street to the northwest
Vicinity Characteristics	Commercial, residential
Approximate Site Acreage/Source	6.75 acres/User-provided information
Property Type	Mixed Use
Subject Property Uses	Hotel, restaurant, and residences
Assessor Parcel Numbers	021-324-190, 021-324-310, and 021-324-320
SITE AND BUILDING INFORMATION	
Number of Buildings	10 (Buildings 1 through 10)
Years of Construction	Building 10 - 1935 Buildings 1 and 2 - 1949 Building 9 - 1950 Buildings 3 and 5 - 1951 Building 4 - 1956 Building 6 - 1969 Buildings 7 and 8 - 1978
Number of Floors/Stories	Building 1 - One Buildings 2 through 7, 9, and 10 - Two Building 8 - Three
Basement or Subgrade Areas	Buildings 1 through 3 and 5 through 10 - None identified Building 4 - Yes, partial basement level
Building Area (Square Feet)/Source	69,000/User-provided information
Building Descriptions	Building 1 - Single-story, slab-on-grade commercial building with no subgrade areas Buildings 2, 3, 5, 6, 7, 9, and 10 - Two-story, slab-on-grade commercial buildings with no subgrade areas Building 4 - Two-story commercial building with a partial basement level Building 8 - Three-story, slab-on-grade commercial building with no subgrade areas
Building Occupants	Buildings 1, 2, 3, 5, 6, 7, and 8 - Best Western Plus El Rancho Inn Building 4 - Best Western Plus El Rancho Inn and Terrace Cafe Building 9 - Residential tenants Building 10 - Vacant
Additional Improvements	Swimming pool, trash enclosures, parking areas, and landscaping
Current On-site Operations	Hospitality services, administrative activities, food preparation, dining activities, and typical residential activities

Current Use of Hazardous Substances	None identified
UTILITY PROVIDER INFORMATION	
Natural Gas Provider	Pacific Gas & Electric (PG&E)
Electricity Provider	PG&E
Potable Water Provider or Source	City of Millbrae
Sewage Disposal Provider or Treatment System	City of Millbrae
REGULATORY INFORMATION	
Regulatory Database Listings	LUST (twice), Historical UST, Recovered Government Archive (RGA) LUST; refer to Section 5.1
Institutional Controls	None identified
Engineering Controls	None identified
Environmental Liens	None identified

Utility provider information listed in the table above is provided by Mr. Art Schwass, key site manager of the subject property.

Refer to Appendix A: Figures and Appendix B: Property Photographs for site location and description.

2.2 Site and Vicinity Characteristics

The immediately surrounding properties consist of the following:

Direction from Site	Tenant/Use (Address)	Regulatory Database Listing(s)
Northeast	San Francisco Water Department parking area (APNs 093-351-020 and 093-351-040)	None identified
Southeast	Orchard Supply Hardware (900 El Camino Real) KFC (950 El Camino Real) San Francisco Water Department (1000 El Camino Real)	SLIC, LUST (three times), UST, AST, RCRA-SQG, San Mateo County Business Inventory (BI) (three times), HAZNET, Statewide Environmental Evaluation and Planning System (SWEEPS) UST (twice), Facility Index System (FINDS), Enforcement and Compliance History Information (ECHO), National Pollutant Discharge Elimination System (NPDES), Historical UST (twice), Emissions Inventory Data (EMI)

Direction from Site	Tenant/Use (Address)	Regulatory Database Listing(s)
Southwest	El Camino Real, followed by: McDonald's (1101 El Camino Real) Cosmo Prof (1111 El Camino Real) Red Wing Shoes (1135 El Camino Real) AA Kitchen Appliance (1145 El Camino Real) America's Tire (1155 El Camino Real)	RCRA-SQG, San Mateo County BI (three times), Historical Hazardous Waste & Substance Site (HIST CORTESE), Environmental Data Resources (EDR) Historical Auto Station (twice), Historical UST (twice), FINDS, HAZNET (twice), ECHO
West	Zen Peninsula (1180 El Camino Real)	None identified
Northwest	Center Street, followed by: Residences/Apartments (16 - 42 Center Street and 1101 San Anselmo Avenue) Millbrae Nursery School (86 - 92 Center Street)	None identified

If the surrounding properties are listed in the regulatory database, please refer to Section 5.1 for discussion.

2.3 Physical Setting

Geology: Based on a review of the United States Geological Survey (USGS) San Francisco Bay Quadrangle Geologic Map, the area surrounding the subject property is underlain by Quaternary era alluvial fan gravelly sand which is commonly characterized by gray or pale-yellow to yellowish- or reddish brown to red, weakly to moderately consolidated, slightly to deeply weathered, gravelly sand with interbedded silt and clay. Color and clast lithology is variable, depending on local bedrock.

USGS Topographic Map:	Montara Mountain, California Quadrangle
Nearest surface water to subject property:	Unnamed creek/0.12 mile north of the subject property
Gradient Direction/Source:	East/Subject property groundwater data
Estimated Depth to Groundwater/Source:	7 feet bgs/Subject property groundwater data

Note: Groundwater flow direction can be influenced locally and regionally by the presence of local wetland features, surface topography, recharge and discharge areas, horizontal and vertical inconsistencies in the types and location of subsurface soils, and proximity to water pumping wells. Depth and gradient of the water table can change seasonally in response to variation in precipitation and recharge, and over time, in response to urban development such as storm water controls, impervious surfaces, pumping wells, cleanup activities, dewatering, seawater intrusion barrier projects near the coast, and other factors.

3.0 HISTORICAL REVIEW OF SITE AND VICINITY

3.1 HISTORICAL SUMMARY

Reasonably ascertainable standard historical sources as outlined in ASTM Standard E1527-13 were used to determine previous uses and occupancies of the subject property that are likely to have led to RECs in connection with the subject property. A chronological summary of historical data found, including but not limited to aerial photographs, historical city directories, Sanborn fire insurance maps, and agency records, is as follows:

Date Range	Subject Property Description/Use	Source(s)
1935	Developed with Building 10	Assessor's information
1943 - 1946	Developed with Building 10 and residential buildings	Aerial photographs
1949	Developed with Buildings 1, 2, and 10; commercial buildings, and residences	Sanborn map, assessor's information, building records
1950	Developed with Buildings 1, 2, 9, and 10; commercial buildings, and residences	Building records
1951 - 1956	Developed with Buildings 1, 2, 3, 5, 9, and 10; commercial buildings, and residences	Building records, Sanborn map, aerial photograph
1956 - 1969	Developed with Buildings 1 through 5, 9, and 10; commercial buildings, and residences	Building records, aerial photographs
1969 - 1977	Developed with Buildings 1 through 6, 9, and 10; two commercial buildings, and residences	Building records, aerial photograph
1977 - 1984	Developed with Buildings 1 through 10; two commercial buildings, and a residence	Building records, aerial photograph
1984 - 1990	Developed with Buildings 1 through 10 and two commercial buildings	Building records
1990 - 1992	Developed with Buildings 1 through 10 and a commercial building	Building records
1992 - present	Developed with the current improvements	Building records, aerial photographs

Based on a review of historical sources, the subject property was developed with several residences from at least 1943 to 1984 and two commercial buildings, which were occupied by a veterinary hospital and a motel from 1949 to 1992. Building 10 was constructed in 1935 for use as a residence; Buildings 1 and 2 were constructed in 1949 and for use as a motel; Building 9 was constructed in 1950 and has since been occupied by residential tenants; Buildings 3 and 5 were constructed in 1951 for use as a motel; Building 4 was constructed in 1956 for use as a motel; Building 6 was constructed in 1969 for use as a motel; and Buildings 7 and 8 were constructed in 1978 for use as a motel.

The following historical addresses were associated with the subject property: 19, 91, and 95 Center Street; 26 Elm Street; and 26 Oak Street. These addresses were also researched as part of this assessment.

AEI did not identify potential environmental concerns in association with the current or historical use of the subject property.

3.2 AERIAL PHOTOGRAPHS

AEI reviewed aerial photographs of the subject property and surrounding area. A search was made of the Environmental Data Resources collection of aerial photographs. Aerial photographs were reviewed for the following years:

Year(s)	Subject Property Description	Adjacent Site Descriptions
1943 1946	Developed with several residences	NORTHEAST: Vacant land SOUTHEAST: Commercial and industrial buildings SOUTHWEST: El Camino Real, followed by agricultural land and agricultural/residential structures WEST: Commercial and residential buildings NORTHWEST: Center Street, followed by commercial and residential buildings
1956 1968	Developed with Buildings 1 through 5, Building 9, Building 10, commercial buildings, and residences	NORTHEAST: No significant changes SOUTHEAST: No significant changes SOUTHWEST: El Camino Real, followed by vacant land WEST: No significant changes NORTHWEST: No significant changes
1974	Building 6 is now present. The remainder of the property appears unchanged	NORTHEAST: No significant changes SOUTHEAST: No significant changes SOUTHWEST: El Camino Real, followed by commercial buildings WEST: Commercial building NORTHWEST: No significant changes
1982	Buildings 7 and 8 are now present. The remainder of the property appears unchanged	No significant changes
1993 1998 2005 2012	Developed with the current improvements	No significant changes

AEI did not identify potential environmental concerns in association with the historical use of the subject property during the aerial photograph review.

3.3 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance maps were developed in the late 1800s and early 1900s for use as an assessment tool for fire insurance rates in urbanized areas. A search was made of the Environmental Data Resources and the Seattle Public Library collection of Sanborn Fire Insurance maps.

The following maps were reviewed:

Year(s)	Subject Property Description (Listed Address)	Adjacent Site Descriptions
1949	Developed with eight houses, a motel, and a pet hospital. Buildings 1, 2, and 10 are present (1100 & 1150 El Camino Real; 19, 91, and 95 Center Street; and 26 Elm Street)	NORTHEAST: Abandoned railways SOUTHEAST: San Francisco Water Department SOUTHWEST: El Camino Real, followed by a residence WEST: Residence and a restaurant NORTHWEST: Center Street, followed by the American Legion Hall and residences
1954	Developed with apartments, nine residences, a motel, and a pet hospital. Buildings 1, 2, 3, 9, 10, and the initial portion of Building 4 are present. (1100 & 1150 El Camino Real; 19, 33, 35, 91, and 95 Center Street; and 26 Oak Street)	NORTHEAST: No significant changes SOUTHEAST: No significant changes SOUTHWEST: Not depicted WEST: No significant changes NORTHWEST: No significant changes

AEI did not identify potential environmental concerns in association with the historical use of the subject property during the Sanborn map review.

3.4 CITY DIRECTORIES

A search of historical city directories was conducted for the subject property utilizing Environmental Data Resources. The following table summarizes the results of the city directory search.

Year(s)	Address - Occupant Listed
1970	1100 El Camino Real - El Rancho Motel; El Rancho Restaurant 1150 El Camino Real - Dr. Hand's Pet Hospital 33, 35, 91, and 95 Center Street - Residential tenants
1977	1100 El Camino Real - El Rancho Motel; El Rancho Restaurant 1150 El Camino Real - Dr. Hand's Pet Hospital; Millbrae Boarding Kennel 33 Center Street - Bertha Maners 35 Center Street - XXXX 91 Center Street - XXXX 95 Center Street - Gerald Bidgood
1980	1100 El Camino Real - Best Western Inn; El Rancho Motel; El Rancho Restaurant 1150 El Camino Real - Dr. Hand's Pet Hospital; Millbrae Boarding Kennel 33 Center Street - Virginia Goodrich 35 Center Street - XXXX 91 Center Street - XXXX

Year(s)	Address - Occupant Listed
1985	1100 El Camino Real - Best Western Inn; El Rancho Motel; El Rancho Restaurant 1150 El Camino Real - Millbrae Veternary Hospital; Millbrae Boarding Kennel 33 & 35 Center Street - Residential tenants 91 Center Street - XXXX
1992	1100 El Camino Real - Best Western Inn; El Rancho Executive Suites; Terrace Cafe 33 & 35 Center Street - Residential tenants
1995	1100 El Camino Real - El Rancho Executive Suites; Terrace Cafe 33 & 35 Center Street - Residential tenants
1999	1100 El Camino Real - Best Western El Rancho Inn; El Rancho Motel; Terrace Cafe 33 & 35 Center Street - Residential tenants
2003	1100 El Camino Real - El Rancho Motel; Terrace Cafe 33 & 35 Center Street - Residential tenants
2008	1100 El Camino Real - Western El Rancho Inn & Suites 33 & 35 Center Street - Residential tenants
2013	1100 El Camino Real - Best Western Plus El Rancho Inn & Suites; Terrace Cafe 33 & 35 Center Street - Residential tenants

If listed above, XXXX indicates that the address is valid but there is no occupancy information available.

Based on a review of historical city directories, the subject property was occupied by a pet hospital from at least 1970 to 1985; a kennel from at least 1977 to 1985; and has been occupied by a motel, restaurant, and residential tenants since at least 1970. AEI did not identify potential environmental concerns in association with the historical use of the subject property during the city directory review.

3.5 HISTORICAL TOPOGRAPHIC MAPS

In accordance with our approved scope of services, historical topographic maps were not reviewed as a part of this assessment.

3.6 CHAIN OF TITLE

In accordance with our approved scope of services, a chain of title search was not performed as part of this assessment.

4.0 REGULATORY AGENCY RECORDS REVIEW

Local and state agencies, such as environmental health departments, fire prevention bureaus, and building and planning departments are contacted to identify any current or previous reports of hazardous substance use, storage, and/or unauthorized releases that may have impacted the subject property. In addition, information pertaining to AULs, defined as legal or physical restrictions, or limitations on the use of, or access to, a site or facility, is requested.

4.1 LOCAL ENVIRONMENTAL HEALTH DEPARTMENT AND/OR STATE ENVIRONMENTAL AGENCY

On October 11, 2016, AEI contacted the San Mateo County Environmental Health Department (SMCEHD) via office visit for information on the subject property. Files at this agency may contain information regarding hazardous substance storage and use, underground storage tanks, unauthorized releases of petroleum hydrocarbons or other contaminants that may affect the soil or groundwater in the area, wells and/or septic systems.

According to Ms. Celia Santos, the following information was on file for the subject property:

Date	Occupant	Document Type	Document Notes/Violations
1987	El Rancho Inn	Permit	Permit to abandon two USTs
1998	El Rancho Inn	Permit	Permit to drill one soil boring

According to files with the SMCEHD, the subject property previously operated two 1,000-gallon gasoline USTs. The USTs were removed from the subject property on February 13, 1987. One groundwater sample was collected during the removal activities. The sample detected TPH-g at 850,000 ppb, benzene at 4,400 ppb, toluene at 30,000 ppb, and xylenes at 8,400 ppb. Based on the analytical results, the SMCEHD required additional investigation. On March 11, 1998, one soil sample and one groundwater sample were collected from the beneath the former USTs. Concentrations of TPH-g, BTEX, and MTBE were not detected above laboratory reporting limits in the soil or groundwater samples. The groundwater sample detected lead at 30 ppb. Based on the analytical results, the SMCEHD granted the subject property closure on February 24, 2000. Based on the regulatory status and the available analytical data, the former USTs are not expected to represent a significant environmental concern.

4.2 FIRE DEPARTMENT

On October 11, 2016, AEI contacted the Millbrae Fire Department via office visit for information on the subject property to identify any evidence of previous or current hazardous substance usage, and/or for any historical information available for the subject property.

According to Ms. Lisa Bartolo, the following information was on file for the subject property:

Date	Occupant	Document Type	Document Notes/Violations
1979	El Rancho Inn	Permit	Permit to install two 1,000-gallon gasoline USTs

Refer to Section 4.1 for discussion of the former subject property USTs.

4.3 BUILDING DEPARTMENT

On October 11, 2016, AEI contacted the Millbrae Building Department via office visit for information on the subject property in order to identify historical tenants, features of concern and property use.

Please refer to the following table for a listing of permits reviewed:

1100 El Camino Real

Year(s)	Owner/Applicant	Description of Permit and Building Use
1949	Earl and Martin Wilms	Construct a motel
1951	Earl and Martin Wilms	New motel building
1951	Earl and Martin Wilms	New motel building
1953	El Rancho Motel	New swimming pool
1955	Carriage House	Alterations to commercial building
1956	El Rancho Motel	New motel/restaurant building
1969	El Rancho Motel	New motel building
1978	Earl Wilms	Construct new hotel buildings
1979	El Rancho Motel	Install two 1,000-gallon gasoline USTs
1992	El Rancho Inn	Demolish motel building

1150 El Camino Real

Year(s)	Owner/Applicant	Description of Permit and Building Use
1949	Dr. Hand	Construct a dog kennel
1950	Dr. Hand	Addition to commercial building
1976	Millbrae Veterinary Hospital	Alterations to building
1984	John Wilms	Demolish one building
1990	El Rancho Inn	Demolish one building

33 Center Street

Year(s)	Owner/Applicant	Description of Permit and Building Use
1950	Mr. and Mrs. Rust	New apartment building
1982	F. Rust	Repairs to building
2008	Rust Ingemand F 2002 Trust	Re-roofing permit

35 Center Street

Year(s)	Owner/Applicant	Description of Permit and Building Use
2005	Rust Ingemand F 2002 Trust	Re-roofing permit

Additionally, several permits for various building repairs and alterations, electrical permits, and plumbing permits were provided for AEI's review.

Refer to Section 4.1 for discussion of the former subject property USTs.

4.4 Planning Department

On October 11, 2016, AEI contacted the Millbrae Planning Department via office visit for information on the subject property in order to identify AULs associated with the subject property.

No evidence indicating the existence of AULs was on file for the subject property with the Millbrae Planning Department.

4.5 County Assessor Office

On October 13, 2016, AEI contacted the San Mateo County Assessor's Office (SMCAO) via telephone for information on the subject property in order to determine the earliest recorded date of development and use.

According to the SMCAO, Building 10 was constructed in 1935. The date of construction for the remaining buildings was identified as 1949. Based on AEI's review of historical sources, the 1949 date is associated with Buildings 1 and 2.

4.6 Oil and Gas Wells/Pipelines

On October 11, 2016, AEI reviewed the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) maps and the National Pipeline Mapping System (NPMS) Public Map Viewer concerning the subject property and nearby properties. The maps contain information regarding oil and gas development.

According to the DOGGR map, oil or gas wells are not located within 500 feet of the subject property. AEI did not identify evidence of environmental concerns during the map review.

According to the NPMS Public Map Viewer, pipelines are not located within 500 feet of the subject property. AEI did not identify evidence of environmental concerns during the map review.

4.7 Other Agencies Searched

On October 13, 2016, AEI accessed the **California State Water Resources Control Board (SWRCB) GeoTracker database**, a data management system for managing sites that impact groundwater, especially those requiring groundwater cleanup [USTs, Department of Defense, Site Cleanup Program] as well as permitted facilities such as operating USTs and land disposal sites.

The subject property was listed on GeoTracker as a closed LUST cleanup site. Refer to Section 4.1 for further discussion.

Nearby Sites of Concern

The southeast adjacent property at 1000 El Camino Real was listed on GeoTracker as an open SLIC case and as a closed LUST cleanup site; and the property at 1201 El Camino Real, located approximately 0.04 mile west of the subject property, as listed as a closed LUST cleanup site. Refer to Section 5.1 for further discussion.

On October 13, 2016, AEI accessed the **California Department of Toxic Substances Control (DTSC) Hazardous Waste Tracking System (HWTS)** online database for information pertaining to hazardous waste disposal associated with the subject property. The HWTS generates reports on hazardous waste shipments for generators, transporters, and treatment, storage or disposal facilities (TSDFs).

The subject property address 35 Center Street was listed on the DTSC HWTS as an active facility with the name "35 Center Street Job." No manifest information was provided for the listing.

On October 13, 2016, AEI accessed the **California Department of Toxic Substances Control (DTSC) EnviroStor** database, which contains information of investigation, cleanup, permitting, and/or corrective actions that are planned, being conducted or have been completed under DTSC oversight.

No information indicating any release of hazardous materials from the subject property was found on the EnviroStor website.

4.8 State Environmental Superliens and Property Transfer Laws

In accordance with our approved scope of services, AEI did not assess whether the subject property is subject to any state environmental superliens and/or property transfer laws.

5.0 REGULATORY DATABASE RECORDS REVIEW

AEI contracted Environmental Data Resources (EDR) to conduct a search of publicly available information from federal, state, tribal, and local databases containing known and suspected sites of environmental contamination and sites of potential environmental significance. Data gathered during the current regulatory database search is compiled by EDR into one regulatory database report. Location information for listed sites is designated using geocoded information provided by federal, state, or local agencies and commonly used mapping databases with the exception of "Orphan" sites. Due to poor or inadequate address information, Orphan sites are identified but not geocoded/mapped by EDR, rather, information is provided based upon vicinity zip codes, city name, and state. The number of listed sites identified within the approximate minimum search distance from the federal and state environmental records database listings specified in ASTM Standard E1527-13 is summarized in Section 5.1, along with the total number of Orphan sites. A copy of the regulatory database report is included in Appendix C of this report.

The subject property was identified in the regulatory database report as follows: LUST (twice), Historical UST, RGA LUST. See Section 5.1 for additional discussion.

In determining if a listed site is a potential environmental concern to the subject property, AEI generally applies the following criteria to classify the site as lower potential environmental concern: 1) the site only holds an operating permit (which does not imply a release), 2) the site's distance from, and/or topographic position relative to, the subject property, and/or 3) the site has recently been granted "No Further Action" by the appropriate regulatory agency.

5.1 RECORDS SUMMARY

Database	Search Distance (Miles)	Subject Property Listed	Number of Listings within Search Distance	Recognized Environmental Condition or Other Environmental Consideration (Yes or No)
NPL	1	No	0	
DELISTED NPL	0.5	No	0	
SEMS (former CERCLIS)	0.5	No	0	
SEMS-ARCHIVE (former CERCLIS NFRAP)	0.5	No	0	
RCRA CORRACTS	1	No	0	
RCRA-TSDF	0.5	No	0	
RCRA LQG, SQG, CESQGs, VGN, NLR	SP/ADJ	No	2	No; the adjacent sites are discussed below
US ENG CONTROLS	SP	No	0	
US INST CONTROLS	SP	No	0	
ERNS	SP	No	0	
STATE/TRIBAL HWS	1	No	7	No; an adjacent site is discussed below
STATE/TRIBAL SWLF	0.5	No	0	
STATE/TRIBAL REGISTERED STORAGE TANKS	SP/ADJ	No	2	No; an adjacent site is discussed below

Database	Search Distance (Miles)	Subject Property Listed	Number of Listings within Search Distance	Recognized Environmental Condition or Other Environmental Consideration (Yes or No)
STATE/TRIBAL LUST	0.5	**Yes**	20	No; the subject property, an adjacent site, and a nearby site are discussed below
STATE/TRIBAL EC and IC	SP	No	0	
STATE/TRIBAL VCP	0.5	No	0	
STATE/TRIBAL BROWNFIELD	0.5	No	1	No
ORPHAN	N/A	No	2	No; none of the identified orphan sites are located in the immediate vicinity (500-feet) of the subject property, and/or based upon the distance and relative gradient, the sites are not expected to represent a significant environmental concern.
ADDITIONAL ENVIRONMENTAL RECORD SOURCES	SP/ADJ	**Yes**	26	No; the subject property and the adjacent sites are discussed below

Facility Name: El Rancho Motel/Best Western El Rancho Inn
Databases: LUST (twice), Historical UST, RGA LUST Address: 1100 El Camino Real Distance: Subject property
Comments: According to the database, the subject property is a closed LUST cleanup site. The database indicates that gasoline had contaminated the groundwater (not a drinking water source) beneath the site. The database indicates that the subject property previously operated gasoline USTs. Refer to Section 4.1 for further discussion.

Facility Name: San Francisco Water Department/SF Department of Public Works/Suburban Headquarters/SFPUC Millbrae Maintenance Yard
Databases: SLIC, LUST (three times), UST, AST, RCRA-SQG, San Mateo County BI, SWEEPS UST (twice), FINDS, ECHO, NPDES, Historical UST (twice), EMI Address: 1000 El Camino Real Distance: Adjacent Direction: Southeast (hydrologically down-gradient)

Comments: According to the database, the southeast adjacent property at 1000 El Camino Real is an open SLIC case. The database indicates that diesel has contaminated soil beneath the site. The site is also listed as a closed LUST cleanup site. The database indicates that gasoline had contaminated the groundwater (not a drinking water source) beneath the site. The site is listed in the database for operating an UST(s) and an AST onsite. The size and contents of the UST(s) and AST(s) were not provided by the database. The database indicates that the site is a small quantity generator of hazardous waste. The RCRA listing indicates that the facility received a violation during a compliance evaluation inspection on October 10, 1986. The facility returned to compliance on October 1, 1991. No violations were noted in the ECHO Listing. The site is listed in the database as a discharger of industrial waste. The facility status was not provided by the database. According to the database, the site emitted reactive organic gases, organic hydrocarbon gases, carbon monoxide emissions, nitrous oxide emissions, sulfur oxide emissions, and particulate matter from 2013 to 2015. The site is listed in the San Mateo County BI as an active facility which operates an UST, operates an AST, stores hazardous materials on site, and generates hazardous waste on site. According to files with the SMCEHD and on GeoTracker, subsurface investigations at the site began in 1991, when soil samples were collected as part of the construction of a warehouse on the property. Soil samples collected from the site detected elevated concentrations of TPH-g, TPH-d, TPH-mo, and BTEX. It was determined that the contamination was caused by releases from the gasoline USTs, diesel UST, and fuel oil UST located at the site, approximately 250 feet southeast of the subject property. One groundwater monitoring well, MW-1, was installed approximately 310 feet southeast of the subject property. In the final sampling of MW-1 (January 1997), TPH-d was detected at 300 ppb and MTBE was detected at 5.9 ppb. Concentrations of TPH-g and BTEX were not detected above laboratory reporting limits. The site was granted closure on August 12, 2009. On September 6, 2010, approximately 700 gallons of diesel was released from an emergency generator on the site, located approximately 415 feet southeast of the subject property. During the cleanup of the spill, it was observed that a large amount of water had flowed down a storm drain. Subsequent subsurface investigations identified elevated concentrations of TPH-d in the soil beneath the site. One groundwater sample was collected from beneath the point of discharge on May 29, 2013. The sample did not detect TPH-d above laboratory reporting limits. Based on the regulatory status of the site, the available analytical data, and the inferred direction of groundwater flow, this site is not expected to represent a significant environmental concern.

Facility Name: Orchard Supply Company, LLC #210/T Mobile West Corp-Site ID SF03073A
Databases: San Mateo County BI (twice), HAZNET Address: 900 El Camino Real Distance: Adjacent Direction: Southeast (hydrologically down-gradient)
Comments: According to the database, the southeast adjacent property generated hazardous wastes consisting of liquids with a pH less than or equal to 2, unspecified solvent mixtures, pesticides and other wastes associated with pesticide production, off-specification, aged, or surplus organics, organic liquids with metals, hydrocarbon solvents, latex wastes, and unreported wastes between 2004 and 2014. The site was listed in the San Mateo County BI as an inactive facility which stored hazardous materials and generated hazardous wastes on site. Based on the lack of a documented release and the inferred direction of groundwater flow, the review of regulatory agency files for this site was not deemed necessary, and the site is not expected to represent a significant environmental concern.

Facility Name: McDonald's of Millbrae/Kragen Auto Parts/CSK Auto Inc./AJKL Inc. Tire Center/Goodyear San Bruno Tire Center/Smog Check Stations
Databases: RCRA-SQG, San Mateo County BI (three times), HIST CORTESE, Environmental Data Resources (EDR) Historical Auto Station (twice), Historical UST (twice), FINDS, HAZNET (twice), ECHO Address: 1101 - 1155 El Camino Real Distance: Adjacent, across El Camino Real (approximately 90 feet) Direction: Southwest (hydrologically cross-to-up-gradient)
Comments: According to the database, the southwest adjacent property is a small quantity generator of hazardous wastes. The RCRA listing indicates that the site generates hazardous wastes consisting of ignitable wastes, corrosive wastes, lead, spent halogenated solvents, and spent non-halogenated solvents. No violations were noted in the RCRA or ECHO listings. The HAZNET listings indicate that the site generated hazardous wastes consisting of aqueous solutions with total organic residues less than 10 percent, hydrocarbon solvents, unspecified solvent mixtures, unspecified organic liquid mixtures, and unreported wastes from 1993 to 2013. According to the database, the site previously operated two 1,000-gallon waste oil USTs and one 250-gallon waste oil UST. The site was listed in the database as a HIST CORTESE site, indicating that a release had occurred from the USTs; however, the HIST CORTESE listing is for a site located in Redwood City and is therefore not expected to represent a significant environmental concern. According to the database, the site was occupied by an auto parts store in 2003 and by auto repair shops since at least 1999. The site is listed in the San Mateo County BI as an active facility which stores motor vehicle fuels or waste only; and as an inactive facility which stored motor vehicle fuels or waste only, stored hazardous materials on site, and generated and recycled waste oil/solvent. Based on the lack of a documented release, the review of regulatory agency files for this site was not deemed necessary, and the site is not expected to represent a significant environmental concern.

Facility Name: Firestone Complete Auto Care #012785
Database: LUST (twice) Address: 1201 El Camino Real Distance: 0.04 mile Direction: West (hydrologically up-gradient)
Comments: According to the database, the site at 1201 El Camino Real is a closed LUST cleanup site. The database indicates that gasoline had contaminated the groundwater (not a drinking water source) beneath the site. According to files with the SMCEHD, a 550-gallon waste oil UST was removed from the site on December 16, 1998. Soil samples collected during the removal activities detected elevated concentrations of TPH-mo and TPH-d. Four groundwater monitoring wells were installed as part of the site investigation. The monitoring well nearest the subject property, MW-4, was installed approximately 325 feet west of the subject property. In the final sampling of MW-4 (April 2001), the groundwater sample detected TPH-d at 1,300 ppb and TPH-g at 0.12 ppb. The site was granted closure on February 14, 2002. Based on the regulatory status of the site and the available analytical data, this site is not expected to represent a significant environmental concern.

5.2 Vapor Migration

AEI reviewed reasonably ascertainable information for the subject and nearby properties, including a regulatory database, files for nearby release sites, and/or historical documentation, to determine if potential vapor-phase migration concerns may be present which could impact the subject property.

Based on a review of available resources as documented in this report, AEI did not identify significant on-site concerns and/or regulated listings from nearby sites which suggest that a vapor-phase migration concern currently exists at the subject property.

6.0 INTERVIEWS AND USER PROVIDED INFORMATION

6.1 INTERVIEWS

Pursuant to ASTM E1527-13, the following interviews were performed during this assessment in order to obtain information indicating RECs in connection with the subject property.

6.1.1 INTERVIEW WITH OWNER

AEI requested an interview with the subject property owner; however, the subject property owner has not responded as of this report date. Based on the quality of information obtained from other sources, this limitation is not expected to alter the overall Findings of this assessment.

6.1.2 INTERVIEW WITH KEY SITE MANAGER

The key site manager, Mr. Art Schwass, was interviewed on October 11, 2016. Mr. Art Schwass has been associated with the subject property since approximately 1995. Mr. Art Schwass was asked if he was aware of any of the following:

	Yes	No
Any knowledge of USTs, clarifiers or oil/water separators, sumps, or other subsurface features.		✔
Any knowledge of previous environmental investigations conducted on site.		✔
Any knowledge of current or past industrial operations and/or other operations which would involve the use of hazardous substances and/or petroleum products.		✔
Any known plans for site redevelopment or change in site use.		✔
Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property.		✔
Any pending, threatened or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property.		✔
Any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.		✔
Any incidents of flooding, leaks, or other water intrusion, and/or complaints related to indoor air quality.		✔

6.1.3 PAST OWNERS, OPERATORS, AND OCCUPANTS

AEI did not attempt to interview past owners, operators, and occupants of the subject property because information from these sources would likely be duplicative of information already obtained from other sources.

6.1.4 INTERVIEW WITH OTHERS

Information obtained during interviews with local government officials is incorporated into the appropriate segments of this section.

6.2 USER PROVIDED INFORMATION

User provided information is intended to help identify the possibility of RECs in connection with the subject property. According to ASTM E1527-13 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), certain items should be researched by the prospective landowner or grantee, and the results of such inquiries may be provided to the Environmental Professional. The responsibility for qualifying for LLPs by conducting the inquiries ultimately rests with the User, and providing the information to the Environmental Professional would be prudent if such information is available.

The User did not complete the ASTM User Questionnaire or provide the User information to AEI. AEI assumes that qualification for the LLPs is being established by the User in documentation outside of this assessment.

6.3 PREVIOUS REPORTS AND OTHER PROVIDED DOCUMENTATION

No prior reports or other relevant documentation in association with the subject property was made available to AEI during the course of this assessment.

7.0 SITE RECONNAISSANCE

Site Reconnaissance Date	October 11, 2016
AEI Site Assessor	Clinton Look
Property Escort/Relationship to Property	Mr. Art Schwass/Key site manager
Units/Areas Observed	Representative portions of Buildings 1 through 8 and 10, including common areas, the exterior parking areas, and guest rooms 122, 125, 126, 201, 204, 205, 206, 233, 235, 244, 250, 301, 303, 308, 555, 557, 563, 611, 613, 615, 700, and 720 (10% of total rooms).
Areas not accessed and reasons	Due to the size of the property, a representative sample of guest rooms was inspected by AEI. Due to the nature of occupancy, this limited inspection method is expected to be adequate for the purposes of this assessment. AEI inspected the following units: 122, 125, 126, 201, 204, 205, 206, 233, 235, 244, 250, 301, 303, 308, 555, 557, 563, 611, 613, 615, 700, and 720 (10% of total rooms). AEI was unable to access the interior of Building 9 during the site reconnaissance. Based on the residential nature of occupancy, the limited access is not expected to significantly alter the Findings of this assessment.
Weather	Overcast, 60º Fahrenheit

7.1 SUBJECT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation
	✔	Regulated Hazardous Substances/Wastes and/or Petroleum Products in Connection with Property Use
	✔	Aboveground/Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)
	✔	Hazardous Substance and Petroleum Product Containers Not in Connection with Property Use
	✔	Unidentified Substance Containers
✔		Electrical or Mechanical Equipment Likely to Contain Fluids
	✔	Interior Stains or Corrosion
	✔	Strong, Pungent, or Noxious Odors
	✔	Pools of Liquid
✔		Drains, Sumps, and Clarifiers
	✔	Pits, Ponds, and Lagoons
	✔	Stained Soil or Pavement
	✔	Stressed Vegetation
	✔	Solid Waste Disposal or Evidence of Fill Materials
	✔	Waste Water Discharges
	✔	Wells
	✔	Septic Systems
	✔	Biomedical Wastes
	✔	Other

The subject property is currently occupied by Best Western Plus El Rancho Inn, Terrace Cafe, and residential tenants. On-site operations consist of hospitality services, administrative activities, food preparation, dining activities, and typical residential activities.

ELECTRICAL OR MECHANICAL EQUIPMENT LIKELY TO CONTAIN FLUIDS

Toxic PCBs were commonly used historically in electrical equipment such as transformers, fluorescent lamp ballasts, and capacitors. According to United States EPA regulation 40 CFR Part 761, there are three categories for classifying such equipment: <50 ppm of PCBs is considered "Non-PCB"; between 50 and 500 ppm is considered "PCB-Contaminated"; and >500 ppm is considered "PCB-Containing". Pursuant to 15 U.S.C. 2605(e)(2)(A), the manufacture, process, or distribution in commerce or use of any polychlorinated biphenyl in any manner other than in a totally enclosed manner was prohibited after January 1, 1977.

Transformers

Type	Quantity	Owner	Presumed Date of Installation	Spills or Stains Observed (Yes/No)	Non-PCB Label (Yes/No)
Pad-Mounted	One	PG&E	Pre-1943	No	No
Pole-Mounted	One	PG&E	Pre-1943	No	No

The management of potential PCB-containing transformers is the responsibility of the local utility or the transformer owner. Actual material samples need to be collected to determine if transformers are PCB-containing.

Transformers installed prior to 1977 may be PCB containing while transformers installed after 1977 are unlikely to be PCB containing. Federal Regulations (40 CFR 761 Subpart G) require any release of material containing >50 ppm PCB and occurring after May 4, 1987, be cleaned up by the transformer owner following the United States EPA's PCB spill cleanup policy.

AEI did not observe evidence of spills, staining, or leaks on or around the transformers. Based on the good condition of the equipment, the transformers are not expected to represent a significant environmental concern.

Elevators

Building 8 is equipped with a hydraulic elevator. The hydraulic fluid contained within elevator systems can potentially contain toxic PCBs. Based on the construction date of the building (pre-1978), the potential exists that hydraulic fluid within the equipment may have contained PCBs. The equipment room for the elevator, which is located on the ground floor of Building 8, was not accessible during AEI's site reconnaissance. The elevator is reportedly maintained by Star Elevator. Based on the regular maintenance of the equipment, the elevator is not expected to represent a significant environmental concern.

A hydraulic elevator is currently being constructed in Building 6. Based on the age of the elevator (post-1978), it is unlikely that the hydraulic fluid within the equipment contains PCBs and the elevator is not expected to represent a significant environmental concern.

DRAINS, SUMPS, AND CLARIFIERS

Several storm drains were observed in the parking area of the subject property. AEI did not observe evidence of hazardous substances or petroleum products in the vicinity of the drains. Based on the use of the drains solely for storm water runoff, the presence of the drains is not expected to represent a significant environmental concern.

7.2 ADJACENT PROPERTY RECONNAISSANCE FINDINGS

Yes	No	Observation
	✔	Hazardous Substances/Wastes and/or Petroleum Products in Connection with Property Use
	✔	Aboveground/Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)
	✔	Hazardous Substance and Petroleum Product Containers Not in Connection with Property Use
	✔	Unidentified Substance Containers
✔		Electrical or Mechanical Equipment Likely to Contain Fluids
	✔	Strong, Pungent, or Noxious Odors
	✔	Pools of Liquid
✔		Drains, Sumps, and Clarifiers
	✔	Pits, Ponds, and Lagoons
	✔	Stained Soil or Pavement
	✔	Stressed Vegetation
	✔	Solid Waste Disposal or Evidence of Fill Materials
	✔	Waste Water Discharges
	✔	Wells
	✔	Septic Systems
	✔	Other

ELECTRICAL OR MECHANICAL EQUIPMENT LIKELY TO CONTAIN FLUIDS

Transformers

Several pole-mounted transformers were observed on the adjacent sites during the site reconnaissance. No spills, staining, or leaks were observed on or around the transformers. Based on the good condition of the equipment, the transformers are not expected to represent a significant environmental concern.

DRAINS, SUMPS, AND CLARIFIERS

Several storm drains were observed in the parking areas of the adjacent properties and along El Camino Real and Center Street. AEI did not observe evidence of hazardous substances or petroleum products in the vicinity of the drains. Based on the use of the drains solely for storm water runoff, the presence of the drains is not expected to represent a significant environmental concern.

8.0 OTHER ENVIRONMENTAL CONSIDERATIONS

8.1 ASBESTOS-CONTAINING BUILDING MATERIALS

Asbestos is the name for a group of naturally occurring silicate minerals that are considered to be "fibrous" and through processing can be separated into smaller and smaller fibers. The fibers are strong, durable, chemical resistant, and resistant to heat and fire. They are also long, thin and flexible, so they can even be woven into cloth. Because of these qualities, asbestos was considered an ideal product and has been used in thousands of consumer, industrial, maritime, automotive, scientific, and building products.

At the federal level, asbestos is primarily regulated by the United States EPA primarily through the EPA's NESHAP (Standard 40 CFR Chapter 61, Subpart M), the OSHA through the General Industry Standard, and the Construction Industry Standard (29 CFR 1926.1101 and 29 CFR 1910.1001). Many states have regulations in place for the inspection, management, and remediation of asbestos including company and individual licensing requirements for all activities relating to asbestos. Under both federal and state regulations building owners and employers may be required to perform certain activities related to the in-place management of asbestos, and prior to renovations or demolition activities (i.e. asbestos inspections or remediation) that may disturb building materials suspected of containing asbestos.

The information below is for general informational purposes only and does not constitute an asbestos survey. In addition, the information is not intended to comply with federal, state, or local regulations in regards to ACM.

Due to the age of the subject property buildings, there is a potential that ACMs are present. A limited list of typical suspect ACMs is included in the following table:

Material Type	Location
Plaster (Acoustical and Smooth)	Walls and Ceilings
Ceiling Tile	Ceiling Systems
Thermal Systems Insulations, Packings, Gaskets	Heating Systems, Cooling Systems, Domestic and Heating and Cooling Piping, Ductwork, Other Equipment
Floor Tile and Associated Mastics, Flooring Felts, Papers (under hardwood/other)	Floors
Vinyl Sheet Flooring and Adhesives	Floors
Cove Base and Associated Mastics	Walls
Ceramic Tile Adhesives and Grouts	Walls, Floors, and Ceilings
All Adhesives	Mirrors, Wall Coverings, Construction, etc.
Grout and Caulking	Windows and Doors
Gypsum Board, Tape, and Joint Compound	Wall and Ceiling Systems
Insulation Materials	Walls, Ceilings, Attic Spaces
Roofing Materials (Felts, Rolled, Shingle, Flashings, Adhesives, Tar, Insulations)	Roof and Parapet Wall Systems
Brick and Block, Mortars	Walls

All observed suspect ACMs at the subject property were in good condition at the time of the site reconnaissance and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Based on the potential presence of ACMs, AEI recommends the implementation of an O&M Plan which stipulates that the repair and maintenance of damaged materials should be performed to protect the health and safety of the building occupants. In the event that building renovation or demolition activities are planned, a thorough asbestos survey to identify asbestos-containing building materials is required in accordance with the EPA NESHAP 40 CFR Part 61 prior to demolition or renovation activities that may disturb suspect ACMs.

8.2 LEAD-BASED PAINT

LBP is defined as any paint, varnish, stain, or other applied coating that has ≥ 1 mg/cm² (5,000 µg/g or 5,000 ppm) or more of lead by federal guidelines; state and local definitions may differ from the federal definitions in amounts ranging from 0.5 mg/cm² to 2.0 mg/cm². Section 1017 of the Housing and Urban Development (HUD) Guidelines, Residential Lead-Based Paint Hazard Reduction Act of 1992, otherwise known as "Title X", defines a LBP hazard as "any condition that causes exposure to lead that would result in adverse human health effects" resulting from lead-contaminated dust, bare, lead-contaminated soil, and/or lead-contaminated paint that is deteriorated or present on accessible, friction, or impact surfaces. Therefore, under Title X, intact LBP on most walls and ceilings would not be considered a "hazard", although the paint should be maintained and its condition monitored to ensure that it does not deteriorate and become a hazard. Additionally, Section 1018 of this law directed HUD and EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978. Most private housing, public housing, or federally owned or subsidized housing is affected by this rule.

LCP is defined as any paint with any detectable amount of lead present in it. It is important to note that LCP may create a lead hazard when being removed. The condition of these materials must be monitored when they are being disturbed. In the event LCP is subject to abrading, sanding, torching, and/or cutting during demolition or renovation activities, there may be regulatory issues that must be addressed.

The information below is for general informational purposes only and does not constitute a lead hazard evaluation. In addition, the information is not intended to comply with federal, state, or local regulations in regards to LCP.

In buildings constructed after 1978, it is unlikely that LBP is present. Structures built prior to 1978 and especially prior to the 1960s should be expected to contain LBP.

Due to the age of Buildings 1 through 8, there is a potential that LBP is present. All observed painted surfaces were in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. Local regulations may apply to LBP in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

Due to the age of Buildings 9 and 10, there is a potential that LBP is present. All painted surfaces were observed in good condition and are not expected to pose a health and safety concern to the occupants of the subject property at this time. However, based on the potential presence of LBP, AEI recommends the owner implement an O&M Plan which stipulates that the assessment, repair and maintenance of damaged painted surfaces be performed to protect the health and safety of the building occupants. Local regulations may apply to LBP in association with building demolition/renovations and worker/occupant protection. Actual material samples would need to be collected or an XRF survey performed in order to determine if LBP is present. It should be noted that construction activities that disturb materials or paints containing any amount of lead may be subject to certain requirements of the OSHA lead standard contained in 29 CFR 1910.1025 and 1926.62.

8.3 RADON

Radon is a naturally-occurring, odorless, and invisible gas. Natural radon levels vary and are closely related to geologic formations. Radon may enter buildings through basement sumps or other openings.

Radon sampling was not requested as part of this assessment. According to the California Department of Health Services Radon Database, 38 tests were conducted for radon levels in the subject property zip code (94030) in 2010. All of these tests indicated that radon levels were below the action level of 4.0 pCi/L set forth by the US EPA. Therefore, radon is not expected to represent a significant environmental concern.

8.4 DRINKING WATER SOURCES AND LEAD IN DRINKING WATER

The City of Millbrae supplies potable water to the subject property. The most recent water quality report (2015) states that the 90th percentile value for lead levels in samples obtained from the area's water supply was 5.3 micrograms per liter (µg/L). Only one sample out of a total of 30 samples exceeded the regulatory action level for lead. The sample exceeding the action level may be attributed to internal corrosion of household water plumbing systems. Overall, lead levels are well within standards established by the United States EPA.

8.5 MOLD/INDOOR AIR QUALITY ISSUES

Molds are simple, microscopic organisms, which can often be seen in the form of discoloration, frequently green, gray, white, brown, or black. When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problem remains undiscovered or is not addressed. As such, interior areas of buildings characterized by poor ventilation and high humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation, and carpeting often play host to such growth. Mold spores primarily cause health problems through the inhalation of mold spores or the toxins they emit when they are present in large numbers. This can occur primarily when there is active mold growth within places where people live or work.

Mold, if present, may or may not visually manifest itself. Neither the individual completing this inspection, nor AEI has any liability for the identification of mold-related concerns except as defined in applicable industry standards. In short, this Phase I ESA should not be construed as a mold survey or inspection.

AEI observed interior areas of the subject property buildings in order to identify the significant presence of mold. AEI did not note obvious visual or olfactory indications of the presence of mold, nor did AEI observe obvious indications of significant water damage. As such, no bulk sampling of suspect surfaces was conducted as part of this assessment and no additional action with respect to mold appears to be warranted at this time.

This activity was not designed to discover all areas which may be affected by mold growth on the subject property. Rather, it is intended to give the client an indication if significant (based on observed areas) mold growth is present at the subject property. Additional areas of mold not observed as part of this limited assessment, possibly in pipe chases, HVAC systems, and behind enclosed walls and ceilings, may be present on the subject property.

9.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR Part 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

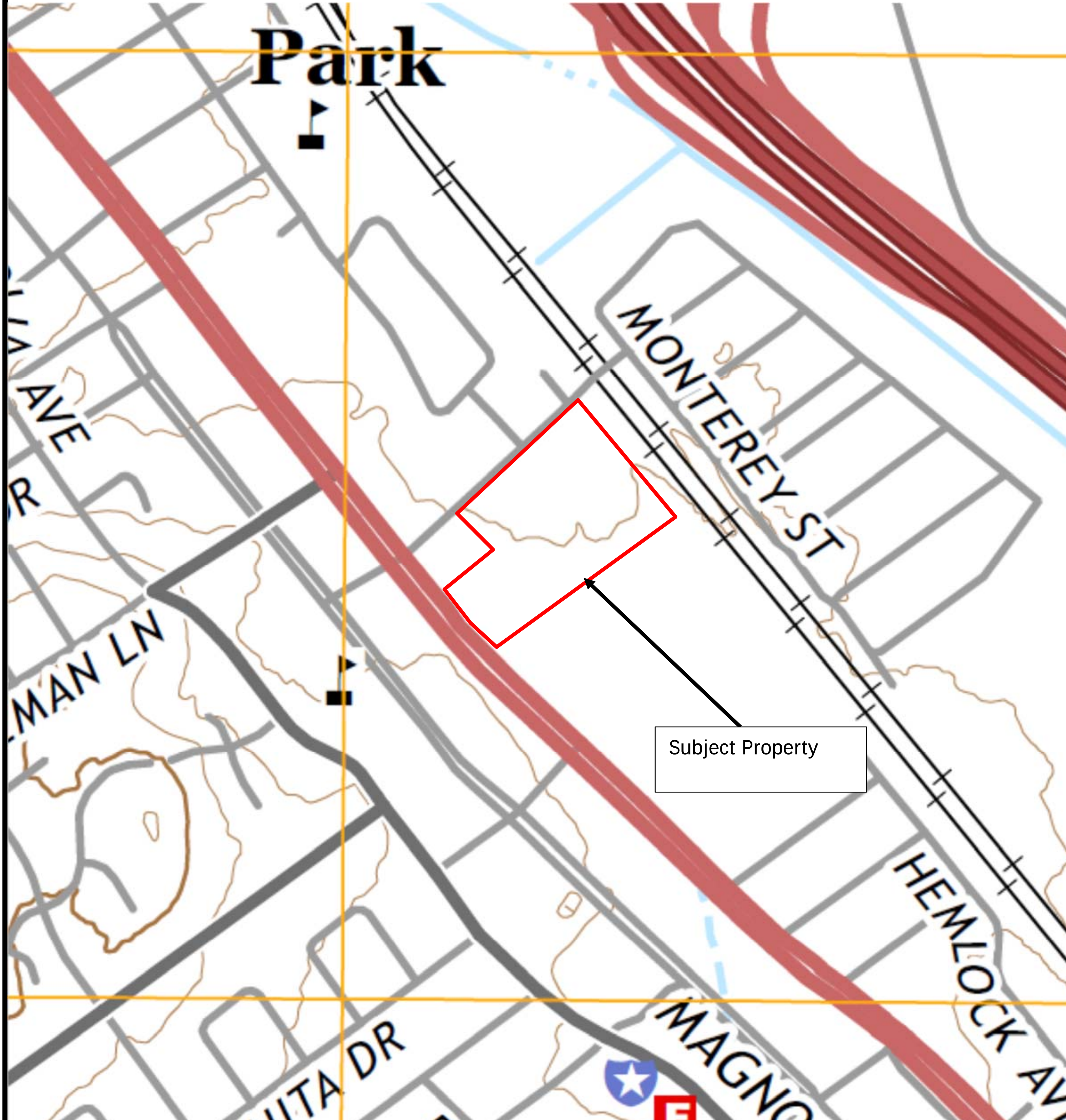
Prepared By:	Reviewed By:
Clinton Look Project Manager	Richard D. Fehler Senior Author

10.0 REFERENCES

Item	Date(s)	Source
Topographic Map	2015	USGS
Groundwater Information	October 11, 2016	San Mateo County Environmental Health Department (SMCEHD)
Aerial Photographs	1943, 1946, 1956, 1968, 1974, 1982, 1993, 1998, 2005, 2012	Environmental Data Resources
Sanborn Map Report	September 28, 2016	Environmental Data Resources and the Seattle Public Library
City Directories	1970 - 2013	Environmental Data Resources
Environmental Health Department/ State Environmental Agency	October 11, 2016	San Mateo County Environmental Health Department (SMCEHD)
Fire Department	October 11, 2016	Millbrae Fire Department
Building Department	October 11, 2016	Millbrae Building Department
Planning Department	October 11, 2016	Millbrae Planning Department
Assessor's Information and Parcel Map	October 13, 2016	San Mateo County assessor's office
Oil and Gas Wells/Pipelines	October 11, 2016	DOGGR, NPMS Public Map Viewer
Hazardous Waste Records	October 13, 2016	Department of Toxic Substances Control's Hazardous Waste Tracking System: http://hwts.dtsc.ca.gov/ report_list.cfm
Regulatory Database Report	September 28, 2016	EDR
Radon Information	2010	California Department of Health Services: http://www.cdph.ca.gov
Water Quality Report	2015	City of Millbrae

APPENDIX A

FIGURES



Legend: Approximate Property Boundary
Source: USGS Topographic Map *Montara Mountain, California* (2015)

N

Figure 1: TOPOGRAPHIC MAP
1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030
Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

Inferred Direction of Groundwater Flow

Listed in the Regulatory Database (*)

N

Figure 2: SITE MAP A

1100 & 1150 El Camino Real and 33 & 35 Center Street,
Millbrae, California 94030
Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

Building Number (###)

Former 1,000-Gallon UST

N

Figure 3: SITE MAP B

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

APPENDIX B

PROPERTY PHOTOGRAPHS

1. View of Building 1 from the northeast

2. View of Building 2 from the northeast

3. View of Building 3 from the northeast

4. View of Building 4 from the south

5. View of Building 5 from the northwest

6. View of Building 6 from the northwest

7. View of Building 7 from the east

8. View of Building 8 from the northwest

9. View of Building 9 from the east

10. View of Building 10 from the northwest

11. View of the lobby area in Building 1

12. View of a meeting room in Building 2

AEI Consultants

13. View of an exercise room in Building 3

14. View of a maintenance room in Building 3

15. View of the dining area in Building 4

16. Another view of the dining area in Building 4

17. View of the basement level in Building 4

18. View of the interior of a guest room in Building 5

19. View of the interior of a guest room in Building 6

20. View of the interior of a guest room in Building 7

21. Another view of the interior of a guest room in Building 7

22. View of the interior of a guest room in Building 8

23. View of a laundry area in Building 8

24. Another view of the interior of a guest room in Building 8

25. View of the interior of Building 10

26. Another view of the interior of Building 10

27. View of the location of the former subject property USTs

APPENDIX C

REGULATORY DATABASE

363712
1100 & 1150 El Camino Real, 33 & 35 Center Street
Millbrae, CA 94030

Inquiry Number: 4739423.2s
September 28, 2016

The EDR Radius Map™ Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FORM-LBI-KTV

TABLE OF CONTENTS

SECTION **PAGE**

GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1100 & 1150 EL CAMINO REAL, 33 & 35 CENTER STREET
MILLBRAE, CA 94030

COORDINATES

Latitude (North):	37.6081300 - 37˚ 36' 29.26''
Longitude (West):	122.3969920 - 122˚ 23' 49.17''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	553224.6
UTM Y (Meters):	4162304.0
Elevation:	20 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5641104 MONTARA MOUNTAIN, CA
Version Date:	2012
North Map:	5641126 SAN FRANCISCO SOUTH, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140608
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1100 & 1150 EL CAMINO REAL, 33 & 35 CENTER STREET
MILLBRAE, CA 94030

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	EL RANCHO MOTEL	1100 EL CAMINO REAL	LUST, HIST UST		TP
A2	BEST WESTERN EL RANC	1100 EL CAMINO REAL	RGA LUST		TP
A3	BEST WESTERN EL RANC	1100 EL CAMINO REAL	LUST		TP
A4	MCDONALDS OF MILLBRA	1101 EL CAMINO REAL	San Mateo Co. BI, HIST CORTESE		TP
B5		1145 EL CAMINO REAL	EDR Hist Auto	Higher	141, 0.027, SW
B6	CSK AUTO INC	1145 EL CAMINO REAL	San Mateo Co. BI	Higher	141, 0.027, SW
B7	A J K L INC TIRE CEN	1155 EL CAMINO REAL	RCRA-SQG, HIST UST, FINDS, HAZNET, ECHO	Higher	200, 0.038, WSW
B8	GOODYEAR SAN BRUNO T	1155 EL CAMINO REAL	HIST UST, San Mateo Co. BI, HAZNET	Higher	200, 0.038, WSW
B9		1155 EL CAMINO REAL	EDR Hist Auto	Higher	200, 0.038, WSW
C10		1065 EL CAMINO REAL	EDR Hist Cleaner	Higher	248, 0.047, SSW
D11	MALLOY PROPERTY	1201 EL CAMINO REAL	HIST CORTESE	Higher	344, 0.065, West
D12	BRIDGESTONE/FIRESTON	1201 EL CAMINO REAL	LUST	Higher	344, 0.065, West
D13		1201 EL CAMINO REAL	EDR Hist Auto	Higher	344, 0.065, West
D14	FIRESTONE COMPLETE A	1201 EL CAMINO REAL	LUST, HIST UST, San Mateo Co. BI	Higher	344, 0.065, West
D15	FIRESTONE STORE #365	1201 EL CAMINO REAL	SWEEPS UST, FINDS, ECHO	Higher	344, 0.065, West
C16	HOLIDAY CLEANERS	1050 BROADWAY	San Mateo Co. BI, DRYCLEANERS, EMI	Higher	383, 0.073, SSW
C17	TEXACO SERVICE STATI	1009 EL CAMINO REAL	SWEEPS UST, CA FID UST	Higher	419, 0.079, South
C18		1009 EL CAMINO REAL	EDR Hist Auto	Higher	419, 0.079, South
C19	BAKERS OLYMPIC	1009 EL CAMINO REAL	UST	Higher	419, 0.079, South
C20	ROB BAKER GARAGE	1009 EL CAMINO REAL	LUST, San Mateo Co. BI	Higher	419, 0.079, South
E21	T MOBILE WEST CORP-S	900 EL CAMINO REAL	San Mateo Co. BI	Higher	444, 0.084, SE
E22	ORCHARD SUPPLY COMPA	900 EL CAMINO REAL	San Mateo Co. BI, HAZNET	Higher	444, 0.084, SE
C23	SAN FRANCISCO WATER	1000 EL CAMINO REAL	RCRA-SQG, LUST, SWEEPS UST, FINDS, ECHO	Higher	474, 0.090, South
C24	SF WATER DEPT.	1000 EL CAMINO REAL	UST, NPDES	Higher	474, 0.090, South
C25	S. F. DEPT. OF PUBLI	1000 EL CAMINO REAL	LUST	Higher	474, 0.090, South
C26	SUBURBAN HEADQUARTER	1000 EL CAMINO REAL	HIST UST	Higher	474, 0.090, South
C27	SFPUC MILLBRAE MAINT	1000 EL CAMINO REAL	LUST, SLIC, AST, SWEEPS UST, HIST UST, San Mateo...	Higher	474, 0.090, South
F28	MADRONE LIFT STATION	340 MADRONE	San Mateo Co. BI	Lower	487, 0.092, NNE
F29		66 SPRUCE ST	EDR Hist Cleaner	Lower	614, 0.116, NNE
30		73 SPRUCE ST	EDR Hist Cleaner	Lower	630, 0.119, NE
31	KENTUCKY FRIED CHICK	950 EL CAMINO REAL	San Mateo Co. BI	Higher	778, 0.147, SSE
32	DR JANIS STONER CHIR	1301 BROADWAY	San Mateo Co. BI	Higher	801, 0.152, West
33	TOMMYS CLEANERS	1340 EL CAMINO REAL	RCRA-SQG, FINDS, San Mateo Co. BI, DRYCLEANERS,...	Lower	823, 0.156, WNW
G34	BART SANTA PAULA VEN	19 MONTEREY	San Mateo Co. BI	Higher	870, 0.165, ESE
G35	BART SANTA PAULA SUB	7 MONTEREY	AST	Higher	888, 0.168, ESE
G36	BART SANTA PAULA SUB	7 MONTEREY	San Mateo Co. BI	Higher	888, 0.168, ESE
37	KOHL'S DEPARTMENT ST	855 BROADWAY	San Mateo Co. BI, HAZNET	Higher	911, 0.173, South
G38	AT&T MOBILITY- 101 A	301 SANTA PAULA	San Mateo Co. BI	Higher	930, 0.176, ESE
39	VERIZON WIRELESS-SFO	1007 HEMLOCK	San Mateo Co. BI	Higher	1003, 0.190, SE

MAPPED SITES SUMMARY

Target Property Address:
1100 & 1150 EL CAMINO REAL, 33 & 35 CENTER STREET
MILLBRAE, CA 94030

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
H40	WALGREENS 0625	615 BROADWAY	RCRA-CESQG, FINDS, ECHO	Higher	1182, 0.224, South
H41	WALGREEN STORE #625	615 BROADWAY	San Mateo Co. BI, HAZNET	Higher	1182, 0.224, South
42	SHERWIN WILLIAMS STO	1395 EL CAMINO REAL	San Mateo Co. BI	Higher	1205, 0.228, WNW
I43	SUPER BURRITO	780 EL CAMINO REAL	San Mateo Co. BI	Higher	1241, 0.235, SSE
J44	SAN FRANCISCO PUBLIC	SANTA PAULA AND BAY	San Mateo Co. BI	Lower	1276, 0.242, East
J45	HETCH HETCHY WATER &	SANTA PAULA AND BAY	AST	Lower	1301, 0.246, East
I46	CITIBANK	700 EL CAMINO REAL	HIST CORTESE	Higher	1372, 0.260, SSE
I47	MIDAS MUFFLER	700 EL CAMINO REAL	HIST CORTESE	Higher	1372, 0.260, SSE
48	REPLANET LLC	525 EL CAMINO REAL	SWRCY, San Mateo Co. BI, NPDES	Higher	1598, 0.303, SSE
49	LOMITA PARK ELEMENTA	200 SANTA HELENA AVE	ENVIROSTOR, SCH, DEED	Higher	1664, 0.315, NW
50	MILLBRAE SCHOOL WARE	700 LAUREL	LUST	Higher	1820, 0.345, SW
K51	MILLBRAE SQUARE CHEV	501 EL CAMINO REAL	LUST, HIST UST, San Mateo Co. BI	Higher	1870, 0.354, SSE
K52	CHEVRON 9-1035	501 EL CAMINO REAL	LUST, San Mateo Co. BI, HIST CORTESE	Higher	1870, 0.354, SSE
L53	JIFFY CLEANERS	512 MAGNOLIA	HIST CORTESE	Higher	1976, 0.374, SSE
L54	JIFFY CLEANERS	512 MAGNOLIA AVENUE	SLIC, BROWNFIELDS, FINDS, San Mateo Co. BI,...	Higher	1976, 0.374, SSE
K55	SHELL	491 EL CAMINO REAL	HIST CORTESE	Higher	2043, 0.387, SSE
K56	VALERO MILLBRAE GAS	491 EL CAMINO REAL	LUST, San Mateo Co. BI	Higher	2043, 0.387, SSE
M57	MILLBRAE SCHOOL DIST	401 LUDEMAN LN	LUST, HAZNET	Higher	2210, 0.419, WSW
58	FOMER BETTY BRITE	446 BROADWAY	ENVIROSTOR, LUST, SLIC	Higher	2235, 0.423, SSE
59	AVIS RENT A CAR (TEM	PLOT 1 SFIA	LUST	Higher	2239, 0.424, ENE
M60	GREEN HILLS COUNTRY	400 LUDEMAN	LUST, SWEEPS UST, HIST CORTESE	Higher	2339, 0.443, WSW
N61	FORMER ARCO SITE	400 EL CAMINO REAL	LUST, San Mateo Co. BI	Lower	2343, 0.444, SE
62	HICKEY FAMILY PARTNE	1581 EL CAMINO	LUST, San Mateo Co. BI, HIST CORTESE	Higher	2407, 0.456, NW
N63	MOBIL OIL CORP	390 EL CAMINO REAL	LUST, AST, SWEEPS UST, CA FID UST, San Mateo Co....	Lower	2501, 0.474, SE
N64	SPEE DEE OIL CHANGE	390 EL CAMINO REAL	LUST, HIST UST, San Mateo Co. BI, HIST CORTESE	Lower	2501, 0.474, SE
65	TAYLOR MIDDLE SCHOOL	850 TAYLOR BOULEVARD	ENVIROSTOR, SCH, HAZNET, NPDES	Higher	3510, 0.665, SSW
66	GREEN HILLS COUNTY C	500 LUDEMAN LANE	Notify 65	Higher	3614, 0.684, WSW
67	MILLBRAE BART	200 MILLBRAE AVENUE	ENVIROSTOR, VCP	Higher	4244, 0.804, SSE
68	CORPORATION YARD	225 HUNTINGTON AVENU	Notify 65	Lower	4717, 0.893, NNW
69	UNOCAL SERVICE STATI	1876 EL CAMINO REAL	Notify 65	Higher	5105, 0.967, SE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
EL RANCHO MOTEL 1100 EL CAMINO REAL MILLBRAE, CA 94030	LUST Database: LUST, Date of Government Version: 06/13/2016 Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016 Status: Completed - Case Closed Facility Id: 990021 Facility Status: 9- Case Closed Global Id: T0608100966 Global ID: T0608100966 HIST UST Facility Id: 00000011166	N/A
BEST WESTERN EL RANC 1100 EL CAMINO REAL MILLBRAE, CA	RGA LUST	N/A
BEST WESTERN EL RANC 1100 EL CAMINO REAL MILLBRAE, CA 99430	LUST Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Status: Case Closed date9: 2/29/2000	N/A
MCDONALDS OF MILLBRA 1101 EL CAMINO REAL MILLBRAE, CA 94030	San Mateo Co. BI Facility Id: FA0002563 HIST CORTESE Reg Id: 41-0839	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL. . . . . National Priority List
Proposed NPL. . . . . Proposed National Priority List Sites

EXECUTIVE SUMMARY

NPL LIENS - - - - - - - - Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL - - - - - - - - National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY - - - - - Federal Facility Site Information listing
SEMS - - - - - - - - Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE - - - - - - Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS - - - - - - - - Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF - - - - - - - - RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG - - - - - - - - RCRA - Large Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS - - - - - - - - Land Use Control Information System
US ENG CONTROLS - - - - - Engineering Controls Sites List
US INST CONTROL - - - - - Sites with Institutional Controls

Federal ERNS list

ERNS - - - - - - - - Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE - - - - - - - - State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF - - - - - - - - Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST - - - - - - - - Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST - - - - - - - - Underground Storage Tank Listing
INDIAN UST - - - - - - - - Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP - - - - - - - - Voluntary Cleanup Program Properties

INDIAN VCP - Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS - A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT - Waste Management Unit Database
HAULERS - Registered Waste Tire Haulers Listing
INDIAN ODI - Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 - Torres Martinez Reservation Illegal Dump Site Locations
ODI - Open Dump Inventory

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL - Delisted National Clandestine Laboratory Register
HIST Cal-Sites - Historical Calsites Database
SCH - School Property Evaluation Program
CDL - Clandestine Drug Labs
Toxic Pits - Toxic Pits Cleanup Act Sites
US CDL - National Clandestine Laboratory Register

Local Land Records

LIENS - Environmental Liens Listing
LIENS 2 - CERCLA Lien Information

Records of Emergency Release Reports

HMIRS - Hazardous Materials Information Reporting System
CHMIRS - California Hazardous Material Incident Report System
LDS - Land Disposal Sites Listing
MCS - Military Cleanup Sites Listing
SPILLS 90 - SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR - RCRA - Non Generators / No Longer Regulated
FUDS - Formerly Used Defense Sites
DOD - Department of Defense Sites
SCRD DRYCLEANERS - State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR - Financial Assurance Information
EPA WATCH LIST - EPA WATCH LIST
2020 COR ACTION - 2020 Corrective Action Program List
TSCA - Toxic Substances Control Act
TRIS - Toxic Chemical Release Inventory System
SSTS - Section 7 Tracking Systems
ROD - Records Of Decision
RMP - Risk Management Plans
RAATS - RCRA Administrative Action Tracking System
PRP - Potentially Responsible Parties

EXECUTIVE SUMMARY

PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
UIC	UIC Listing
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
ICE	ICE
FUELS PROGRAM	EPA Fuels Program Registered Listing
ECHO	Enforcement & Compliance History Information

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List

EXECUTIVE SUMMARY

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/21/2016 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A J K L INC TIRE CEN	***1155 EL CAMINO REAL***	***WSW 0 - 1/8 (0.038 mi.)***	***B7***	***11***
SAN FRANCISCO WATER	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C23***	***42***

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOMMYS CLEANERS	***1340 EL CAMINO REAL***	***WNW 1/8 - 1/4 (0.156 mi.)***	***33***	***56***

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 06/21/2016 has revealed that there is 1 RCRA-CESQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WALGREENS 0625	***615 BROADWAY***	***S 1/8 - 1/4 (0.224 mi.)***	***H40***	***68***

EXECUTIVE SUMMARY

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 05/02/2016 has revealed that there are 4 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOMITA PARK ELEMENTA	***200 SANTA HELENA AVE***	***NW 1/4 - 1/2 (0.315 mi.)***	***49***	***76***
Facility Id: 60001360 Status: Certified O&M - Land Use Restrictions Only				
FOMER BETTY BRITE	***446 BROADWAY***	***SSE 1/4 - 1/2 (0.423 mi.)***	***58***	***116***
Facility Id: 60001046 Status: Refer: 1248 Local Agency				
TAYLOR MIDDLE SCHOOL	***850 TAYLOR BOULEVARD***	***SSW 1/2 - 1 (0.665 mi.)***	***65***	***137***
Facility Id: 60001362 Status: No Further Action				
MILLBRAE BART	***200 MILLBRAE AVENUE***	***SSE 1/2 - 1 (0.804 mi.)***	***67***	***142***
Facility Id: 60002244 Status: Active				

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, has revealed that there are 18 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BRIDGESTONE/FIRESTON	1201 EL CAMINO REAL	W 0 - 1/8 (0.065 mi.)	D12	19
Database: LUST REG 2, Date of Government Version: 09/30/2004 Facility Status: Case Closed date9: 2/14/2002				
FIRESTONE COMPLETE A	***1201 EL CAMINO REAL***	***W 0 - 1/8 (0.065 mi.)***	***D14***	***20***
Database: LUST, Date of Government Version: 06/13/2016 Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016 Status: Completed - Case Closed Facility Id: 990027 Facility Status: 9- Case Closed				

Global Id: T0608174722
Global ID: T0608174722

ROB BAKER GARAGE ***1009 EL CAMINO REAL*** ***S 0 - 1/8 (0.079 mi.)*** ***C20*** ***29***
Database: LUST, Date of Government Version: 06/13/2016
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Database: LUST REG 2, Date of Government Version: 09/30/2004
Status: Open - Assessment & Interim Remedial Action
Facility Status: Pollution Characterization
Facility Id: 990026
Facility Status: 5C- Pollution Characterization
Global Id: T0608121993
Global ID: T0608121993

SAN FRANCISCO WATER ***1000 EL CAMINO REAL*** ***S 0 - 1/8 (0.090 mi.)*** ***C23*** ***42***
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Facility Id: 990011
Facility Status: 9- Case Closed
Global ID: T0608100908

S. F. DEPT. OF PUBLI 1000 EL CAMINO REAL S 0 - 1/8 (0.090 mi.) C25 47
Database: LUST REG 2, Date of Government Version: 09/30/2004
Facility Status: Post remedial action monitoring

SFPUC MILLBRAE MAINT ***1000 EL CAMINO REAL*** ***S 0 - 1/8 (0.090 mi.)*** ***C27*** ***48***
Database: LUST, Date of Government Version: 06/13/2016
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Status: Completed - Case Closed
Facility Id: 999033
Facility Status: 3B- Preliminary Assessment Underway
Global Id: T0608100908

MILLBRAE SCHOOL WARE 700 LAUREL SW 1/4 - 1/2 (0.345 mi.) 50 84
Database: LUST, Date of Government Version: 06/13/2016
Database: LUST REG 2, Date of Government Version: 09/30/2004
Status: Completed - Case Closed
Facility Status: Case Closed
Global Id: T0608101028
date9: 6/1/2001

MILLBRAE SQUARE CHEV ***501 EL CAMINO REAL*** ***SSE 1/4 - 1/2 (0.354 mi.)*** ***K51*** ***86***
Database: LUST, Date of Government Version: 06/13/2016
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Status: Completed - Case Closed
Facility Id: 990022
Facility Status: 9- Case Closed
Global Id: T0608100963
Global ID: T0608100963

CHEVRON 9-1035 ***501 EL CAMINO REAL*** ***SSE 1/4 - 1/2 (0.354 mi.)*** ***K52*** ***95***
Database: LUST REG 2, Date of Government Version: 09/30/2004
Facility Status: Pollution Characterization

VALERO MILLBRAE GAS ***491 EL CAMINO REAL*** ***SSE 1/4 - 1/2 (0.387 mi.)*** ***K56*** ***106***
Database: LUST, Date of Government Version: 06/13/2016
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Database: LUST REG 2, Date of Government Version: 09/30/2004
Status: Completed - Case Closed
Facility Status: Pollution Characterization
Facility Id: 990016

EXECUTIVE SUMMARY

Facility Status: 9- Case Closed
Global Id: T0608100842
Global ID: T0608100842

MILLBRAE SCHOOL DIST	***401 LUDEMAN LN***	***WSW 1/4 - 1/2 (0.419 mi.)***	***M57***	***115***

Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Facility Id: 990025
Facility Status: 9- Case Closed
Global ID: T0608101028

FOMER BETTY BRITE	***446 BROADWAY***	***SSE 1/4 - 1/2 (0.423 mi.)***	***58***	***116***

Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Facility Id: 999031
Facility Status: 5C- Pollution Characterization
Global ID: SL0608107611

AVIS RENT A CAR (TEM	PLOT 1 SFIA	ENE 1/4 - 1/2 (0.424 mi.)	59	121

Database: LUST, Date of Government Version: 06/13/2016
Status: Completed - Case Closed
Global Id: T0608139599

GREEN HILLS COUNTRY	***400 LUDEMAN***	***WSW 1/4 - 1/2 (0.443 mi.)***	***M60***	***122***

Database: LUST, Date of Government Version: 06/13/2016
Database: LUST REG 2, Date of Government Version: 09/30/2004
Status: Completed - Case Closed
Facility Status: Case Closed
Global Id: T0608100241
date9: 9/2/1993

HICKEY FAMILY PARTNE	***1581 EL CAMINO***	***NW 1/4 - 1/2 (0.456 mi.)***	***62***	***129***

Database: LUST, Date of Government Version: 06/13/2016
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Database: LUST REG 2, Date of Government Version: 09/30/2004
Status: Completed - Case Closed
Facility Status: Case Closed
Facility Id: 990019
Facility Status: 9- Case Closed
Global Id: T0608100463
Global ID: T0608100463
date9: 5/20/1997

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER ARCO SITE	***400 EL CAMINO REAL***	***SE 1/4 - 1/2 (0.444 mi.)***	***N61***	***126***

Database: LUST, Date of Government Version: 06/13/2016
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016
Status: Open - Site Assessment
Facility Id: 990035
Facility Status: 3B- Preliminary Assessment Underway
Global Id: T10000003068
Global ID: T10000003068

MOBIL OIL CORP	***390 EL CAMINO REAL***	***SE 1/4 - 1/2 (0.474 mi.)***	***N63***	***131***

Database: LUST REG 2, Date of Government Version: 09/30/2004
Facility Status: Case Closed
date9: 1/26/1999

SPEE DEE OIL CHANGE	***390 EL CAMINO REAL***	***SE 1/4 - 1/2 (0.474 mi.)***	***N64***	***134***

Database: LUST, Date of Government Version: 06/13/2016
Database: SAN MATEO CO. LUST, Date of Government Version: 06/09/2016

EXECUTIVE SUMMARY

Status: Completed - Case Closed
Facility Id: 990005
Facility Status: 9- Case Closed
Global Id: T0608100341
Global ID: T0608100341

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, has revealed that there are 3 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SFPUC MILLBRAE MAINT	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C27***	***48***
Database: SLIC, Date of Government Version: 06/13/2016 Facility Status: Open - Assessment & Interim Remedial Action Global Id: T10000002568				
JIFFY CLEANERS	***512 MAGNOLIA AVENUE***	***SSE 1/4 - 1/2 (0.374 mi.)***	***L54***	***96***
Database: SLIC, Date of Government Version: 06/13/2016 Facility Status: Open - Site Assessment Global Id: T0608147901				
FOMER BETTY BRITE	***446 BROADWAY***	***SSE 1/4 - 1/2 (0.423 mi.)***	***58***	***116***
Database: SLIC, Date of Government Version: 06/13/2016 Facility Status: Open - Site Assessment Global Id: SL0608107611				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board’s Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BAKERS OLYMPIC	1009 EL CAMINO REAL	S 0 - 1/8 (0.079 mi.)	C19	29
Database: UST, Date of Government Version: 06/13/2016 Facility Id: 41--018356				
SF WATER DEPT.	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C24***	***45***
Database: UST, Date of Government Version: 06/13/2016 Facility Id: 41--123432				

EXECUTIVE SUMMARY

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, and dated 07/06/2016 has revealed that there are 3 AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SFPUC MILLBRAE MAINT	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C27***	***48***
BART SANTA PAULA SUB	7 MONTEREY	ESE 1/8 - 1/4 (0.168 mi.)	G35	65

Lower Elevation	Address	Direction / Distance	Map ID	Page
HETCH HETCHY WATER &	SANTA PAULA AND BAY	E 1/8 - 1/4 (0.246 mi.)	J45	73

State and tribal Brownfields sites

BROWNFIELDS: A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

A review of the BROWNFIELDS list, as provided by EDR, and dated 02/29/2016 has revealed that there is 1 BROWNFIELDS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JIFFY CLEANERS	***512 MAGNOLIA AVENUE***	***SSE 1/4 - 1/2 (0.374 mi.)***	***L54***	***96***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 06/13/2016 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
REPLANET LLC Cert Id: RC230638.001	***525 EL CAMINO REAL***	***SSE 1/4 - 1/2 (0.303 mi.)***	***48***	***74***

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 4 SWEEPS UST sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FIRESTONE STORE #365 Status: A Tank Status: A Comp Number: 990016	***1201 EL CAMINO REAL***	***W 0 - 1/8 (0.065 mi.)***	***D15***	***22***
TEXACO SERVICE STATI Status: A Comp Number: 990011	***1009 EL CAMINO REAL***	***S 0 - 1/8 (0.079 mi.)***	***C17***	***27***
SAN FRANCISCO WATER Status: A Comp Number: 990023	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C23***	***42***
SFPUC MILLBRAE MAINT Status: A Tank Status: A Comp Number: 990031	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C27***	***48***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 5 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A J K L INC TIRE CEN Facility Id: 00000059716	***1155 EL CAMINO REAL***	***WSW 0 - 1/8 (0.038 mi.)***	***B7***	***11***
GOODYEAR SAN BRUNO T Facility Id: 00000054435	***1155 EL CAMINO REAL***	***WSW 0 - 1/8 (0.038 mi.)***	***B8***	***16***
FIRESTONE COMPLETE A Facility Id: 00000005839	***1201 EL CAMINO REAL***	***W 0 - 1/8 (0.065 mi.)***	***D14***	***20***
SUBURBAN HEADQUARTER Facility Id: 00000030282	1000 EL CAMINO REAL	S 0 - 1/8 (0.090 mi.)	C26	47
SFPUC MILLBRAE MAINT Facility Id: 00000030253	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C27***	***48***

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there is 1 CA FID UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TEXACO SERVICE STATI Facility Id: 41004995 Status: A	***1009 EL CAMINO REAL***	***S 0 - 1/8 (0.079 mi.)***	***C17***	***27***

EXECUTIVE SUMMARY

Local Land Records

DEED: The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes .

A review of the DEED list, as provided by EDR, and dated 06/06/2016 has revealed that there is 1 DEED site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOMITA PARK ELEMENTA Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY Envirostor ID: 60001360	***200 SANTA HELENA AVE***	***NW 1/4 - 1/2 (0.315 mi.)***	***49***	***76***

Other Ascertainable Records

Hazardous Materials Business Plan, Hazardous Waste Generator, Underground Storage tanks

A review of the San Mateo Co. BI list, as provided by EDR, and dated 06/02/2016 has revealed that there are 21 San Mateo Co. BI sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CSK AUTO INC Facility Id: FA0012597	1145 EL CAMINO REAL	SW 0 - 1/8 (0.027 mi.)	B6	11
GOODYEAR SAN BRUNO T Facility Id: FA0018379	***1155 EL CAMINO REAL***	***WSW 0 - 1/8 (0.038 mi.)***	***B8***	***16***
FIRESTONE COMPLETE A Facility Id: FA0018361	***1201 EL CAMINO REAL***	***W 0 - 1/8 (0.065 mi.)***	***D14***	***20***
HOLIDAY CLEANERS Facility Id: FA0045306 Facility Id: FA0011893	***1050 BROADWAY***	***SSW 0 - 1/8 (0.073 mi.)***	***C16***	***23***
ROB BAKER GARAGE Facility Id: FA0018356 Facility Id: FA0058501	***1009 EL CAMINO REAL***	***S 0 - 1/8 (0.079 mi.)***	***C20***	***29***
T MOBILE WEST CORP-S Facility Id: FA0045257	900 EL CAMINO REAL	SE 0 - 1/8 (0.084 mi.)	E21	40
ORCHARD SUPPLY COMPA Facility Id: FA0054241	***900 EL CAMINO REAL***	***SE 0 - 1/8 (0.084 mi.)***	***E22***	***40***
SFPUC MILLBRAE MAINT Facility Id: FA0010711	***1000 EL CAMINO REAL***	***S 0 - 1/8 (0.090 mi.)***	***C27***	***48***
KENTUCKY FRIED CHICK Facility Id: FA0013386	950 EL CAMINO REAL	SSE 1/8 - 1/4 (0.147 mi.)	31	56
DR JANIS STONER CHIR Facility Id: FA0012917	1301 BROADWAY	W 1/8 - 1/4 (0.152 mi.)	32	56
BART SANTA PAULA VEN Facility Id: FA0058013	19 MONTEREY	ESE 1/8 - 1/4 (0.165 mi.)	G34	64
BART SANTA PAULA SUB Facility Id: FA0027900	7 MONTEREY	ESE 1/8 - 1/4 (0.168 mi.)	G36	65
KOHL'S DEPARTMENT ST	***855 BROADWAY***	***S 1/8 - 1/4 (0.173 mi.)***	***37***	***66***

EXECUTIVE SUMMARY

Facility Id: FA0008851				
AT&T MOBILITY- 101 A Facility Id: FA0028491	301 SANTA PAULA	ESE 1/8 - 1/4 (0.176 mi.)	G38	67
VERIZON WIRELESS-SFO Facility Id: FA0027814	1007 HEMLOCK	SE 1/8 - 1/4 (0.190 mi.)	39	68
WALGREEN STORE #625 Facility Id: FA0028775	***615 BROADWAY***	***S 1/8 - 1/4 (0.224 mi.)***	***H41***	***71***
SHERWIN WILLIAMS STO Facility Id: FA0055205	1395 EL CAMINO REAL	WNW 1/8 - 1/4 (0.228 mi.)	42	72
SUPER BURRITO Facility Id: FA0000956	780 EL CAMINO REAL	SSE 1/8 - 1/4 (0.235 mi.)	I43	72

Lower Elevation	Address	Direction / Distance	Map ID	Page
MADRONE LIFT STATION Facility Id: FA0046886	340 MADRONE	NNE 0 - 1/8 (0.092 mi.)	F28	55
TOMMYS CLEANERS Facility Id: FA0023579	***1340 EL CAMINO REAL***	***WNW 1/8 - 1/4 (0.156 mi.)***	***33***	***56***
SAN FRANCISCO PUBLIC Facility Id: FA0026630	SANTA PAULA AND BAY	E 1/8 - 1/4 (0.242 mi.)	J44	73

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 06/02/2016 has revealed that there are 2 DRYCLEANERS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HOLIDAY CLEANERS EPA Id: CAL000354997	***1050 BROADWAY***	***SSW 0 - 1/8 (0.073 mi.)***	***C16***	***23***

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOMMYS CLEANERS EPA Id: CAL000387001	***1340 EL CAMINO REAL***	***WNW 1/8 - 1/4 (0.156 mi.)***	***33***	***56***

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 9 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MALLOY PROPERTY Reg Id: 41-0742	1201 EL CAMINO REAL	W 0 - 1/8 (0.065 mi.)	D11	19

Reg Id: 41-1102				
CITIBANK Reg Id: 41-0850	700 EL CAMINO REAL	SSE 1/4 - 1/2 (0.260 mi.)	I46	74
MIDAS MUFFLER Reg Id: 41-0907	700 EL CAMINO REAL	SSE 1/4 - 1/2 (0.260 mi.)	I47	74
CHEVRON 9-1035 Reg Id: 41-1050	***501 EL CAMINO REAL***	***SSE 1/4 - 1/2 (0.354 mi.)***	***K52***	***95***
JIFFY CLEANERS Reg Id: 41-1068	512 MAGNOLIA	SSE 1/4 - 1/2 (0.374 mi.)	L53	96
SHELL Reg Id: 41-0914	491 EL CAMINO REAL	SSE 1/4 - 1/2 (0.387 mi.)	K55	106
GREEN HILLS COUNTRY Reg Id: 41-0253	***400 LUDEMAN***	***WSW 1/4 - 1/2 (0.443 mi.)***	***M60***	***122***
HICKEY FAMILY PARTNE Reg Id: 41-0487	***1581 EL CAMINO***	***NW 1/4 - 1/2 (0.456 mi.)***	***62***	***129***

Lower Elevation	Address	Direction / Distance	Map ID	Page
SPEE DEE OIL CHANGE Reg Id: 41-0358	***390 EL CAMINO REAL***	***SE 1/4 - 1/2 (0.474 mi.)***	***N64***	***134***

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 09/10/2015 has revealed that there are 3 Notify 65 sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GREEN HILLS COUNTY C	500 LUDEMAN LANE	WSW 1/2 - 1 (0.684 mi.)	66	142
UNOCAL SERVICE STATI	1876 EL CAMINO REAL	SE 1/2 - 1 (0.967 mi.)	69	145

Lower Elevation	Address	Direction / Distance	Map ID	Page
CORPORATION YARD	225 HUNTINGTON AVENU	NNW 1/2 - 1 (0.893 mi.)	68	144

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk

Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 4 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	1145 EL CAMINO REAL	SW 0 - 1/8 (0.027 mi.)	B5	11
Not reported	1155 EL CAMINO REAL	WSW 0 - 1/8 (0.038 mi.)	B9	18
Not reported	1201 EL CAMINO REAL	W 0 - 1/8 (0.065 mi.)	D13	20
Not reported	1009 EL CAMINO REAL	S 0 - 1/8 (0.079 mi.)	C18	28

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 3 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	1065 EL CAMINO REAL	SSW 0 - 1/8 (0.047 mi.)	C10	18

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	66 SPRUCE ST	NNE 0 - 1/8 (0.116 mi.)	F29	55
Not reported	73 SPRUCE ST	NE 0 - 1/8 (0.119 mi.)	30	55

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
39-49 EL CAMINO REAL	SLIC
BROWNING-FERRIS INDUSTRIES	ENVIROSTOR

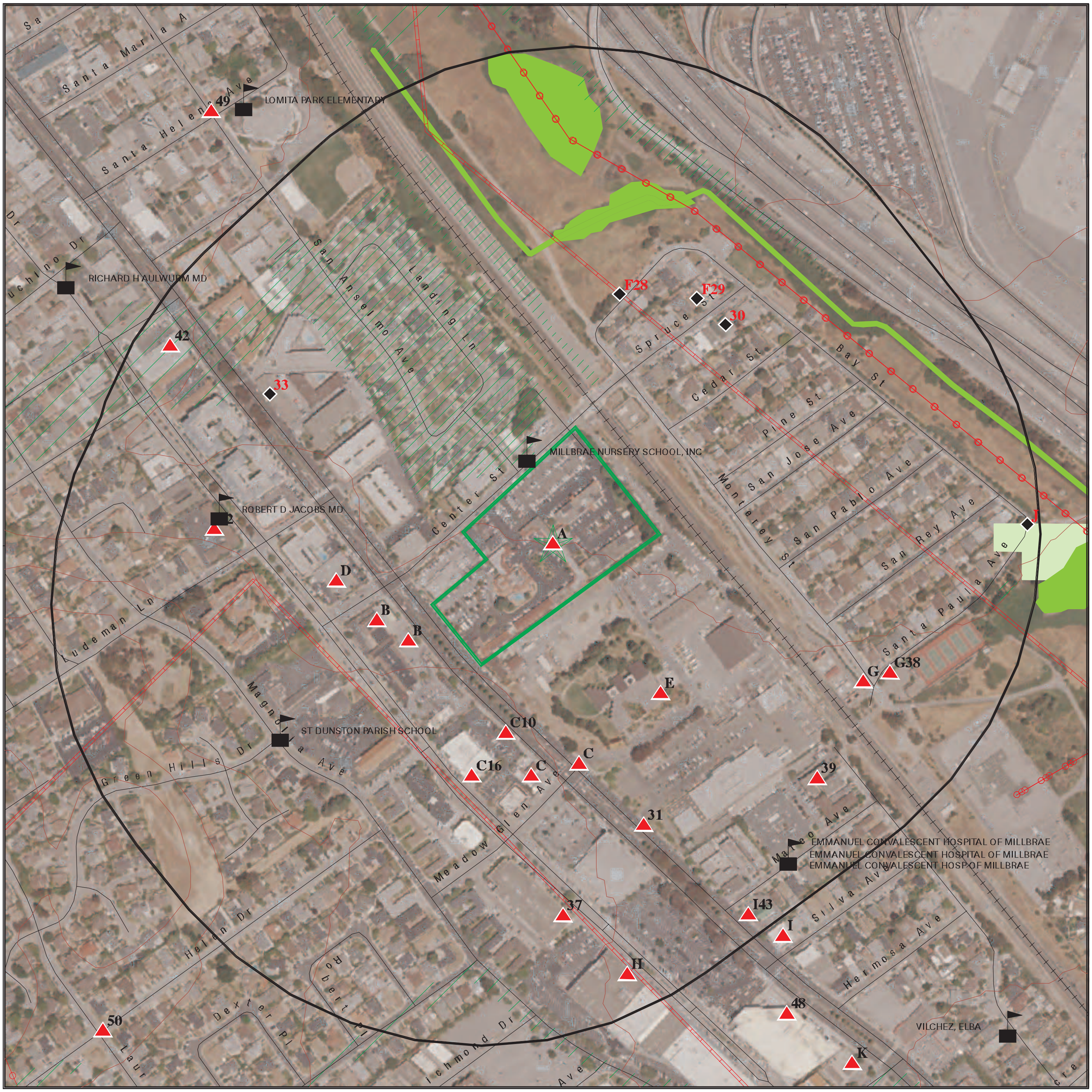
OVERVIEW MAP - 4739423.2S

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	363712	CLIENT:	AEI Consultants
ADDRESS:	1100 & 1150 El Camino Real, 33 & 35 Center Street	CONTACT:	Brooke
	Millbrae CA 94030	INQUIRY #:	4739423.2s
LAT/LONG:	37.60813 / 122.396992	DATE:	September 28, 2016 4:00 pm

DETAIL MAP - 4739423.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 363712	CLIENT: AEI Consultants
ADDRESS: 1100 & 1150 El Camino Real, 33 & 35 Center Street Millbrae CA 94030	CONTACT: Brooke INQUIRY #: 4739423.2s
LAT/LONG: 37.60813 / 122.396992	DATE: September 28, 2016 4:01 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		2	1	NR	NR	NR	3
RCRA-CESQG	0.250		0	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	2	2	NR	4
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500	2	6	0	12	NR	NR	20

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		1	0	2	NR	NR	3
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		2	0	NR	NR	NR	2
AST	0.250		1	2	NR	NR	NR	3
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	1	NR	NR	1
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	1	NR	NR	1
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		4	0	NR	NR	NR	4
HIST UST	0.250	1	5	0	NR	NR	NR	6
CA FID UST	0.250		1	0	NR	NR	NR	1
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	1	NR	NR	1
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
San Mateo Co. BI	0.250	1	9	12	NR	NR	NR	22
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		1	1	NR	NR	NR	2
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500	1	1	0	8	NR	NR	10
HWP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
HWT	0.250		0	0	NR	NR	NR	0
MINES	TP		NR	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	3	NR	3
UIC	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ICE	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		4	NR	NR	NR	NR	4
EDR Hist Cleaner	0.125		3	NR	NR	NR	NR	3
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP	1	NR	NR	NR	NR	NR	1
- Totals --		6	40	17	27	5	0	95

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 Target Property	**EL RANCHO MOTEL 1100 EL CAMINO REAL MILLBRAE, CA 94030**	**LUST HIST UST**	**U001594240 N/A**

Site 1 of 4 in cluster A

Actual: 20 ft.

LUST:

Region:	STATE
Global Id:	T0608100966
Latitude:	37.608158
Longitude:	-122.396993
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/29/2000
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-1053
LOC Case Number:	990021
File Location:	Local Agency Warehouse
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608100966
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608100966
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608100966
Status:	Completed - Case Closed
Status Date:	02/29/2000
Global Id:	T0608100966
Status:	Open - Case Begin Date
Status Date:	06/08/1997

Regulatory Activities:

Global Id:	T0608100966
Action Type:	ENFORCEMENT
Date:	10/01/1997
Action:	Notice of Responsibility - #1

EL RANCHO MOTEL (Continued) **U001594240**

Global Id:	T0608100966
Action Type:	Other
Date:	06/08/1997
Action:	Leak Reported

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	990021
Facility Status:	9- Case Closed
Global ID:	T0608100966
APN Number:	021324320
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

HIST UST:

File Number:	0002BE50
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002BE50.pdf
Region:	STATE
Facility ID:	00000011166
Facility Type:	Other
Other Type:	HOTEL
Contact Name:	JOHN WILMS
Telephone:	4155882912
Owner Name:	EL RANCHO MOTEL, INC.
Owner Address:	1100 EL CAMINO REAL
Owner City,St,Zip:	MILLBRAE, CA 94030
Total Tanks:	0001

Tank Num:	001
Container Num:	#1
Year Installed:	1979
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Click here for Geo Tracker PDF:

A2
Target
Property

BEST WESTERN EL RANCHO INN
1100 EL CAMINO REAL
MILLBRAE, CA

RGA LUST **S114582721**
N/A

Site 2 of 4 in cluster A

Actual:
20 ft.

RGA LUST:

2012	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2011	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2010	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2009	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2008	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2007	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2006	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2005	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2003	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2002	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL

BEST WESTERN EL RANCHO INN (Continued) **S114582721**

2001	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
2000	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL
1998	BEST WESTERN EL RANCHO INN	1100 EL CAMINO REAL

A3
Target
Property

BEST WESTERN EL RANCHO INN
1100 EL CAMINO REAL
MILLBRAE, CA 99430

LUST **S102859827**
N/A

Site 3 of 4 in cluster A

Actual:
20 ft.

LUST REG 2:

Region:	2
Facility Id:	Not reported
Facility Status:	Case Closed
Case Number:	990021
How Discovered:	OM
Leak Cause:	Unknown
Leak Source:	Unknown
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

A4
Target
Property

MCDONALDS OF MILLBRAE
1101 EL CAMINO REAL
MILLBRAE, CA 94030

San Mateo Co. BI **S103065296**
HIST CORTESE **N/A**

Site 4 of 4 in cluster A

Actual:
20 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0002563
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0082004
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0839

B5 | **EDR Hist Auto** | **1015166967**
SW **1145 EL CAMINO REAL** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.027 mi.
141 ft. **Site 1 of 5 in cluster B**

Relative: Higher

Actual: 34 ft.

EDR Historical Auto Stations:

Name:	KRAGEN AUTO PARTS
Year:	2003
Address:	1145 EL CAMINO REAL

B6 **CSK AUTO INC** | **San Mateo Co. BI** | **S102268402**
SW **1145 EL CAMINO REAL** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.027 mi.
141 ft. **Site 2 of 5 in cluster B**

Relative: Higher

Actual: 34 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0012597
Prog Element Code:	GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id:	PR0012287
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status:	INACTIVE

Region:	SAN MATEO
Facility ID:	FA0012597
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0005085
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	INACTIVE

B7 **A J K L INC TIRE CENTER** | **RCRA-SQG** | **1000302310**
WSW **1155 EL CAMINO REAL** | **HIST UST** | **CAD982369969**
< 1/8 **MILLBRAE, CA 94030** | **FINDS**
0.038 mi. | **HAZNET**
200 ft. **Site 3 of 5 in cluster B** | **ECHO**

Relative: Higher

Actual: 29 ft.

RCRA-SQG:

Date form received by agency:	02/26/1999
Facility name:	A J K L INC TIRE CENTER
Facility address:	1155 EL CAMINO REAL MILLBRAE, CA 94030
EPA ID:	CAD982369969
Contact:	JERRY GALLI
Contact address:	1155 EL CAMINO REAL MILLBRAE, CA 94030
Contact country:	US
Contact telephone:	(650) 583-2417
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

A J K L INC TIRE CENTER (Continued) **1000302310**

Owner/Operator Summary:

Owner/operator name:	A J K L INC
Owner/operator address:	260 EL CAMINO REAL SAN CARLOS, CA 94070
Owner/operator country:	Not reported
Owner/operator telephone:	(650) 637-0746
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	02/26/1999
Site name:	A J K L INC TIRE CENTER
Classification:	Large Quantity Generator

. Waste code:	D000
. Waste name:	Not Defined
. Waste code:	D001
. Waste name:	IGNITABLE WASTE
. Waste code:	D002
. Waste name:	CORROSIVE WASTE
. Waste code:	D008
. Waste name:	LEAD
. Waste code:	F001
. Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
. Waste code:	F002

A J K L INC TIRE CENTER (Continued) **1000302310**

. Waste name:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
. Waste code:	F003
. Waste name:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
. Waste code:	F004
. Waste name:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: CRESOLS, CRESYLIC ACID, AND NITROBENZENE; AND THE STILL BOTTOMS FROM THE RECOVERY OF THESE SOLVENTS; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
. Waste code:	F005
. Waste name:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Date form received by agency:	09/01/1996
Site name:	A J K L INC TIRE CENTER
Classification:	Small Quantity Generator
Violation Status:	No violations found

HIST UST:

File Number:	0002C10A
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002C10A.pdf
Region:	STATE
Facility ID:	00000059716
Facility Type:	Other
Other Type:	TIRE CENTER
Contact Name:	F. TARDELLI
Telephone:	4155832417
Owner Name:	OLYMPIAN OIL COMPANY
Owner Address:	260 MICHELE CT.
Owner City,St,Zip:	SOUTH SAN FRANCISCO, CA 94080

A J K L INC TIRE CENTER (Continued) **1000302310**

Total Tanks: 0001

Tank Num: 001
Container Num: 1
Year Installed: 1974
Tank Capacity: 00000250
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: 14
Leak Detection: None

Click here for Geo Tracker PDF:

FINDS:

Registry ID: 110002802218

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
envid: 1000302310
Year: 2004
GEPAID: CAD982369969
Contact: JERRY GALLI
Telephone: 6505832417
Mailing Name: Not reported
Mailing Address: 1155 EL CAMINO REAL
Mailing City,St,Zip: MILLBRAE, CA 940302014
Gen County: Not reported
TSD EPA ID: CA0000084517
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.2
Cat Decode: Aqueous solution with total organic residues less than 10 percent
Method Decode: Transfer Station
Facility County: San Mateo

envid: 1000302310
Year: 2004
GEPAID: CAD982369969
Contact: JERRY GALLI
Telephone: 6505832417
Mailing Name: Not reported

A J K L INC TIRE CENTER (Continued) **1000302310**

Mailing Address:	1155 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940302014
Gen County:	Not reported
TSD EPA ID:	CA0000084517
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.2
Cat Decode:	Aqueous solution with total organic residues less than 10 percent
Method Decode:	Transfer Station
Facility County:	San Mateo

envid:	1000302310
Year:	2004
GEPAID:	CAD982369969
Contact:	JERRY GALLI
Telephone:	6505832417
Mailing Name:	Not reported
Mailing Address:	1155 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940302014
Gen County:	Not reported
TSD EPA ID:	CA0000084517
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Transfer Station
Tons:	Not reported
Cat Decode:	Not reported
Method Decode:	Transfer Station
Facility County:	San Mateo

envid:	1000302310
Year:	2004
GEPAID:	CAD982369969
Contact:	JERRY GALLI
Telephone:	6505832417
Mailing Name:	Not reported
Mailing Address:	1155 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940302014
Gen County:	Not reported
TSD EPA ID:	CA0000084517
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Transfer Station
Tons:	Not reported
Cat Decode:	Not reported
Method Decode:	Transfer Station
Facility County:	San Mateo

envid:	1000302310
Year:	2003
GEPAID:	CAD982369969
Contact:	JERRY GALLI
Telephone:	6505832417
Mailing Name:	Not reported
Mailing Address:	1155 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940302014
Gen County:	Not reported

A J K L INC TIRE CENTER (Continued) **1000302310**

TSD EPA ID:	CA0000084517
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Transfer Station
Tons:	0.29
Cat Decode:	Aqueous solution with total organic residues less than 10 percent
Method Decode:	Transfer Station
Facility County:	San Mateo

Click this hyperlink while viewing on your computer to access
15 additional CA_HAZNET: record(s) in the EDR Site Report.

ECHO:

Envid:	1000302310
Registry ID:	110002802218
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002802218

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
B8 **WSW** **< 1/8** **0.038 mi.** **200 ft.**	**GOODYEAR SAN BRUNO TIRE CTR INC** **1155 EL CAMINO REAL** **MILLBRAE, CA 94030** **Site 4 of 5 in cluster B**	**HIST UST** **San Mateo Co. BI** **HAZNET**	**U001594242** **N/A**

Relative:
Higher

Actual:
29 ft.

HIST UST:

File Number:	0002BBEC
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002BBEC.pdf
Region:	STATE
Facility ID:	00000054435
Facility Type:	Other
Other Type:	WASTE OIL
Contact Name:	FRANK TARDELLI
Telephone:	4155832417
Owner Name:	BANK OF AMERICA
Owner Address:	400 SOUTH EL CAMINO REAL, 6TH
Owner City,St,Zip:	SAN MATEO, CA 94402
Total Tanks:	0002

Tank Num:	001
Container Num:	I
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	None

Tank Num:	002
Container Num:	II
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	None

GOODYEAR SAN BRUNO TIRE CTR INC (Continued) **U001594242**

Click here for Geo Tracker PDF:

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0018379
Prog Element Code:	GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id:	PR0012269
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status:	INACTIVE

Region:	SAN MATEO
Facility ID:	FA0018379
Prog Element Code:	STORES HAZ MAT <1,199GAL,9,999LB,4,799FT3
Record Id:	PR0005067
Description:	STORES HAZ MAT <1,199GAL,9,999LB,4,799CF
Facility Status:	INACTIVE

HAZNET:

envid:	U001594242
Year:	2013
GEPAID:	CAC002722348
Contact:	MARTIN SCHWAGER
Telephone:	4156262106
Mailing Name:	Not reported
Mailing Address:	2148A MARKET ST
Mailing City,St,Zip:	SAN FRANCISCO, CA 941141319
Gen County:	San Mateo
TSD EPA ID:	CAD980887418
TSD County:	Alameda
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.76
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Not reported

envid:	U001594242
Year:	2013
GEPAID:	CAC002732446
Contact:	MARTIN SCHWAGER
Telephone:	4156262100
Mailing Name:	Not reported
Mailing Address:	2148A MARKET STREET
Mailing City,St,Zip:	SAN FRANCISCO, CA 94114
Gen County:	San Mateo
TSD EPA ID:	CAT080012602
TSD County:	Solano
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	2.085
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

GOODYEAR SAN BRUNO TIRE CTR INC (Continued) **U001594242**

Facility County: Not reported

B9
WSW
< 1/8
0.038 mi.
200 ft.

1155 EL CAMINO REAL
MILLBRAE, CA 94030

Site 5 of 5 in cluster B

EDR Hist Auto **1015169553**
N/A

Relative:
Higher

Actual:
29 ft.

EDR Historical Auto Stations:

Name:	SMOG CHECK STATIONS MILLBRAE
Year:	1999
Address:	1155 EL CAMINO REAL
Name:	SAN BRUNO TIRE CTR INC
Year:	2010
Address:	1155 EL CAMINO REAL
Name:	SMOG CHECK STATIONS
Year:	2011
Address:	1155 EL CAMINO REAL
Name:	SAN BRUNO TIRE CENTER
Year:	2012
Address:	1155 EL CAMINO REAL

C10
SSW
< 1/8
0.047 mi.
248 ft.

1065 EL CAMINO REAL
MILLBRAE, CA 94030

Site 1 of 11 in cluster C

EDR Hist Cleaner **1014972106**
N/A

Relative:
Higher

Actual:
44 ft.

EDR Historical Cleaners:

Name:	SUPER WASH
Year:	1999
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2000
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2001
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2003
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2004
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2005
Address:	1065 EL CAMINO REAL

(Continued) **1014972106**

Name:	SUPER WASH
Year:	2006
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2007
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2008
Address:	1065 EL CAMINO REAL
Name:	SUPER WASH
Year:	2009
Address:	1065 EL CAMINO REAL

D11 **MALLOY PROPERTY** **HIST CORTESE** **S101303122**
West **1201 EL CAMINO REAL** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.065 mi.
344 ft. **Site 1 of 5 in cluster D**

Relative:
Higher

Actual:
27 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0742
Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-1102

D12 **BRIDGESTONE/FIRESTONE** **LUST** **S104493851**
West **1201 EL CAMINO REAL** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.065 mi.
344 ft. **Site 2 of 5 in cluster D**

Relative:
Higher

Actual:
27 ft.

LUST REG 2:

Region:	2
Facility Id:	Not reported
Facility Status:	Case Closed
Case Number:	990027
How Discovered:	OM
Leak Cause:	Unknown
Leak Source:	Unknown
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

D13		**EDR Hist Auto**	**1015179874**
West	**1201 EL CAMINO REAL**		**N/A**
< 1/8	**MILLBRAE, CA 94030**		
0.065 mi.			
344 ft.	**Site 3 of 5 in cluster D**		

Relative: **Higher**

Actual: **27 ft.**

EDR Historical Auto Stations:

Name:	FIRESTONE TIRE & SERVICE CNTR
Year:	2003
Address:	1201 EL CAMINO REAL
Name:	FIRESTONE TIRE & SERVICE CENTERS
Year:	2009
Address:	1201 EL CAMINO REAL

D14	**FIRESTONE COMPLETE AUTO CARE #012785**	**LUST**	**1000223051**
West	**1201 EL CAMINO REAL**	**HIST UST**	**N/A**
< 1/8	**MILLBRAE, CA 94030**	**San Mateo Co. BI**	
0.065 mi.			
344 ft.	**Site 4 of 5 in cluster D**		

Relative: **Higher**

Actual: **27 ft.**

LUST:

Region:	STATE
Global Id:	T0608174722
Latitude:	37.607797
Longitude:	-122.399629
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/14/2002
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-4056
LOC Case Number:	990027
File Location:	Local Agency Warehouse
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608174722
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608174722
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

FIRESTONE COMPLETE AUTO CARE #012785 (Continued) **1000223051**

Status History:

Global Id:	T0608174722
Status:	Completed - Case Closed
Status Date:	02/14/2002
Global Id:	T0608174722
Status:	Open - Case Begin Date
Status Date:	05/12/1999

Regulatory Activities:

Global Id:	T0608174722
Action Type:	ENFORCEMENT
Date:	05/14/1999
Action:	Notice of Responsibility - #1
Global Id:	T0608174722
Action Type:	Other
Date:	05/12/1999
Action:	Leak Reported

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	990027
Facility Status:	9- Case Closed
Global ID:	T0608174722
APN Number:	021291020
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

HIST UST:

File Number:	0002BE81
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002BE81.pdf
Region:	STATE
Facility ID:	00000005839
Facility Type:	Other
Other Type:	AUTO SVC CENTER
Contact Name:	CY HARTLEY
Telephone:	4158719096
Owner Name:	FIRESTONE TIRE & RUBBER CO.
Owner Address:	1200 FIRESTONE PARKWAY
Owner City,St,Zip:	AKRON, OH 44317
Total Tanks:	0001
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000250
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual

FIRESTONE COMPLETE AUTO CARE #012785 (Continued) **1000223051**

Click here for Geo Tracker PDF:

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0018361
Prog Element Code:	2221
Record Id:	PR0012262
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT - LQG
Facility Status:	ACTIVE

Region:	SAN MATEO
Facility ID:	FA0018361
Prog Element Code:	STORES HAZ MAT <3,499GAL,27,999LB,13,999FT3
Record Id:	PR0023848
Description:	STORES HAZ MAT <3,499GAL,27,999LB,13,999CF
Facility Status:	ACTIVE

Region:	SAN MATEO
Facility ID:	FA0018361
Prog Element Code:	UNDERGROUND TANK - GENERAL
Record Id:	PR0023010
Description:	UNDERGROUND TANK - GENERAL
Facility Status:	INACTIVE

D15
West
< 1/8
0.065 mi.
344 ft.

FIRESTONE STORE #3657
1201 EL CAMINO REAL
MILLBRAE, CA 94030

Site 5 of 5 in cluster D

SWEEPS UST / **FINDS** / **ECHO** — **1007690997** / **N/A**

Relative: **Higher**

Actual: **27 ft.**

SWEEPS UST:

Status:	Active
Comp Number:	990016
Number:	1
Board Of Equalization:	Not reported
Referral Date:	04-05-94
Action Date:	04-05-94
Created Date:	06-20-90
Owner Tank Id:	1-550-O/C
SWRCB Tank Id:	41-000-990016-000001
Tank Status:	A
Capacity:	550
Active Date:	04-05-94
Tank Use:	OIL
STG:	W
Content:	WASTE OIL
Number Of Tanks:	1

FINDS:

Registry ID: 110017957843

Environmental Interest/Information System
STATE MASTER

UORS (California - Used Oil Recycling System). California Integrated
Waste Management Board (CIWMB) helps communities establish and promote

FIRESTONE STORE #3657 (Continued) **1007690997**

convenient collection opportunities for used oil and used oil filters.

ECHO:
Envid: 1007690997
Registry ID: 110017957843
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110017957843

C16
SSW
< 1/8
0.073 mi.
383 ft.

HOLIDAY CLEANERS
1050 BROADWAY
MILLBRAE, CA 94030

Site 2 of 11 in cluster C

San Mateo Co. BI
DRYCLEANERS
EMI

1001262833
N/A

Relative:
Higher

Actual:
51 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0045306
Prog Element Code:	GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id:	PR0058753
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0045306
Prog Element Code:	STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id:	PR0058752
Description:	STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0011893
Prog Element Code:	GENERATES <27 GAL/YEAR
Record Id:	PR0012286
Description:	GENERATES <27 GAL/YEAR
Facility Status:	INACTIVE
Region:	SAN MATEO
Facility ID:	FA0011893
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0046837
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	INACTIVE

DRYCLEANERS:

EPA Id:	CAL000354997
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	07/22/2010
Facility Active:	Yes
Inactive Date:	Not reported
Facility Addr2:	Not reported
Owner Name:	EUNA & HYUN S. KIM
Owner Address:	EUNA & HYUN S. KIM
Owner Address 2:	Not reported
Owner Telephone:	6506975779

HOLIDAY CLEANERS (Continued) **1001262833**

Contact Name:	EUNA KIM
Contact Address:	1050 BROADWAY
Contact Address 2:	Not reported
Contact Telephone:	6506975779
Mailing Name:	Not reported
Mailing Address 1:	1050 BROADWAY
Mailing Address 2:	Not reported
Mailing City:	MILLBRAE
Mailing State:	CA
Mailing Zip:	940301944
Owner Fax:	2
Region Code:	6506975779

EMI:

Year:	1990
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1993
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1995
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported

HOLIDAY CLEANERS (Continued) **1001262833**

Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 1996
County Code: 41
Air Basin: SF
Facility ID: 4998
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 1997
County Code: 41
Air Basin: SF
Facility ID: 4998
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 1998
County Code: 41
Air Basin: SF
Facility ID: 4998
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0

HOLIDAY CLEANERS (Continued) **1001262833**

Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year:	1999
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2000
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2005
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2006
County Code:	41
Air Basin:	SF
Facility ID:	4998

HOLIDAY CLEANERS (Continued) **1001262833**

Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.378
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2008
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.238
Reactive Organic Gases Tons/Yr:	.8952
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2010
County Code:	41
Air Basin:	SF
Facility ID:	4998
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2.238
Reactive Organic Gases Tons/Yr:	0.8952
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

C17 **TEXACO SERVICE STATION** **SWEEPS UST** **S101594098**
South **1009 EL CAMINO REAL** **CA FID UST** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.079 mi.
419 ft. **Site 3 of 11 in cluster C**

Relative:
Higher

Actual:
43 ft.

SWEEPS UST:

Status:	Active
Comp Number:	990011
Number:	9
Board Of Equalization:	Not reported

TEXACO SERVICE STATION (Continued) **S101594098**

Referral Date:	04-05-94
Action Date:	04-05-94
Created Date:	10-13-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

CA FID UST:

Facility ID:	41004995
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	4150000000
Mail To:	Not reported
Mailing Address:	1009 EL CAMINO REAL
Mailing Address 2:	Not reported
Mailing City,St,Zip:	MILLBRAE 94030
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

C18
South **1009 EL CAMINO REAL**
< 1/8 **MILLBRAE, CA 94030**
0.079 mi.
419 ft. **Site 4 of 11 in cluster C**

EDR Hist Auto **1015123705**
N/A

Relative:
Higher

Actual:
43 ft.

EDR Historical Auto Stations:

Name:	ROB BAKER TEXACO
Year:	2002
Address:	1009 EL CAMINO REAL
Name:	BAKER ROBS TEXACO SVC
Year:	2010
Address:	1009 EL CAMINO REAL

C19 BAKERS OLYMPIC **UST U003782649**
South 1009 EL CAMINO REAL **N/A**
< 1/8 MILLBRAE, CA 94030
0.079 mi.
419 ft. Site 5 of 11 in cluster C

Relative:
Higher

Actual:
43 ft.

UST:

Facility ID:	41--018356
Permitting Agency:	SAN MATEO COUNTY
Latitude:	37.6072544
Longitude:	-122.3960092

C20 ROB BAKER GARAGE **LUST S102268399**
South 1009 EL CAMINO REAL **San Mateo Co. BI N/A**
< 1/8 MILLBRAE, CA 94030
0.079 mi.
419 ft. Site 6 of 11 in cluster C

Relative:
Higher

Actual:
43 ft.

LUST:

Region:	STATE
Global Id:	T0608121993
Latitude:	37.6058863891452
Longitude:	-122.397160191074
Case Type:	LUST Cleanup Site
Status:	Open - Assessment & Interim Remedial Action
Status Date:	07/19/2011
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-4055
LOC Case Number:	990026
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Extracted from Pangea’s May 24 2010, First-half 2010 groundwater monitoring report. San Mateo County does not take responsibility for the accuracy of the statements made or any professional interpretations made in the referenced report. Environmental compliance work commenced in January 1999 when two 4,000-gallon gasoline USTs, one 6,000-gallon gasoline UST and one 6,000-gallon diesel UST and associated piping were removed from the site. Petroleum hydrocarbons were detected in site soil and approximately 500 cubic yards of contaminated soil was over-excavated from the former UST cavity in February 1999. In October 2000, soil borings SB-1 through SB-6 evaluated the lateral extent of soil and groundwater contamination at the site. In July 2003, monitoring wells MW-1 through MW-4 were installed and periodic groundwater monitoring was initiated at the site. In December 2003, offsite soil borings were completed to further evaluation of the lateral extent of contaminant migration. In 2005 the groundwater monitoring frequency was reduced to a semi-annual (in March and September). Interim site remediation was performed using dual phase extraction (DPE) during December 2008 and February 2009 to remediate free product in MW-4 and to reduce dissolved hydrocarbon and MTBE concentrations. Assessment of the offsite extent of petroleum hydrocarbons and MTBE has been ongoing since 2003. The Crystal Springs water-supply right-of-way and the offices and maintenance facilities of the San Francisco Water Department (SFWD) are located directly across El Camino Real.

ROB BAKER GARAGE (Continued) **S102268399**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608121993
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608121993
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608121993
Status:	Open - Assessment & Interim Remedial Action
Status Date:	07/19/2011
Global Id:	T0608121993
Status:	Open - Case Begin Date
Status Date:	01/20/1999
Global Id:	T0608121993
Status:	Open - Site Assessment
Status Date:	02/09/2000

Regulatory Activities:

Global Id:	T0608121993
Action Type:	RESPONSE
Date:	01/12/2009
Action:	Soil and Water Investigation Workplan - Addendum
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	07/15/2008
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	07/15/2007
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	01/15/2008
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608121993

ROB BAKER GARAGE (Continued) **S102268399**

Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 04/27/2010
Action: Staff Letter - #20100427

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 04/27/2010
Action: Staff Letter - #20100427

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 04/14/2015
Action: Staff Letter - #20150414

Global Id: T0608121993
Action Type: RESPONSE
Date: 02/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: RESPONSE
Date: 01/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: RESPONSE
Date: 08/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: RESPONSE
Date: 05/15/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 01/21/2009
Action: Staff Letter - #20090121

Global Id: T0608121993
Action Type: REMEDIATION
Date: 12/10/2008
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 01/30/2014
Action: Staff Letter - #20140130

Global Id: T0608121993
Action Type: RESPONSE
Date: 08/20/2010

ROB BAKER GARAGE (Continued) **S102268399**

Action: Soil and Water Investigation Workplan - Addendum

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 01/16/2009
Action: Letter - Notice

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 07/20/2010
Action: Staff Letter - #20100720

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 02/09/2011
Action: Staff Letter - #20110209

Global Id: T0608121993
Action Type: RESPONSE
Date: 11/15/2016
Action: Monitoring Report - Annually

Global Id: T0608121993
Action Type: RESPONSE
Date: 01/27/2005
Action: Soil and Water Investigation Workplan

Global Id: T0608121993
Action Type: RESPONSE
Date: 11/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0608121993
Action Type: RESPONSE
Date: 08/31/2007
Action: Risk Assessment Report

Global Id: T0608121993
Action Type: RESPONSE
Date: 01/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: RESPONSE
Date: 08/15/2011
Action: Monitoring Report - Quarterly

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 02/15/2007
Action: Staff Letter - #20070215

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 12/04/2007
Action: Staff Letter - #20071204

ROB BAKER GARAGE (Continued) **S102268399**

Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	04/17/2003
Action:	Staff Letter - #20030417B
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	10/28/2004
Action:	Staff Letter - #20041028
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	02/26/1999
Action:	Notice of Responsibility - #1
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	04/17/2003
Action:	Staff Letter - #20030417A
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	03/01/2004
Action:	Staff Letter - #20040301C
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	12/07/2006
Action:	Staff Letter - #20071207
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	09/13/2006
Action:	Notice of Violation - #20060913
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	12/07/2006
Action:	Notice of Violation - #20061207
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	03/15/2006
Action:	Staff Letter - #20060315
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	03/22/2005
Action:	Staff Letter - #20050322A
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	05/19/2005
Action:	Staff Letter - #20050519
Global Id:	T0608121993
Action Type:	ENFORCEMENT

ROB BAKER GARAGE (Continued) **S102268399**

Date:	01/14/2004
Action:	Staff Letter - #20040114
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	06/07/2007
Action:	Staff Letter - #20070607
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	03/22/2005
Action:	Staff Letter - #20050322B
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	11/04/2010
Action:	Technical Correspondence / Assistance / Other - #20101104
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	05/06/2009
Action:	Staff Letter - #20090506
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	01/31/2011
Action:	Well Installation Report - Regulator Responded
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	04/16/2004
Action:	Staff Letter - #20040416
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	03/01/2004
Action:	Staff Letter - #20040301A
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	02/12/2009
Action:	Technical Correspondence / Assistance / Other
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	08/15/2012
Action:	Interim Remedial Action Report - Regulator Responded
Global Id:	T0608121993
Action Type:	REMEDIATION
Date:	01/15/1999
Action:	Excavation
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	01/15/2010
Action:	Monitoring Report - Semi-Annually

ROB BAKER GARAGE (Continued) **S102268399**

Global Id:	T0608121993
Action Type:	RESPONSE
Date:	07/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	06/01/2009
Action:	Correspondence
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	07/08/2009
Action:	Staff Letter - #20090708
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	08/14/2014
Action:	Warning Letter - #20140814
Global Id:	T0608121993
Action Type:	Other
Date:	01/20/1999
Action:	Leak Discovery
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	11/15/2015
Action:	Monitoring Report - Annually
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	06/24/2016
Action:	Proposed Plan
Global Id:	T0608121993
Action Type:	ENFORCEMENT
Date:	07/19/2011
Action:	Staff Letter - #20110719
Global Id:	T0608121993
Action Type:	Other
Date:	02/22/1999
Action:	Leak Reported
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	03/29/2016
Action:	Soil and Water Investigation Report
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	05/30/2014
Action:	Risk Assessment Report - Regulator Responded
Global Id:	T0608121993
Action Type:	RESPONSE

ROB BAKER GARAGE (Continued) **S102268399**

Date: 11/15/2013
Action: Monitoring Report - Semi-Annually - Regulator Responded

Global Id: T0608121993
Action Type: RESPONSE
Date: 11/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 03/01/2004
Action: Staff Letter - #20040301B

Global Id: T0608121993
Action Type: RESPONSE
Date: 01/30/2008
Action: Soil and Water Investigation Report

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 12/17/2009
Action: Staff Letter - #20091217

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 08/14/2012
Action: Staff Letter - #20120814

Global Id: T0608121993
Action Type: RESPONSE
Date: 04/25/2009
Action: Interim Remedial Action Report

Global Id: T0608121993
Action Type: RESPONSE
Date: 02/15/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 11/20/2008
Action: Staff Letter - #20081120

Global Id: T0608121993
Action Type: REMEDIATION
Date: 01/12/2012
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0608121993
Action Type: ENFORCEMENT
Date: 03/03/2016
Action: Staff Letter - #20160303

Global Id: T0608121993
Action Type: RESPONSE
Date: 05/15/2013
Action: Monitoring Report - Semi-Annually

ROB BAKER GARAGE (Continued) **S102268399**

Global Id:	T0608121993
Action Type:	RESPONSE
Date:	08/15/2014
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	04/25/2009
Action:	Soil and Water Investigation Report
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	07/15/2009
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	07/07/2003
Action:	Soil and Water Investigation Report
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	02/07/2004
Action:	Other Workplan
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	02/13/2004
Action:	Other Report / Document
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	04/05/2004
Action:	Soil and Water Investigation Workplan
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	04/05/2004
Action:	NPDES / WDR Reports
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	04/05/2004
Action:	Electronic Reporting Submittal Due
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	06/28/2004
Action:	Risk Assessment Report
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	04/05/2004
Action:	Soil and Water Investigation Workplan
Global Id:	T0608121993
Action Type:	RESPONSE

ROB BAKER GARAGE (Continued) **S102268399**

Date:	04/29/2005
Action:	Other Report / Document
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	05/16/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	05/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	05/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	11/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	07/05/2005
Action:	Soil and Water Investigation Workplan
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	07/31/2006
Action:	Soil and Water Investigation Report
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	04/14/2006
Action:	Other Workplan
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	04/14/2006
Action:	Electronic Reporting Submittal Due
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	03/12/2007
Action:	Electronic Reporting Submittal Due
Global Id:	T0608121993
Action Type:	RESPONSE
Date:	01/30/2008
Action:	Other Report / Document

LUST REG 2:

Region:	2
Facility Id:	Not reported

ROB BAKER GARAGE (Continued) **S102268399**

Facility Status: Pollution Characterization
Case Number: 990026
How Discovered: Tank Closure
Leak Cause: Unknown
Leak Source: Unknown
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: 2/9/2000
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

SAN MATEO CO. LUST:
Region: SAN MATEO
Facility ID: 990026
Facility Status: 5C- Pollution Characterization
Global ID: T0608121993
APN Number: 021363030
Case Type: SAN MATEO CO. LUST
EDR Link ID: SAN MATEO CO. LUST

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0018356
Prog Element Code: STORES HAZ MAT <1,199GAL,9,999LB,4,799FT3
Record Id: PR0023968
Description: STORES HAZ MAT <1,199GAL,9,999LB,4,799CF
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0018356
Prog Element Code: UNDERGROUND TANK - GENERAL
Record Id: PR0023006
Description: UNDERGROUND TANK - GENERAL
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0058501
Prog Element Code: GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id: PR0081068
Description: GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0058501
Prog Element Code: STORES MV FUELS OR WASTE ONLY
Record Id: PR0081067
Description: STORES MV FUELS OR WASTE ONLY
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0018356
Prog Element Code: GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id: PR0023967

ROB BAKER GARAGE (Continued) **S102268399**

Description: GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status: INACTIVE

E21 **T MOBILE WEST CORP-SITE ID SF03073A** **San Mateo Co. BI** **S108215548**
SE **900 EL CAMINO REAL** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.084 mi.
444 ft. **Site 1 of 2 in cluster E**

Relative:
Higher

Actual:
29 ft.

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0045257
Prog Element Code: STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id: PR0058539
Description: STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status: INACTIVE

E22 **ORCHARD SUPPLY COMPANY, LLC #210** **San Mateo Co. BI** **S113100327**
SE **900 EL CAMINO REAL** **HAZNET** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.084 mi.
444 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
29 ft.

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0054241
Prog Element Code: GEN <1 TONS HAZ WASTE/YR
Record Id: PR0074852
Description: GEN <1 TONS HAZ WASTE/YR
Facility Status: INACTIVE

Region: SAN MATEO
Facility ID: FA0054241
Prog Element Code: STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id: PR0074851
Description: STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status: INACTIVE

HAZNET:
envid: S113100327
Year: 2014
GEPAID: CAL000389933
Contact: JUSTIN FORD, ENVIRONMENTAL MGR
Telephone: 4083652786
Mailing Name: Not reported
Mailing Address: 6450 VIA DEL ORO
Mailing City,St,Zip: SAN JOSE, CA 951190000
Gen County: San Mateo
TSD EPA ID: NVD980895338
TSD County: 99
Waste Category: Liquids with pH <= 2
Disposal Method: Neutralization Only
Tons: 0.0185
Cat Decode: Liquids with pH <= 2
Method Decode: Neutralization Only
Facility County: San Mateo

ORCHARD SUPPLY COMPANY, LLC #210 (Continued) **S113100327**

envid:	S113100327
Year:	2014
GEPAID:	CAL000389933
Contact:	JUSTIN FORD, ENVIRONMENTAL MGR
Telephone:	4083652786
Mailing Name:	Not reported
Mailing Address:	6450 VIA DEL ORO
Mailing City,St,Zip:	SAN JOSE, CA 951190000
Gen County:	San Mateo
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.029
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Mateo

envid:	S113100327
Year:	2014
GEPAID:	CAL000389933
Contact:	JUSTIN FORD, ENVIRONMENTAL MGR
Telephone:	4083652786
Mailing Name:	Not reported
Mailing Address:	6450 VIA DEL ORO
Mailing City,St,Zip:	SAN JOSE, CA 951190000
Gen County:	San Mateo
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Unspecified solvent mixture
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.155
Cat Decode:	Unspecified solvent mixture
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Mateo

envid:	S113100327
Year:	2014
GEPAID:	CAL000389933
Contact:	JUSTIN FORD, ENVIRONMENTAL MGR
Telephone:	4083652786
Mailing Name:	Not reported
Mailing Address:	6450 VIA DEL ORO
Mailing City,St,Zip:	SAN JOSE, CA 951190000
Gen County:	San Mateo
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Pesticides and other waste associated with pesticide production
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.265
Cat Decode:	Pesticides and other waste associated with pesticide production
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery

ORCHARD SUPPLY COMPANY, LLC #210 (Continued) **S113100327**

	(H010-H129) Or (H131-H135)
Facility County:	San Mateo
envid:	S113100327
Year:	2014
GEPAID:	CAL000389933
Contact:	JUSTIN FORD, ENVIRONMENTAL MGR
Telephone:	4083652786
Mailing Name:	Not reported
Mailing Address:	6450 VIA DEL ORO
Mailing City,St,Zip:	SAN JOSE, CA 951190000
Gen County:	San Mateo
TSD EPA ID:	NVD980895338
TSD County:	99
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.3745
Cat Decode:	Off-specification, aged or surplus organics
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Mateo

Click this hyperlink while viewing on your computer to access
47 additional CA_HAZNET: record(s) in the EDR Site Report.

C23 **SAN FRANCISCO WATER DEPARTMENT** **RCRA-SQG** **1000114499**
South **1000 EL CAMINO REAL** **LUST** **CAD981453723**
< 1/8 **MILLBRAE, CA 94030** **SWEEPS UST**
0.090 mi. **FINDS**
474 ft. **Site 7 of 11 in cluster C** **ECHO**

Relative:
Higher

Actual:
37 ft.

RCRA-SQG:

Date form received by agency:	03/04/1999
Facility name:	SAN FRANCISCO WATER DEPARTMENT
Site name:	PUBLIC UTILITIES/WATER/MILLBRAE YARD
Facility address:	1000 EL CAMINO REAL MILLBRAE, CA 94030
EPA ID:	CAD981453723
Mailing address:	1390 MARKET STREET #210 SAN FRANCISCO, CA 94102
Contact:	SCOTT NAKAMURA
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	(415) 252-3994
Contact email:	Not reported
EPA Region:	09
Land type:	County
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

SAN FRANCISCO WATER DEPARTMENT (Continued) **1000114499**

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	County
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	CITY AND COUNTY OF SAN FRANCISCO
Owner/operator address:	101 GROVE ST NO 207 SAN FRANCISCO, CA 94102
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 554-2727
Legal status:	County
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	11/25/1996
Site name:	SAN FRANCISCO WATER DEPARTMENT
Classification:	Small Quantity Generator

Facility Has Received Notices of Violations:

Regulation violated:	FR - 262.50-60
Area of violation:	Generators - General
Date violation determined:	10/01/1986
Date achieved compliance:	10/01/1991
Violation lead agency:	State
Enforcement action:	Not reported
Enforcement action date:	Not reported
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	Not reported
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

SAN FRANCISCO WATER DEPARTMENT (Continued) **1000114499**

Evaluation Action Summary:

Evaluation date:	10/01/1986
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	10/01/1991
Evaluation lead agency:	State Contractor/Grantee

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	990011
Facility Status:	9- Case Closed
Global ID:	T0608100908
APN Number:	093220010
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

SWEEPS UST:

Status:	Active
Comp Number:	990023
Number:	9
Board Of Equalization:	Not reported
Referral Date:	10-26-93
Action Date:	10-26-93
Created Date:	10-13-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

FINDS:

Registry ID: 110058347123

Environmental Interest/Information System
AIR EMISSIONS CLASSIFICATION UNKNOWN

Registry ID: 110009537135

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain

SAN FRANCISCO WATER DEPARTMENT (Continued) **1000114499**

limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

HAZARDOUS AIR POLLUTANT MAJOR

ECHO:

Envid:	1000114499
Registry ID:	110058347123
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110058347123
Envid:	1000114499
Registry ID:	110009537135
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110009537135

C24 **SF WATER DEPT.** **UST** **U003782666**
South **1000 EL CAMINO REAL** **NPDES** **N/A**
< 1/8 **MILLBRAE, CA 94030**
0.090 mi.
474 ft. **Site 8 of 11 in cluster C**

Relative:
Higher

Actual:
37 ft.

UST:

Facility ID:	41--123432
Permitting Agency:	SAN MATEO COUNTY
Latitude:	37.6078979
Longitude:	-122.3948348

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	2
Regulatory Measure Id:	275361
Order No:	Not reported
Regulatory Measure Type:	Industrial
Place Id:	Not reported
WDID:	2 41I005378
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	5/9/2008
PROCESSED DATE:	11/17/1992
STATUS CODE NAME:	Terminated
STATUS DATE:	11/17/1992
PLACE SIZE:	11
PLACE SIZE UNIT:	52
FACILITY CONTACT NAME:	Robert Vasconcellos
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	415-872-5903

SF WATER DEPT. (Continued) **U003782666**

FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	San Francisco City & County
OPERATOR ADDRESS:	425 Mason St
OPERATOR CITY:	San Francisco
OPERATOR STATE:	California
OPERATOR ZIP:	94102
OPERATOR CONTACT NAME:	John Mullane
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	415-554-3160
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	California
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	415-872-5903
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	San Francisco Bay
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	4911-Electric Services
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

C25
South
< 1/8
0.090 mi.
474 ft.

S. F. DEPT. OF PUBLIC WORKS
1000 EL CAMINO REAL
MILLBRAE, CA 94030

LUST **S100932066** **N/A**

Site 9 of 11 in cluster C

Relative: **Higher**

Actual: **37 ft.**

LUST REG 2:

Region:	2
Facility Id:	Not reported
Facility Status:	Post remedial action monitoring
Case Number:	990011
How Discovered:	SA
Leak Cause:	Unknown
Leak Source:	Unknown
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	5/1/1994
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	7/31/1996

C26
South
< 1/8
0.090 mi.
474 ft.

SUBURBAN HEADQUARTERS
1000 EL CAMINO REAL
MILLBRAE, CA 94030

HIST UST **U001594251** **N/A**

Site 10 of 11 in cluster C

Relative: **Higher**

Actual: **37 ft.**

HIST UST:

File Number:	0002C231
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002C231.pdf
Region:	STATE
Facility ID:	00000030282
Facility Type:	Other
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	4156974424
Owner Name:	SAN FRANCISCO WATER DEPARTMENT
Owner Address:	425 MASON STREET
Owner City,St,Zip:	SAN FRANCISCO, CA 94102
Total Tanks:	0003

Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00001000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Visual

SUBURBAN HEADQUARTERS (Continued) **U001594251**

Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Visual

Click here for Geo Tracker PDF:

C27
South
< 1/8
0.090 mi.
474 ft.

Relative:
Higher

Actual:
37 ft.

SFPUC MILLBRAE MAINTENANCEYARD
1000 EL CAMINO REAL
MILLBRAE, CA 94030

Site 11 of 11 in cluster C

LUST
SLIC
AST
SWEEPS UST
HIST UST
San Mateo Co. BI
EMI

U001594255
N/A

LUST:

Region:	STATE
Global Id:	T0608100908
Latitude:	37.60631
Longitude:	-122.393807
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/12/2009
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-0993
LOC Case Number:	990011
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608100908
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported

Global Id:	T0608100908
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

SFPUC MILLBRAE MAINTENANCEYARD (Continued) **U001594255**

Status History:

Global Id:	T0608100908
Status:	Completed - Case Closed
Status Date:	08/12/2009
Global Id:	T0608100908
Status:	Open - Case Begin Date
Status Date:	07/01/1991
Global Id:	T0608100908
Status:	Open - Site Assessment
Status Date:	05/01/1994
Global Id:	T0608100908
Status:	Open - Site Assessment
Status Date:	05/27/2009
Global Id:	T0608100908
Status:	Open - Verification Monitoring
Status Date:	07/31/1996
Global Id:	T0608100908
Status:	Open - Verification Monitoring
Status Date:	05/27/2009

Regulatory Activities:

Global Id:	T0608100908
Action Type:	RESPONSE
Date:	07/19/2005
Action:	Soil and Water Investigation Workplan
Global Id:	T0608100908
Action Type:	REMEDIATION
Date:	05/01/1994
Action:	Excavation
Global Id:	T0608100908
Action Type:	Other
Date:	07/01/1991
Action:	Leak Discovery
Global Id:	T0608100908
Action Type:	Other
Date:	08/20/1991
Action:	Leak Reported
Global Id:	T0608100908
Action Type:	ENFORCEMENT
Date:	08/12/2009
Action:	Closure/No Further Action Letter - #20090812
Global Id:	T0608100908
Action Type:	ENFORCEMENT
Date:	08/29/1991
Action:	Notice of Responsibility - #19910829

SFPUC MILLBRAE MAINTENANCEYARD (Continued) **U001594255**

Global Id:	T0608100908
Action Type:	ENFORCEMENT
Date:	10/31/2005
Action:	Staff Letter - #20051031

Global Id:	T0608100908
Action Type:	ENFORCEMENT
Date:	03/31/2005
Action:	Staff Letter - #20050331

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	999033
Facility Status:	3B- Preliminary Assessment Underway
Global ID:	Not reported
APN Number:	093220010
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

SLIC:

Region:	STATE
Facility Status:	**Open - Assessment & Interim Remedial Action**
Status Date:	09/29/2010
Global Id:	T10000002568
Lead Agency:	SAN MATEO COUNTY LOP
Lead Agency Case Number:	999033
Latitude:	37.6068286623392
Longitude:	-122.395543456078
Case Type:	Cleanup Program Site
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	Not reported
File Location:	Not reported
Potential Media Affected:	Soil, Under Investigation
Potential Contaminants of Concern:	Diesel
Site History:	Site opened 9/29/2010 due to diesel spill from AST system.

Click here to access the California GeoTracker records for this facility:

AST:

Certified Unified Program Agencies:	Not reported
Owner:	SAN FRANCISCO WATER DEPT
Total Gallons:	Not reported
CERSID:	10064485
Facility ID:	41-000-010711
Business Name:	SFPUC Millbrae Maintenance Yard
Phone:	(650) 872-5900
Fax:	Not reported
Mailing Address:	PO BOX 730
Mailing Address City:	MILLBRAE
Mailing Address State:	CA
Mailing Address Zip Code:	94030
Operator Name:	SFPUC Water Supply and Treatment
Operator Phone:	650-872-5900
Owner Phone:	(650) 871-2003

SFPUC MILLBRAE MAINTENANCEYARD (Continued) **U001594255**

Owner Mail Address:	PO BOX 730
Owner State:	CA
Owner Zip Code:	94030
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	CAD981453723

SWEEPS UST:

Status:	Active
Comp Number:	990031
Number:	5
Board Of Equalization:	Not reported
Referral Date:	05-05-94
Action Date:	05-05-94
Created Date:	05-02-94
Owner Tank Id:	UNK
SWRCB Tank Id:	41-000-990031-000001
Tank Status:	A
Capacity:	5000
Active Date:	05-02-94
Tank Use:	UNKNOWN
STG:	P
Content:	Not reported
Number Of Tanks:	2

Status:	Active
Comp Number:	990031
Number:	5
Board Of Equalization:	Not reported
Referral Date:	05-05-94
Action Date:	05-05-94
Created Date:	05-02-94
Owner Tank Id:	UNK
SWRCB Tank Id:	41-000-990031-000002
Tank Status:	A
Capacity:	10000
Active Date:	05-02-94
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

HIST UST:

File Number:	0002C22E
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002C22E.pdf
Region:	STATE
Facility ID:	00000030253
Facility Type:	Other
Other Type:	Not reported
Contact Name:	Not reported

SFPUC MILLBRAE MAINTENANCEYARD (Continued) **U001594255**

Telephone:	4156974424
Owner Name:	SAN FRANCISCO WATER DEPARTMENT
Owner Address:	425 MASON STREET
Owner City,St,Zip:	SAN FRANCISCO, CA 94102
Total Tanks:	0009
Tank Num:	001
Container Num:	14
Year Installed:	Not reported
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	002
Container Num:	15
Year Installed:	Not reported
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	003
Container Num:	16
Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	004
Container Num:	17
Year Installed:	Not reported
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	005
Container Num:	18
Year Installed:	Not reported
Tank Capacity:	00000400
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Visual
Tank Num:	006
Container Num:	19
Year Installed:	Not reported
Tank Capacity:	00000400
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL

SFPUC MILLBRAE MAINTENANCEYARD (Continued) **U001594255**

Container Construction Thickness: Not reported
Leak Detection: Visual

Tank Num: 007
Container Num: 20
Year Installed: Not reported
Tank Capacity: 00001500
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual

Tank Num: 008
Container Num: 21
Year Installed: Not reported
Tank Capacity: 00000140
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual

Tank Num: 009
Container Num: 22
Year Installed: Not reported
Tank Capacity: 00000200
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Visual

Click here for Geo Tracker PDF:

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0010711
Prog Element Code: GEN 1-5 TONS HAZ WASTE/YR
Record Id: PR0012266
Description: GEN 1-5 TONS HAZ WASTE/YR
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0010711
Prog Element Code: STORES HAZ MAT <3,499GAL,27,999LB,13,999FT3
Record Id: PR0023850
Description: STORES HAZ MAT <3,499GAL,27,999LB,13,999CF
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0010711
Prog Element Code: 2353
Record Id: PR0065657
Description: TANK STOR CAP =>1,320 & <10,000 GAL
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0010711
Prog Element Code: UNDERGROUND TANK - GENERAL

SFPUC MILLBRAE MAINTENANCEYARD (Continued) **U001594255**

Record Id:	PR0023021
Description:	UNDERGROUND TANK - GENERAL
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0010711
Prog Element Code:	ABOVE GROUND TANK/SPCC
Record Id:	PR0063965
Description:	ABOVE GROUND TANK/SPCC
Facility Status:	INACTIVE

EMI:

Year:	2013
County Code:	41
Air Basin:	SF
Facility ID:	14241
Air District Name:	BA
SIC Code:	9511
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.001
Reactive Organic Gases Tons/Yr:	9.14e-005
Carbon Monoxide Emissions Tons/Yr:	0.023
NOX - Oxides of Nitrogen Tons/Yr:	0.01
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2014
County Code:	41
Air Basin:	SF
Facility ID:	14241
Air District Name:	BA
SIC Code:	9511
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.192609963
Reactive Organic Gases Tons/Yr:	0.189686579
Carbon Monoxide Emissions Tons/Yr:	3.188068106
NOX - Oxides of Nitrogen Tons/Yr:	1.359226649
SOX - Oxides of Sulphur Tons/Yr:	0.005230331
Particulate Matter Tons/Yr:	0.005689974
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.005688119

Year:	2015
County Code:	41
Air Basin:	SF
Facility ID:	14241
Air District Name:	BA
SIC Code:	9511
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.192609963
Reactive Organic Gases Tons/Yr:	0.189686579

SFPUC MILLBRAE MAINTENANCEYARD (Continued) **U001594255**

Carbon Monoxide Emissions Tons/Yr:	3.188068106
NOX - Oxides of Nitrogen Tons/Yr:	1.359226649
SOX - Oxides of Sulphur Tons/Yr:	0.005230331
Particulate Matter Tons/Yr:	0.005689974
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.005688119

F28
NNE
< 1/8
0.092 mi.
487 ft.

MADRONE LIFT STATION
340 MADRONE
MILLBRAE, CA 94030

San Mateo Co. BI **S110376428**
N/A

Site 1 of 2 in cluster F

Relative:
Lower

Actual:
13 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0046886
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0063846
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

F29
NNE
< 1/8
0.116 mi.
614 ft.

66 SPRUCE ST
MILLBRAE, CA 94030

EDR Hist Cleaner **1015085450**
N/A

Site 2 of 2 in cluster F

Relative:
Lower

Actual:
12 ft.

EDR Historical Cleaners:

Name:	DUN RITE CARPET CLEANING
Year:	1999
Address:	66 SPRUCE ST
Name:	DUN RITE CARPET CLEANING
Year:	2000
Address:	66 SPRUCE ST
Name:	DUN RITE CARPET CLEANING
Year:	2001
Address:	66 SPRUCE ST

30
NE
< 1/8
0.119 mi.
630 ft.

73 SPRUCE ST
MILLBRAE, CA 94030

EDR Hist Cleaner **1015091873**
N/A

Relative:
Lower

Actual:
12 ft.

EDR Historical Cleaners:

Name:	JASARA CLEANING SERVICES
Year:	2001
Address:	73 SPRUCE ST
Name:	JASARA CLEANING SERVICES
Year:	2003
Address:	73 SPRUCE ST

31 **SSE** **1/8-1/4** **0.147 mi.** **778 ft.**

KENTUCKY FRIED CHICKEN
950 EL CAMINO REAL
MILLBRAE, CA 94030

San Mateo Co. BI — **S118584894** **N/A**

Relative: **Higher**

Actual: **35 ft.**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0013386
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0082006
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

---

32 **West** **1/8-1/4** **0.152 mi.** **801 ft.**

DR JANIS STONER CHIROPRACTIC
1301 BROADWAY
MILLBRAE, CA 94030

San Mateo Co. BI — **S102268397** **N/A**

Relative: **Higher**

Actual: **35 ft.**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0012917
Prog Element Code:	GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id:	PR0012289
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status:	INACTIVE

---

33 **WNW** **1/8-1/4** **0.156 mi.** **823 ft.**

TOMMYS CLEANERS
1340 EL CAMINO REAL
MILLBRAE, CA 94030

RCRA-SQG **FINDS** **San Mateo Co. BI** **DRYCLEANERS** **EMI** **HAZNET** **ECHO** — **1000597457** **CAD983614702**

Relative: **Lower**

Actual: **13 ft.**

RCRA-SQG:

Date form received by agency:	11/12/1991
Facility name:	TOMMYS CLEANERS
Facility address:	1340 EL CAMINO REAL MILLBRAE, CA 94030
EPA ID:	CAD983614702
Contact:	DONG SHINN
Contact address:	1340 EL CAMINO REAL MILLBREA, CA 94030
Contact country:	US
Contact telephone:	(415) 871-8825
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DOUG SHINN

TOMMYS CLEANERS (Continued) **1000597457**

Owner/operator address: 1340 EL CAMINO REAL
MILLBRAE, CA 94030
Owner/operator country: Not reported
Owner/operator telephone: (415) 871-8825
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002412130

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS AIR POLLUTANT MAJOR

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0023579
Prog Element Code: STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id: PR0027311
Description: STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0023579
Prog Element Code: GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id: PR0027310
Description: GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status: INACTIVE

TOMMYS CLEANERS (Continued) **1000597457**

DRYCLEANERS:

EPA Id:	CAL000387001
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	07/02/2013
Facility Active:	No
Inactive Date:	06/30/2014
Facility Addr2:	Not reported
Owner Name:	ANDY WONG
Owner Address:	1340 EL CAMINO REAL
Owner Address 2:	Not reported
Owner Telephone:	6508718825
Contact Name:	ANDY WONG
Contact Address:	1340 EL CAMINO REAL
Contact Address 2:	Not reported
Contact Telephone:	6508718825
Mailing Name:	Not reported
Mailing Address 1:	1340 EL CAMINO REAL
Mailing Address 2:	Not reported
Mailing City:	MILLBRAE
Mailing State:	CA
Mailing Zip:	94030
Owner Fax:	2
Region Code:	Not reported

EMI:

Year:	1996
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1997
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0

TOMMYS CLEANERS (Continued) **1000597457**

Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 1998
County Code: 41
Air Basin: SF
Facility ID: 9459
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 1999
County Code: 41
Air Basin: SF
Facility ID: 9459
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2000
County Code: 41
Air Basin: SF
Facility ID: 9459
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

TOMMYS CLEANERS (Continued) **1000597457**

Year:	2001
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2002
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2003
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2004
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216

TOMMYS CLEANERS (Continued) **1000597457**

Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.482
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2005
County Code: 41
Air Basin: SF
Facility ID: 9459
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2006
County Code: 41
Air Basin: SF
Facility ID: 9459
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .452
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2007
County Code: 41
Air Basin: SF
Facility ID: 9459
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .266
Reactive Organic Gases Tons/Yr: .1858276
Carbon Monoxide Emissions Tons/Yr: 0

TOMMYS CLEANERS (Continued) **1000597457**

NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2008
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.266
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2009
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.23599999999999999
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2010
County Code:	41
Air Basin:	SF
Facility ID:	9459
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.63200000000000001
Reactive Organic Gases Tons/Yr:	0.32326959999999999
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

TOMMYS CLEANERS (Continued) **1000597457**

HAZNET:

envid:	1000597457
Year:	1995
GEPAID:	CAD983614702
Contact:	DOUG SHINN
Telephone:	4158718825
Mailing Name:	Not reported
Mailing Address:	1340 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940301411
Gen County:	Not reported
TSD EPA ID:	CAT000613950
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	.0975
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	San Mateo

envid:	1000597457
Year:	1994
GEPAID:	CAD983614702
Contact:	DOUG SHINN
Telephone:	4158718825
Mailing Name:	Not reported
Mailing Address:	1340 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940301411
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	.6550
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	San Mateo

envid:	1000597457
Year:	1994
GEPAID:	CAD983614702
Contact:	DOUG SHINN
Telephone:	4158718825
Mailing Name:	Not reported
Mailing Address:	1340 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940301411
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Not reported
Tons:	.0975
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Not reported
Facility County:	San Mateo

envid:	1000597457
Year:	1994

TOMMYS CLEANERS (Continued) **1000597457**

GEPAID:	CAD983614702
Contact:	DOUG SHINN
Telephone:	4158718825
Mailing Name:	Not reported
Mailing Address:	1340 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940301411
Gen County:	Not reported
TSD EPA ID:	CAT000613950
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	.3900
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	San Mateo

envid:	1000597457
Year:	1993
GEPAID:	CAD983614702
Contact:	DOUG SHINN
Telephone:	4158718825
Mailing Name:	Not reported
Mailing Address:	1340 EL CAMINO REAL
Mailing City,St,Zip:	MILLBRAE, CA 940301411
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	0.58499999999
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	San Mateo

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

ECHO:

Envid:	1000597457
Registry ID:	110002412130
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002412130

G34	**BART SANTA PAULA VENTILATION STRUCTURE (SPS)**	**San Mateo Co. BI**	**S117976191**
ESE	**19 MONTEREY**		**N/A**
1/8-1/4	**MILLBRAE, CA 94030**		
0.165 mi.			
870 ft.	**Site 1 of 4 in cluster G**		

Relative: **Higher**

Actual: **25 ft.**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0058013
Prog Element Code:	STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id:	PR0080483
Description:	STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status:	ACTIVE

G35 **BART SANTA PAULA SUBSTATION-WPA** **AST** **A100340184**
ESE **7 MONTEREY** **N/A**
1/8-1/4 **MILLBRAE, CA**
0.168 mi.
888 ft. **Site 2 of 4 in cluster G**

Relative:
Higher

Actual:
26 ft.

AST:

Certified Unified Program Agencies:	San Mateo
Owner:	Not reported
Total Gallons:	1,320
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

G36 **BART SANTA PAULA SUBSTATION-WPA** **San Mateo Co. BI** **S106034809**
ESE **7 MONTEREY** **N/A**
1/8-1/4 **MILLBRAE, CA 94030**
0.168 mi.
888 ft. **Site 3 of 4 in cluster G**

Relative:
Higher

Actual:
26 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0027900
Prog Element Code:	STORES HAZ MAT <1,199GAL,9,999LB,4,799FT3
Record Id:	PR0045800
Description:	STORES HAZ MAT <1,199GAL,9,999LB,4,799CF
Facility Status:	ACTIVE

Region:	SAN MATEO
Facility ID:	FA0027900
Prog Element Code:	ABOVE GROUND TANK/SPCC
Record Id:	PR0049522
Description:	ABOVE GROUND TANK/SPCC
Facility Status:	INACTIVE

37 **South** **1/8-1/4** **0.173 mi.** **911 ft.**	**KOHL'S DEPARTMENT STORES - STORE #1368** **855 BROADWAY** **MILLBRAE, CA 94030**	**San Mateo Co. BI** **HAZNET**	**S112975800** **N/A**

Relative: **Higher**

Actual: **43 ft.**

San Mateo Co. BI:

Region: SAN MATEO
Facility ID: FA0008851
Prog Element Code: GENERATES <27 GAL/YEAR
Record Id: PR0075085
Description: GENERATES <27 GAL/YEAR
Facility Status: INACTIVE

Region: SAN MATEO
Facility ID: FA0008851
Prog Element Code: STORES MV FUELS OR WASTE ONLY
Record Id: PR0074829
Description: STORES MV FUELS OR WASTE ONLY
Facility Status: INACTIVE

HAZNET:

envid: S112975800
Year: 2009
GEPAID: CAC002639096
Contact: FRED SPELSHAUS
Telephone: 2627037337
Mailing Name: Not reported
Mailing Address: N56W17000 RIDGEWOOD DR
Mailing City,St,Zip: MENOMONEE FALLS, WI 530515660
Gen County: Not reported
TSD EPA ID: NVD980895338
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.125
Cat Decode: Unspecified oil-containing waste
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: San Mateo

envid: S112975800
Year: 2009
GEPAID: CAC002639096
Contact: FRED SPELSHAUS
Telephone: 2627037337
Mailing Name: Not reported
Mailing Address: N56W17000 RIDGEWOOD DR
Mailing City,St,Zip: MENOMONEE FALLS, WI 530515660
Gen County: Not reported
TSD EPA ID: CAD981382732
TSD County: Not reported
Waste Category: Asbestos containing waste
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 6
Cat Decode: Asbestos containing waste
Method Decode: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To

KOHL'S DEPARTMENT STORES - STORE #1368 (Continued) **S112975800**

	Include On-Site Treatment And/Or Stabilization)
Facility County:	San Mateo
envid:	S112975800
Year:	2009
GEPAID:	CAC002639096
Contact:	FRED SPELSHAUS
Telephone:	2627037337
Mailing Name:	Not reported
Mailing Address:	N56W17000 RIDGEWOOD DR
Mailing City,St,Zip:	MENOMONEE FALLS, WI 530515660
Gen County:	Not reported
TSD EPA ID:	CAD982411993
TSD County:	Not reported
Waste Category:	Polychlorinated biphenyls and material containing PCBs
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.32729
Cat Decode:	Polychlorinated biphenyls and material containing PCBs
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Mateo
envid:	S112975800
Year:	2009
GEPAID:	CAC002639096
Contact:	FRED SPELSHAUS
Telephone:	2627037337
Mailing Name:	Not reported
Mailing Address:	N56W17000 RIDGEWOOD DR
Mailing City,St,Zip:	MENOMONEE FALLS, WI 530515660
Gen County:	Not reported
TSD EPA ID:	NVD980895338
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.532
Cat Decode:	Waste oil and mixed oil
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	San Mateo

G38
ESE
1/8-1/4
0.176 mi.
930 ft.

AT&T MOBILITY- 101 AIRPORT (12831)
301 SANTA PAULA
MILLBRAE, CA 94030

Site 4 of 4 in cluster G

San Mateo Co. BI **S106498818**
N/A

Relative:
Higher

Actual:
25 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0028491
Prog Element Code:	STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id:	PR0047393
Description:	STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status:	ACTIVE

39
SE
1/8-1/4
0.190 mi.
1003 ft.

VERIZON WIRELESS-SFO WEST
1007 HEMLOCK
MILLBRAE, CA 94030

San Mateo Co. BI

S106982238
N/A

Relative:
Higher

Actual:
28 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0027814
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0044940
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

H40
South
1/8-1/4
0.224 mi.
1182 ft.

WALGREENS 0625
615 BROADWAY
MILLBRAE, CA 94030

Site 1 of 2 in cluster H

RCRA-CESQG
FINDS
ECHO

1001227066
CAR000043091

Relative:
Higher

Actual:
38 ft.

RCRA-CESQG:

Date form received by agency:	03/01/2014
Facility name:	WALGREENS #625
Facility address:	615 BROADWAY MILLBRAE, CA 94030
EPA ID:	CAR000043091
Mailing address:	GREY HAWK CT STE 200 CARLSBAD, CA 92010
Contact:	KARINA E ROMERO
Contact address:	GREY HAWK CT STE 200 CARLSBAD, CA 92010
Contact country:	Not reported
Contact telephone:	(760) 602-8887
Contact email:	KROMERO@3ECOMPANY.COM
EPA Region:	09
Land type:	Private
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	MILLBRAE SQUARE COMPANY
Owner/operator address:	BROADWAY MILLBRAE, CA 94030
Owner/operator country:	Not reported
Owner/operator telephone:	(650) 692-1018
Legal status:	Private

WALGREENS 0625 (Continued) **1001227066**

Owner/Operator Type: Owner
Owner/Op start date: 10/01/1999
Owner/Op end date: Not reported

Owner/operator name: WALGREEN CO
Owner/operator address: 200 WILMONT RD NO 2214
DEERFIELD, IL 60015
Owner/operator country: Not reported
Owner/operator telephone: (847) 914-3193
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: WALGREEN CO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 10/01/1999
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D024

WALGREENS 0625 (Continued) **1001227066**

. Waste name: M-CRESOL

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U165
. Waste name: NAPHTHALENE

Historical Generators:
Date form received by agency: 02/07/2002
Site name: WALGREENS 0625
Classification: Large Quantity Generator

Date form received by agency: 02/07/2002
Site name: WALGREENS 0625
Classification: Small Quantity Generator

Date form received by agency: 07/17/1998
Site name: WALGREENS 625
Classification: Small Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D011
. Waste name: SILVER

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 12/23/2015
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110002924097

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of

WALGREENS 0625 (Continued) **1001227066**

events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

HAZARDOUS WASTE BIENNIAL REPORTER

ECHO:

Envid:	1001227066
Registry ID:	110002924097
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002924097

H41 **WALGREEN STORE #625** **San Mateo Co. BI** **S113080651**
South **615 BROADWAY** **HAZNET** **N/A**
1/8-1/4 **MILLBRAE, CA 94030**
0.224 mi.
1182 ft. **Site 2 of 2 in cluster H**

Relative:
Higher

Actual:
38 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0028775
Prog Element Code:	2231
Record Id:	PR0048307
Description:	GEN EXTREMELY HAZARDOUS WASTE - RCRA
Facility Status:	ACTIVE

Region:	SAN MATEO
Facility ID:	FA0028775
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0048306
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

HAZNET:

envid:	S113080651
Year:	1998
GEPAID:	CAL000146664
Contact:	WALGREEN COMPANY
Telephone:	8479143143
Mailing Name:	Not reported
Mailing Address:	4020 STIRRUP CREEK DR STE 211
Mailing City,St,Zip:	DURHAM, NC 277039000
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Not reported
Tons:	.1668
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Not reported
Facility County:	San Mateo

envid:	S113080651
Year:	1998

WALGREEN STORE #625 (Continued) **S113080651**

GEPAID:	CAL000146664
Contact:	WALGREEN COMPANY
Telephone:	8479143143
Mailing Name:	Not reported
Mailing Address:	4020 STIRRUP CREEK DR STE 211
Mailing City,St,Zip:	DURHAM, NC 277039000
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	3.5064
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Recycler
Facility County:	San Mateo

42
WNW
1/8-1/4
0.228 mi.
1205 ft.

SHERWIN WILLIAMS STORE #8687
1395 EL CAMINO REAL
MILLBRAE, CA 94030

San Mateo Co. BI **S116348337**
N/A

Relative: **Higher**

Actual: **23 ft.**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0055205
Prog Element Code:	GEN <1 TONS HAZ WASTE/YR
Record Id:	PR0076126
Description:	GEN <1 TONS HAZ WASTE/YR
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0055205
Prog Element Code:	STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id:	PR0076125
Description:	STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status:	ACTIVE

I43
SSE
1/8-1/4
0.235 mi.
1241 ft.

SUPER BURRITO
780 EL CAMINO REAL
MILLBRAE, CA 94030

Site 1 of 3 in cluster I

San Mateo Co. BI **S118584884**
N/A

Relative: **Higher**

Actual: **35 ft.**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0000956
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0081995
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

J44 **SAN FRANCISCO PUBLIC UTILITIES** — **San Mateo Co. BI** — **S113757530** **N/A**
East **SANTA PAULA AND BAY ST**
1/8-1/4 **MILLBRAE, CA 94030**
0.242 mi.
1276 ft. **Site 1 of 2 in cluster J**

Relative: Lower

Actual: 18 ft.

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0026630
Prog Element Code:	STORES HAZ MAT <15999GAL, 111999LB, 5599FT^3
Record Id:	PR0038659
Description:	STORES HAZ MAT <15999GAL, 111999LB, 5599CF
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0026630
Prog Element Code:	ABOVE GROUND TANK/SPCC
Record Id:	PR0038660
Description:	ABOVE GROUND TANK/SPCC
Facility Status:	INACTIVE

J45 **HETCH HETCHY WATER & POWER STA** — **AST** — **A100339073** **N/A**
East **SANTA PAULA AND BAY ST**
1/8-1/4 **MILLBRAE, CA**
0.246 mi.
1301 ft. **Site 2 of 2 in cluster J**

Relative: Lower

Actual: 18 ft.

AST:

Certified Unified Program Agencies:	San Mateo
Owner:	Not reported
Total Gallons:	1,320
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

I46
SSE
1/4-1/2
0.260 mi.
1372 ft.

CITIBANK
700 EL CAMINO REAL
MILBRA, CA 94030

HIST CORTESE — **S103065301** **N/A**

Site 2 of 3 in cluster I

Relative: **Higher**

Actual: **33 ft.**

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0850

I47
SSE
1/4-1/2
0.260 mi.
1372 ft.

MIDAS MUFFLER
700 EL CAMINO REAL
MILBRA, CA 94030

HIST CORTESE — **S103065302** **N/A**

Site 3 of 3 in cluster I

Relative: **Higher**

Actual: **33 ft.**

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0907

48
SSE
1/4-1/2
0.303 mi.
1598 ft.

REPLANET LLC
525 EL CAMINO REAL
MILLBRAE, CA 94039

SWRCY
San Mateo Co. BI
NPDES

S107137470 **N/A**

Relative: **Higher**

Actual: **30 ft.**

SWRCY:

Reg Id:	230638
Cert Id:	RC230638.001
Mailing Address:	800 N Haven Ave Suite 120
Mailing City:	Ontario
Mailing State:	CA
Mailing Zip Code:	91764
Website:	http://www.replanet.com
Email:	Not reported
Phone Number:	(877) 737-5263
Grand Father:	N
Rural:	N
Operation Begin Date:	09/01/2015
Aluminium:	Y
Glass:	Y
Plastic:	Y
Bimetal:	Y
Agency:	N/A
Monday Hours Of Operation:	9:00 am - 5:00 pm; Closed 1:00 pm - 1:30 pm
Tuesday Hours Of Operation:	9:00 am - 5:00 pm; Closed 1:00 pm - 1:30 pm
Wednesday Hours Of Operation:	9:00 am - 5:00 pm; Closed 1:00 pm - 1:30 pm
Thursday Hours Of Operation:	9:00 am - 5:00 pm; Closed 1:00 pm - 1:30 pm
Friday Hours Of Operation:	9:00 am - 5:00 pm; Closed 1:00 pm - 1:30 pm
Saturday Hours Of Operation:	9:00 am - 5:00 pm; Closed 1:00 pm - 1:30 pm
Sunday Hours Of Operation:	9:00 am - 5:00 pm; Closed 1:00 pm - 1:30 pm
Organization ID:	151891
Organization Name:	rePlanet LLC

REPLANET LLC (Continued) **S107137470**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0000954
Prog Element Code:	GEN <1 TONS HAZ WASTE/YR
Record Id:	PR0074767
Description:	GEN <1 TONS HAZ WASTE/YR
Facility Status:	ACTIVE

Region:	SAN MATEO
Facility ID:	FA0000954
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0074768
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

NPDES:

Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	2
Regulatory Measure Id:	427519
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	2 41C364564
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/12/2012
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	08/09/2013
Discharge Name:	Safeway inc
Discharge Address:	5918 Stoneridge Mall Rd
Discharge City:	Pleasanton
Discharge State:	California
Discharge Zip:	94588
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported

REPLANET LLC (Continued) **S107137470**

OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

49
NW
1/4-1/2
0.315 mi.
1664 ft.

LOMITA PARK ELEMENTARY SCHOOL
200 SANTA HELENA AVENUE
SAN BRUNO, CA 94066

ENVIROSTOR **S109693082**
SCH **N/A**
DEED

Relative:
Higher

Actual:
25 ft.

ENVIROSTOR:

Facility ID:	60001360
Status:	Certified O&M - Land Use Restrictions Only
Status Date:	12/12/2012
Site Code:	204244
Site Type:	School Cleanup
Site Type Detailed:	School
Acres:	3.7
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Mellan Songco
Supervisor:	Jose Salcedo
Division Branch:	Northern California Schools & Santa Susana
Assembly:	22
Senate:	13

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

Special Program: Not reported
Restricted Use: YES
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 37.61209
Longitude: -122.4002
APN: 021-195-020, 021195020
Past Use: AGRICULTURAL - ROW CROPS, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, SCHOOL - ELEMENTARY
Potential COC: Chlordane DDD DDE DDT
Confirmed COC: Chlordane 30006-NO 30007-NO 30008-NO
Potential Description: SOIL
Alias Name: 021-195-020
Alias Type: APN
Alias Name: 021195020
Alias Type: APN
Alias Name: 204244
Alias Type: Project Code (Site Code)
Alias Name: 60001360
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 05/06/2011
Comments: On May 6, 2011, DTSC sent the signed Voluntary Cleanup Agreement to the District.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 06/08/2011
Comments: Signed NOE sent to Gunther Moskat for processing

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 09/02/2011
Comments: DTSC issued an Approval to Occupy letter based on the confirmation sampling results which indicated that the removal action objectives and cleanup goals were achieved and the site no longer poses an unacceptable risk to human health or the environment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction
Completed Date: 06/07/2012
Comments: On June 7, 2012, DTSC received the recorded Covenant to Restrict Use of Property Environmental Restriction for the Lomita Park ES.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 11/10/2010
Comments: DTSC mailed Fully executed Environmental Oversight Agreement to District

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Land Use Restriction Monitoring Report
Completed Date: 02/11/2013
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 02/10/2013
Comments: On February 10, 2013, DTSC received PG&E's notification via email regarding their project. Their project will not affect the Lomita Park Main School building foundation and therefore will not impact the LUC requirements.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Land Use Restriction Monitoring Report
Completed Date: 08/20/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 07/22/2013
Comments: On July 22, 2013, DTSC reviewed the information provided by PG&E and confirmed that based on the information provided it does not appear that the Lomita Park Elementary School's Capped Property (i.e., area now generally bounded by the footprint of the Lomita Park Elementary School Main School Building and is covered by the concrete slab foundation) that is under a land use restriction will be impacted by the B-027 L-101 Lomita Park Regulator Station Rebuild and Piping Upgrades project.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 06/24/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 03/03/2011
Comments: DTSC issued the PEA Workplan approval letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/09/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 10/28/2010
Comments: On Oct 1, 2010, DTSC received a hard copy of this document as

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

background information. On Oct 28, 2010, an e-copy was received.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 02/19/2011
Comments: On Feb 18 & 19, 2011, DTSC observed PES representative (J. Patterson) implement the PEA workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 06/08/2011
Comments: DTSC approved the revised draft PEA report and RAW for further action

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/08/2011
Comments: The PEA Report & RAW is a single document. Please see the RAW document for the final PEA Report & RAW, DTSC approval letter, and other pertinent documents.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Community Profile
Completed Date: 04/28/2011
Comments: Final Community Profile Report to be inlcluded in the information repository.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 05/02/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 09/28/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 10/10/2011
Comments: DTSC reviewed the Revised Soil Management Plan and hereby approves the revised SMP and certifies that all response actions have been completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 06/29/2012
Comments: DTSC completed and signed the Removal Action Certification.

Completed Area Name: PROJECT WIDE

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/17/2014
Comments: On January 17, 2014, DTSC approved the Annual Compliance letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 03/23/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 02/19/2016
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Facility ID: 60001360
Site Type: School Cleanup
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 3.7
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Mellan Songco
Supervisor: Jose Salcedo
Division Branch: Northern California Schools & Santa Susana
Site Code: 204244
Assembly: 22
Senate: 13
Special Program Status: Not reported
Status: Certified O&M - Land Use Restrictions Only
Status Date: 12/12/2012
Restricted Use: YES
Funding: School District
Latitude: 37.61209
Longitude: -122.4002
APN: 021-195-020, 021195020
Past Use: AGRICULTURAL - ROW CROPS, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, SCHOOL - ELEMENTARY
Potential COC: Chlordane, DDD, DDE, DDT
Confirmed COC: Chlordane, 30006-NO, 30007-NO, 30008-NO
Potential Description: SOIL

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

Alias Name:	021-195-020
Alias Type:	APN
Alias Name:	021195020
Alias Type:	APN
Alias Name:	204244
Alias Type:	Project Code (Site Code)
Alias Name:	60001360
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	05/06/2011
Comments:	On May 6, 2011, DTSC sent the signed Voluntary Cleanup Agreement to the District.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Notice of Exemption
Completed Date:	06/08/2011
Comments:	Signed NOE sent to Gunther Moskat for processing

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	09/02/2011
Comments:	DTSC issued an Approval to Occupy letter based on the confirmation sampling results which indicated that the removal action objectives and cleanup goals were achieved and the site no longer poses an unacceptable risk to human health or the environment.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Land Use Restriction
Completed Date:	06/07/2012
Comments:	On June 7, 2012, DTSC received the recorded Covenant to Restrict Use of Property Environmental Restriction for the Lomita Park ES.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	11/10/2010
Comments:	DTSC mailed Fully executed Environmental Oversight Agreement to District

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	* Land Use Restriction Monitoring Report
Completed Date:	02/11/2013
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/10/2013
Comments:	On February 10, 2013, DTSC received PG&E's notification via email regarding their project. Their project will not affect the Lomita

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

Park Main School building foundation and therefore will not impact the LUC requirements.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Land Use Restriction Monitoring Report
Completed Date: 08/20/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 07/22/2013
Comments: On July 22, 2013, DTSC reviewed the information provided by PG&E and confirmed that based on the information provided it does not appear that the Lomita Park Elementary School's Capped Property (i.e., area now generally bounded by the footprint of the Lomita Park Elementary School Main School Building and is covered by the concrete slab foundation) that is under a land use restriction will be impacted by the B-027 L-101 Lomita Park Regulator Station Rebuild and Piping Upgrades project.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 06/24/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Workplan
Completed Date: 03/03/2011
Comments: DTSC issued the PEA Workplan approval letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: *Correspondence - Received
Completed Date: 12/09/2010
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 10/28/2010
Comments: On Oct 1, 2010, DTSC received a hard copy of this document as background information. On Oct 28, 2010, an e-copy was received.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 02/19/2011
Comments: On Feb 18 & 19, 2011, DTSC observed PES representative (J. Patterson) implement the PEA workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

Completed Date: 06/08/2011
Comments: DTSC approved the revised draft PEA report and RAW for further action

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/08/2011
Comments: The PEA Report & RAW is a single document. Please see the RAW document for the final PEA Report & RAW, DTSC approval letter, and other pertinent documents.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Community Profile
Completed Date: 04/28/2011
Comments: Final Community Profile Report to be inlcluded in the information repository.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 05/02/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Completion Report
Completed Date: 09/28/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Soils Management Plan
Completed Date: 10/10/2011
Comments: DTSC reviewed the Revised Soil Management Plan and hereby approves the revised SMP and certifies that all response actions have been completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 06/29/2012
Comments: DTSC completed and signed the Removal Action Certification.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 01/17/2014
Comments: On January 17, 2014, DTSC approved the Annual Compliance letter.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 03/23/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE

LOMITA PARK ELEMENTARY SCHOOL (Continued) **S109693082**

Completed Sub Area Name: Not reported
Completed Document Type: Land Use Restriction Monitoring Report
Completed Date: 02/19/2016
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

DEED:
Envirostor ID: 60001360
Area: PROJECT WIDE
Sub Area: Not reported
Site Type: SCHOOL CLEANUP
Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY
Agency: Not reported
Covenant Uploaded: Not reported
Deed Date(s): 06/07/2012

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50 **MILLBRAE SCHOOL WAREHOUSE** **LUST** **S104493853**
SW **700 LAUREL** **N/A**
1/4-1/2 **MILLBRAE, CA 94030**
0.345 mi.
1820 ft.

Relative:
Higher

Actual:
85 ft.

LUST:
Region: STATE
Global Id: T0608101028
Latitude: 37.6034597
Longitude: -122.4024139
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 06/01/2001
Lead Agency: SAN MATEO COUNTY LOP
Case Worker: JM
Local Agency: SAN MATEO COUNTY LOP
RB Case Number: 41-1118
LOC Case Number: 990025
File Location: Local Agency Warehouse
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0608101028
Contact Type: Regional Board Caseworker
Contact Name: Regional Water Board
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY ST SUITE 1400
City: OAKLAND

MILLBRAE SCHOOL WAREHOUSE (Continued) **S104493853**

Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608101028
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608101028
Status:	Completed - Case Closed
Status Date:	06/01/2001
Global Id:	T0608101028
Status:	Open - Case Begin Date
Status Date:	06/19/1998

Regulatory Activities:

Global Id:	T0608101028
Action Type:	ENFORCEMENT
Date:	07/24/1998
Action:	Notice of Responsibility - #1
Global Id:	T0608101028
Action Type:	Other
Date:	06/19/1998
Action:	Leak Discovery
Global Id:	T0608101028
Action Type:	Other
Date:	07/10/1998
Action:	Leak Reported

LUST REG 2:

Region:	2
Facility Id:	Not reported
Facility Status:	Case Closed
Case Number:	990025
How Discovered:	OM
Leak Cause:	Unknown
Leak Source:	Unknown
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

K51 **MILLBRAE SQUARE CHEVRON** **LUST** **U001594232**
SSE **501 EL CAMINO REAL** **HIST UST** **N/A**
1/4-1/2 **MILLBRAE, CA 94030** **San Mateo Co. BI**
0.354 mi.
1870 ft. **Site 1 of 4 in cluster K**

Relative:
Higher

Actual:
24 ft.

LUST:

Region:	STATE
Global Id:	T0608100963
Latitude:	37.603146028
Longitude:	-122.393368418
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/17/2011
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-1050
LOC Case Number:	990022
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Extracted from CRA’s November 23, 2009 Soil Vapor Assessment Report, San Mateo County does not take responsibility for the accuracy of the statements made or any professional interpretations made in the referenced report. The site is an active Chevron-branded service station located on the west corner of EI Camino Real and Taylor Boulevard in a mixed commercial and residential area of Millbrae, California (Figure 1). Three generations of USTs have been present on the site. The first generation UST, removed in approximately 1971, was located in the southern corner of the property, along Taylor Boulevard. The second- and third-generation UST complexes are located in the northern corner of the property. Current site facilities include a station building, two pump islands under a common canopy, two 10,OOO-gallon and one 6,OOO-gallon double-walled fiberglass gasoline USTs, and one diesel UST located in a separate tank pit just north of the gasoline USTs. 1997 Site Upgrade: During September through October 1997, Gettler-Ryan Inc. (G-R) replaced two 10,000-gallon gasoline underground storage tanks (USTs), one 6,000-gallon gasoline UST, and associated product lines, and removed one 1,000-gallon used-oil UST, one oil/water separator, and approximately 1,877 tons of soil from the site. The highest detections of total petroleum hydrocarbons as diesel (TPHd) and total petroleum hydrocarbons as gasoline (TPHg) were reported in samples collected from the eastern end of the former gasoline USTs at 19 milligrams per kilogram (mg/kg) and 560 mg/kg, respectively. The highest benzene and methyl tertiary-butyl ether (MTBE) concentrations were reported at 0.023 mg/kg and 0.047 mg/kg, respectively. Soil collected from product line trenches had maximum concentrations of 1,300 mg/kg TPHd, 5,600 mg/kg TPHg, 39 mg/kg benzene, and 2.1 mg/kg MTBE. Groundwater samples collected from the UST excavation had maximum concentrations of 2,300 micrograms per liter (%g/L) TPHd, 12,000 %g/L TPHg, 52 %g/L benzene, and 570 %g/L MTBE. 1999 Monitoring Well Installation: In February 1999, G-R installed monitoring wells MW-1 through MW-3. No TPHg, TPHd, benzene, or MTBE was reported in any soil samples collected, except for 1.1 mg/kg TPHd at 6 feet below grade (fbg) in MW-2. 2003 Hoist Removal: In October 2003, Cambria Environmental Technology Inc. (Cambria) observed the removal, transportation, and disposal of one hydraulic hoist and performed

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

confirmation soil sampling. Cambria collected one confirmation soil sample from the hydraulic hoist excavation. Total petroleum hydrocarbons as hydraulic oil (TPHho) was reported at a concentration of 180 mg/kg in sample H-1 at 8 fbg. 2003 Soil Borings: In October 2003, Cambria advanced eight soil borings to a depth of 16 fbg. No TPHg, TPHd, or benzene was reported in soil collected from borings B-1 through B-6 and B-8. Maximum concentrations of TPHd, TPHg, benzene, and MTBE in the remaining boring (B-7, located near the former USTs) were 360 mg/kg, 1,100 mg/kg, 0.14 mg/kg, and 0.21 mg/kg, respectively. Grab-groundwater samples were collected from each boring and maximum TPHd, TPHg, benzene, and MTBE concentrations were reported at 9,100 %g/L, 30,000 %g/L, 4,500 %g/L, and 3,400 %g/L, respectively. 2005 Monitoring Well Installation and Soil Borings: In December 2005, Cambria installed monitoring wells MW-4 and MW-5, and advanced soil borings B-9 through B-11. No petroleum hydrocarbons were reported in soil samples collected from the well and soil borings except from boring B-10, where TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected. TPHg and benzene were detected at concentrations of 10 mg/kg and 0.2 mg/kg, respectively. MTBE was detected in soil from well boring MW-4 and soil boring B-10 at concentrations up to 0.065 mg/kg. Elevated hydrocarbon concentrations were detected in the grab-groundwater sample from boring B-10, where TPHd, TPHg, benzene, and MTBE were detected at concentrations of 52,000 %g/L, 24,000 %g/L, 900 %g/L, and 98 %g/L, respectively. 2006 Soil Borings: In November 2006, Cambria advanced soil borings B-12 through B-14. No TPHd, TPHg, or benzene was reported in any soil sample. MTBE was reported at a maximum concentration of 0.002 mg/kg in boring B-13 at 15 fbg. Trichloroethene (TCE) and tetrachloroethene (PCE) were detected in soil boring B-12 at concentrations of 0.007 mg/kg and 0.076 mg/kg, respectively at 5 fbg. Grab-groundwater samples were collected from all three borings. TPHd was reported in groundwater samples from borings B-12 through B-14 at concentrations up to 360 %g/L. TPHg was reported in borings B-12 and B-14 with a maximum concentration of 1,200 %g/L in boring B-12 at 20 fbg. MTBE was reported in boring B-13 at a concentration of 16 %g/L at 20 fbg. TCE and PCE were detected in all the groundwater samples with maximum concentrations of 16 %g/L and 2,800 %g/L, respectively. 2009 Vapor Well Installation: In January 2009, Conestoga-Rovers & Associates (CRA) installed soil vapor wells VP-1, VP-2, and VP-3 to approximately 5.8 fbg. Soil vapor samples were collected in February 2009; a field duplicate was taken simultaneously with the sample at VP-2. TPHd was detected in soil vapor samples VP-2 and VP-3 at concentrations of 840 micrograms per cubic meter (%g/m3) and 3,300 %g/m3, respectively. TPHg was detected in all soil vapor samples at concentrations ranging from 410 %g/m3 in VP-1 to 76,000,000 %g/m3 in VP-3. Benzene was detected in vapor samples VP-2, VP-2 Dup, and VP-3 at concentrations of 1,400 %g/m3 in VP-2 and VP-2 Dup, and 76,000 %g/m3 in VP-3. The soil vapor samples were also analyzed for 2,2,4-trimethylpentane (isooctane), which is an additive to gasoline after the removal of MTBE in 2004. Isooctane was detected in all VP-2, VP-2 Dup, and VP-3 at concentrations of 15,000 %g/m3 in VP-2 and VP-2 Dup, and 1,100,000 %g/m3 in VP-3.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608100963
Contact Type:	Regional Board Caseworker

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608100963
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608100963
Status:	Completed - Case Closed
Status Date:	05/17/2011
Global Id:	T0608100963
Status:	Open - Case Begin Date
Status Date:	09/19/1997
Global Id:	T0608100963
Status:	Open - Site Assessment
Status Date:	09/19/1997
Global Id:	T0608100963
Status:	Open - Site Assessment
Status Date:	03/07/2003

Regulatory Activities:

Global Id:	T0608100963
Action Type:	RESPONSE
Date:	02/15/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	02/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/30/2009
Action:	Soil and Water Investigation Report
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	07/14/2009
Action:	Soil and Water Investigation Workplan
Global Id:	T0608100963
Action Type:	RESPONSE

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

Date: 02/23/2010
Action: Soil and Water Investigation Workplan

Global Id: T0608100963
Action Type: RESPONSE
Date: 08/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: RESPONSE
Date: 11/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 05/14/2009
Action: Staff Letter - #20090514

Global Id: T0608100963
Action Type: RESPONSE
Date: 05/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: RESPONSE
Date: 02/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0608100963
Action Type: RESPONSE
Date: 01/14/2012
Action: Well Destruction Report - Regulator Responded

Global Id: T0608100963
Action Type: REMEDIATION
Date: 09/01/1997
Action: Excavation

Global Id: T0608100963
Action Type: RESPONSE
Date: 09/30/2010
Action: Soil and Water Investigation Report

Global Id: T0608100963
Action Type: RESPONSE
Date: 05/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 06/30/2009
Action: Meeting

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 07/29/2009
Action: Staff Letter - #20090729

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	07/02/2009
Action:	Staff Letter - #20090702
Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	01/14/2011
Action:	Staff Letter - #20110114
Global Id:	T0608100963
Action Type:	Other
Date:	09/19/1997
Action:	Leak Discovery
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	05/15/2003
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	05/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/15/2002
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/15/2001
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/15/2003
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/15/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/15/2000
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

Date:	08/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	08/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	05/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	11/15/2006
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	02/15/2007
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	02/05/2004
Action:	Soil and Water Investigation Report
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	06/08/2004
Action:	Soil and Water Investigation Workplan
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	04/27/2004
Action:	Other Report / Document
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	02/15/2006
Action:	Soil and Water Investigation Report
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	08/23/2006
Action:	Other Report / Document
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	01/02/2007
Action:	Soil and Water Investigation Report
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	04/19/2007
Action:	Other Report / Document

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

Global Id: T0608100963
Action Type: Other
Date: 11/04/1997
Action: Leak Reported

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 11/23/2010
Action: Notification - Public Notice of Case Closure - #20101123

Global Id: T0608100963
Action Type: RESPONSE
Date: 11/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: RESPONSE
Date: 05/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: RESPONSE
Date: 05/15/2001
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: RESPONSE
Date: 05/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 11/03/1997
Action: Notice of Responsibility - #1

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 09/28/2006
Action: Staff Letter - #20060928

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 08/09/2000
Action: Staff Letter - #20000809

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 06/25/2003
Action: Staff Letter - #20030625

Global Id: T0608100963
Action Type: ENFORCEMENT
Date: 03/23/2004
Action: Staff Letter - #20040323

Global Id: T0608100963
Action Type: ENFORCEMENT

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

Date:	03/22/2007
Action:	Staff Letter - #20070322
Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	05/23/2006
Action:	Staff Letter - #20060523
Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	06/21/2004
Action:	Staff Letter - #20040621
Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	01/08/2010
Action:	Staff Letter - #20100108
Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	05/17/2011
Action:	Closure/No Further Action Letter - #20010517
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	02/15/2011
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	10/07/2008
Action:	Staff Letter - #20081007
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	08/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	02/24/2009
Action:	Soil and Water Investigation Report
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	05/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0608100963
Action Type:	RESPONSE
Date:	08/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608100963
Action Type:	ENFORCEMENT
Date:	02/09/2010
Action:	Staff Letter - #20100209

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	990022
Facility Status:	9- Case Closed
Global ID:	T0608100963
APN Number:	024121070
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

HIST UST:

File Number:	0002BCC8
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002BCC8.pdf
Region:	STATE
Facility ID:	00000061972
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	CONNERS, RICHARD C INC
Telephone:	4156973275
Owner Name:	CHEVRON U.S.A. INC.
Owner Address:	575 MARKET
Owner City,St,Zip:	SAN FRANCISCO, CA 94105
Total Tanks:	0005

Tank Num:	001
Container Num:	1
Year Installed:	1982
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor

Tank Num:	002
Container Num:	2
Year Installed:	1982
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor

Tank Num:	003
Container Num:	3
Year Installed:	1982
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor

Tank Num:	004
Container Num:	4
Year Installed:	1982
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported

MILLBRAE SQUARE CHEVRON (Continued) **U001594232**

Container Construction Thickness: 0000250
Leak Detection: Stock Inventor

Tank Num: 005
Container Num: 5
Year Installed: 1982
Tank Capacity: 00001500
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 0000250
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0018381
Prog Element Code: STORES MV FUELS OR WASTE ONLY
Record Id: PR0005055
Description: STORES MV FUELS OR WASTE ONLY
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0018381
Prog Element Code: UNDERGROUND TANK - GENERAL
Record Id: PR0023004
Description: UNDERGROUND TANK - GENERAL
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0018381
Prog Element Code: GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id: PR0012272
Description: GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status: INACTIVE

K52 **CHEVRON 9-1035** **LUST** **S101310780**
SSE **501 EL CAMINO REAL** **San Mateo Co. BI** **N/A**
1/4-1/2 **MILLBRAE, CA 94030** **HIST CORTESE**
0.354 mi.
1870 ft. **Site 2 of 4 in cluster K**

Relative:
Higher

Actual:
24 ft.

LUST REG 2:
Region: 2
Facility Id: Not reported
Facility Status: Pollution Characterization
Case Number: 990022
How Discovered: OM
Leak Cause: Unknown
Leak Source: Unknown
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: 1/1/1965
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported

CHEVRON 9-1035 (Continued) **S101310780**

Date Post Remedial Action Monitoring Began: Not reported

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0057506
Prog Element Code:	GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id:	PR0079795
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0057506
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0079794
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-1050

L53
SSE
1/4-1/2
0.374 mi.
1976 ft.

JIFFY CLEANERS
512 MAGNOLIA
MILLBRAE, CA 94030

Site 1 of 2 in cluster L

Database(s): **HIST CORTESE**
EDR ID Number: **1001610298**
EPA ID Number: **N/A**

Relative:
Higher

Actual:
31 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-1068

L54
SSE
1/4-1/2
0.374 mi.
1976 ft.

JIFFY CLEANERS
512 MAGNOLIA AVENUE
MILLBRAE, CA 94030

Site 2 of 2 in cluster L

Database(s): **SLIC**, **BROWNFIELDS**, **FINDS**, **San Mateo Co. BI**, **DRYCLEANERS**, **EMI**, **ECHO**
EDR ID Number: **1004440270**
EPA ID Number: **N/A**

Relative:
Higher

Actual:
31 ft.

SLIC:

Region:	STATE
Facility Status:	**Open - Site Assessment**
Status Date:	04/01/2001
Global Id:	T0608147901
Lead Agency:	SAN FRANCISCO BAY RWQCB (REGION 2)
Lead Agency Case Number:	Not reported
Latitude:	37.6027678841075
Longitude:	-122.394846081734
Case Type:	Cleanup Program Site
Case Worker:	RL
Local Agency:	SAN MATEO COUNTY LOP

JIFFY CLEANERS (Continued) **1004440270**

RB Case Number: 41S0191
File Location: Local Agency
Potential Media Affected: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: * Solvents
Site History: Extracted from TRC’s July 1, 2010 Indoor Air and Passive Soil Vapor Survey, San Mateo County does not take responsibility for the accuracy of the statements made or any professional interpretations made in the referenced report. The Site is located at 512 Magnolia Avenue in Millbrae, California, approximately 1 mile west of the San Francisco Bay and \\% mile southwest from the San Francisco International Airport. The current tenant is Jiffy Cleaners, which is located in the southwestern corner of the Millbrae Square shopping center. Adjacent businesses include Starbucks and Jamba Juice to the northeast and Bagel Street Caf to the northwest. Beyond Millbrae Square, neighboring properties consist of Safeway to the northeast, Millbrae Fire Station to the southwest, single-family residences to the south, and a United States Postal Service office to the east. Topography at the Site is generally planar and horizontal with a regional slope to the east towards the San Francisco Bay. The Site elevation is approximately 27 feet above mean sea level (msl). A dry cleaning facility has operated at the Site since at least 1982. The previous dry cleaning facility reportedly used 600 to 700 gallons of PCE per year. In 1995, the dry cleaning operator (Jiffy Cleaners) installed a new self-contained dry cleaning machine at the same location of the previous machine, which used 100 gallons of PCE per year (Golder Associates, 1997). Jiffy Cleaners installed a new, wet machine that does not use PCE in January of 2010. A Phase I ESA performed by Golder Associates identified that a dry cleaning facility had been in operation at the Site since at least 1982, using approximately 600 to 700 gallons of PCE per year. The machine was reportedly upgraded to a self-contained system in 1996, using approximately 100 gallons of PCE per year. Lowney Associates (now TRC) advanced two soil and grab groundwater borings at downgradient locations from the floor drain in the PCE storage room (EB-1) and the sealed floor drain behind the dry cleaning machine (EB-2). Soil and grab groundwater samples were collected from each boringand analyzed for halogenated volatile organic compounds (VOCs). PCE was detected in soil samples at concentrations ranging from 0.0031 to 0.110 milligrams per kilogram (mg/Kg). PCE was also detected in grab groundwater samples collected from the two borings at concentrations of 57 to 360 microgram per liter (μg/L). The highest concentrations of PCE were detected in soil and groundwater samples collected from boring EB-2, located near the sealed floor drain and dry cleaning machine. On April 25, 2001, Lowney Associates directed a subsurface exploration program and logged five borings (EB-4, EB-5, MW-1, MW-2, and MW-3) to approximate depths of 11 to 20\\% feet. In soil, PCE was detected at concentrations ranging from 0.010 to 0.048 mg/Kg, with the highest concentrations detected in samples collected from EB-4, located adjacent to the dry cleaning machine. PCE was detected in the grab groundwater collected from borings EB-4 and EB-5 and from monitoring wells MW-1, MW-2, and MW-3 at concentrations ranging from 9.4 to 240 μg/L, the highest of which was detected in monitoring well MW-3, located approximately 120 feet in the downgradient direction from the Site. Degradation components of PCE (cis-1,2-dichloroethene and trichloroethene) were also detected at low concentrations in groundwater from wells MW-2 and MW-3. On July 12, 2002, Lowney Associates conducted a conduit study of the on-Site

JIFFY CLEANERS (Continued) **1004440270**

sanitary sewer lateral. A video inspection was performed from the restroom in the back of the Jiffy Cleaners building to the manhole located in Broadway. No sags, breaks, offset joints or roots were observed in the sewer lateral. On March 18 and April 22, 2003 Lowney Associates directed a subsurface investigation to further evaluate the dissolved PCE plume. The investigation included drilling of five groundwater borings (EB-6 to EB-10a), three soil vapor borings (SV-1 to SV-3), and collection of groundwater from existing monitoring wells MW-1 to MW-3 and two off-Site domestic wells. Concentrations of PCE ranged from 0.57 μg/L from boring EB-6, located cross gradient from the dry cleaning machine, to 310 μg/L from boring EB-7, located downgradient from the dry cleaning. Results from this investigation revealed that the dissolved PCE plume was extending off-Site to the northeast below the Safeway located at 525 El Camino Real. VOCs originating from the Jiffy Cleaners site were not detected above laboratory reporting limits in groundwater samples collected from the domestic wells located upgradient at 246 Taylor Boulevard and downgradient at 15 Silva Avenue. PCE was detected in soil vapor samples ranging from 88 to 400 μg/m3, with the highest concentration detected from SV-2 located approximately 10 feet to the east of the dry cleaning machine. Between July 22 and August 4, 2004, Lowney collected additional soil vapor samples (VS-2Aa and VS-2Ab) in the vicinity of previous boring SV-2, collected-grab groundwater samples from three hydropunch borings (EB-10 through EB-12) located downgradient from the dry cleaners, installed one monitoring well (MW-4) downgradient from the Safeway, and advanced one soil boring (EB-2A) in the vicinity of previous boring EB-2. Results from the soil vapor sampling ranged from 1,000 to 2,500 μg/m3, which exceed the California Human Health Screening Level (CHHSL) for soil vapor at commercial sites. PCE was detected in soil samples collected from EB-2A ranging between 0.027 and 0.043 mg/Kg. PCE was not detected above laboratory reporting limits in grab groundwater samples collected from EB-10b or EB-11, located in the parking lot to the north of the Site. PCE was detected in the sample collected between 16 and 20 ft bgs at boring EB-12 (80 μg/L); however, PCE was below laboratory reporting limits in the sample collected between 26 and 30 ft bgs. Additional investigation of soil vapor and groundwater was performed between June 3 and 5, 2009, in accordance to the GPP-approved Workplan. Four sub-slab soil vapor samples were collected within Jiffy Cleaners and the three adjacent businesses (Starbucks, Jamba Juice, and Bagel Street Caf) to evaluate the potential for vapor intrusion due to underlying groundwater impacted with PCE. In addition, one shallow grab groundwater sample (EB-13) was collected near the intersection of Broadway and Taylor Boulevard, and one CPT boring (CPT-1) with adjacent grab groundwater borings were advanced downgradient from the Site to investigate the lateral and vertical extent of PCE-impacted groundwater. The soil vapor and groundwater analytical results are presented below: Groundwater: PCE was detected at 3.3 μg/L in the groundwater sample collected from EB-13 at 18 ft bgs. No other VOCs were detected above laboratory reporting limits. The highest concentration of PCE (600 μg/L) was detected at 25 ft bgs from CPT-1. The 35- and 45-foot samples at CPT-1 contained 3.3 and 0.60 μg/L, indicating that the vertical migration of PCE is insignificant. PCE daughter products, including trichloroethene (TCE) (23 μg/L) and cis-1,2 DCE (29 μg/L), were also detected at 25 ft bgs but were below laboratory reporting limits in deeper samples. In addition, each groundwater sample was

JIFFY CLEANERS (Continued) **1004440270**

analyzed for total dissolved solids (TDS) by EPA Method 160.1 in order to determine whether or not shallow groundwater in the vicinity is suitable for drinking water purposes. Concentrations of TDS ranged from 270 to 440 mg/L, which is below the California Secondary Maximum Contaminant Level (MCL) for drinking water (500 mg/L). Soil Vapor: Concentrations of PCE that exceeded the CHHSL of 603 μg/m3 ranged from 630 μg/m3 at SV-4 (taken inside Starbucks) to 5,000 μg/m3 at SV-5 inside Jiffy Cleaners. The concentration of PCE detected in the vapor sample collected inside Jamba Juice (SV-7) was below the commercial CHHSL; however, chloroform was detected at 6,100 μg/m3. No PCE daughter products were detected in vapor samples exceeding the laboratory reporting limits. Groundwater monitoring has occurred at the Site since June of 2001. Based on review of the analytical data and groundwater elevations, observations of VOC concentration trends in each monitoring well to date are as follows: &#65533;&#65533; MW-1: Concentrations of PCE have decreased overall from 27 μg/L in June of 2001 to 5.3 μg/L in June of 2009. Increases in PCE concentration are generally observed with increases in groundwater elevation. TCE has only been detected once in March of 2003 at 2.2 μg/L. &#65533;&#65533; MW-2: Concentrations of PCE have fluctuated between 15.4 and 110 μg/L, with higher concentrations generally observed with increases in groundwater elevation. PCE daughter products, such as trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE), have been detected at low concentrations, generally following the same trend as concentrations of PCE. Between June and December of 2009, concentrations of PCE have remained stable (62-64 ug/L). &#65533;&#65533; MW-3: The highest concentrations of PCE have been detected in monitoring well MW-3, ranging from 240 μg/L in June of 2001 to 2,600 μg/L in March of 2005. Since 2005, concentrations of PCE have remained between 268 and 703 μg/L. Increases in PCE concentration are generally observed with increases in groundwater elevation. TCE and cis-1,2-DCE have been detected above laboratory reporting limits during most sampling events; however, elevated reporting limits observed before November 2005 may have masked lower detections of both TCE and cis-1,2-DCE. No trend correlations appear to exist between concentrations of PCE daughter products and PCE. &#65533;&#65533; MW-4: Since the installation of monitoring well MW-4, concentrations of PCE have fluctuated between 0.99 (during the July 2009 monitoring event) and 18 μg/L. PCE daughter products have generally not been detected above laboratory reporting limits in this well. No trend correlations appear to exist between the PCE concentration and groundwater elevation.

Click here to access the California GeoTracker records for this facility:

BROWNFIELDS:
Global ID: T0608147901

FINDS:

Registry ID: 110001181792

Environmental Interest/Information System
HAZARDOUS AIR POLLUTANT MAJOR

JIFFY CLEANERS (Continued) **1004440270**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0018372
Prog Element Code:	GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id:	PR0012261
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status:	INACTIVE

Region:	SAN MATEO
Facility ID:	FA0018372
Prog Element Code:	STORES HAZ MAT <219GAL,1,999LB, 879FT3
Record Id:	PR0005081
Description:	STORES HAZ MAT <219GAL,1,999LB, 879CF
Facility Status:	INACTIVE

DRYCLEANERS:

EPA Id:	CAL000008979
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	11/14/1989
Facility Active:	No
Inactive Date:	06/30/2010
Facility Addr2:	Not reported
Owner Name:	MOSTAFA JELVEH
Owner Address:	512 MAGNOLIA AVE
Owner Address 2:	Not reported
Owner Telephone:	6506923689
Contact Name:	MOSTAFA JELVEH
Contact Address:	512 MAGNOLIA AVE
Contact Address 2:	Not reported
Contact Telephone:	6506923689
Mailing Name:	Not reported
Mailing Address 1:	512 MAGNOLIA AVE
Mailing Address 2:	Not reported
Mailing City:	MILLBRAE
Mailing State:	CA
Mailing Zip:	940300000
Owner Fax:	2
Region Code:	0000000000

EMI:

Year:	1987
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0

JIFFY CLEANERS (Continued) **1004440270**

SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1990
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1993
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1995
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1996
County Code:	41

JIFFY CLEANERS (Continued) **1004440270**

Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1997
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1998
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1999
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported

JIFFY CLEANERS (Continued) **1004440270**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2000
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2001
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2002
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

JIFFY CLEANERS (Continued) **1004440270**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2003
County Code: 41
Air Basin: SF
Facility ID: 1199
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2004
County Code: 41
Air Basin: SF
Facility ID: 1199
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0.064
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2005
County Code: 41
Air Basin: SF
Facility ID: 1199
Air District Name: BA
SIC Code: 7216
Air District Name: BAY AREA AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr:0

Year: 2006
County Code: 41
Air Basin: SF

JIFFY CLEANERS (Continued) **1004440270**

Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.067
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2007
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.067
Reactive Organic Gases Tons/Yr:	.0468062
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2008
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.067
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2009
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported

JIFFY CLEANERS (Continued) **1004440270**

Total Organic Hydrocarbon Gases Tons/Yr:	6.7000000000000004E-2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2010
County Code:	41
Air Basin:	SF
Facility ID:	1199
Air District Name:	BA
SIC Code:	7216
Air District Name:	BAY AREA AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.7000000000000004E-2
Reactive Organic Gases Tons/Yr:	4.6806199999999999E-2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

ECHO:

Envid:	1004440270
Registry ID:	110001181792
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110001181792

K55
SSE
1/4-1/2
0.387 mi.
2043 ft.

SHELL
491 EL CAMINO REAL
MILLBRAE, CA 94030

HIST CORTESE **S110060296**
N/A

Site 3 of 4 in cluster K

Relative:
Higher

Actual:
24 ft.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0914

K56
SSE
1/4-1/2
0.387 mi.
2043 ft.

VALERO MILLBRAE GAS & FOOD
491 EL CAMINO REAL
MILLBRAE, CA 94030

LUST **S106448022**
San Mateo Co. BI **N/A**

Site 4 of 4 in cluster K

Relative:
Higher

Actual:
24 ft.

LUST:

Region:	STATE
Global Id:	T0608100842
Latitude:	37.602838925
Longitude:	-122.393105047
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/16/2014

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-0914
LOC Case Number:	990016
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Extracted from Green Environment’s November 13, 2006 Subsurface Investigation Report, San Mateo County does not take responsibility for the accuracy of the statements made or any professional interpretations made in the referenced report. The subject property is presently a Valero fuel service station. The service station includes a 1,500 square-foot single story convenience store building and an underground fuel storage tank (UST) system with two (2) fuel dispenser islands below a station canopy. The USTs system includes the following three (3) tanks: Two (2) tanks each of 12,000-gallon capacity are used for regular unleaded and mid-grade unleaded gasoline, and are located on the eastern side of the station canopy. One (1) dualcompartment UST of 15,000-capacity is located on the southwest side of the station canopy. The dual compartment tank consists of an 8,000-gallon capacity compartment for premium-grade unleaded gasoline, and a 7,000-gallon capacity compartment for diesel. In August 1995, four (4) single-wall USTs along with underground piping and fuel dispensers were removed from the subject property. Three (3) USTs were located in the northwest portion of the service station and consisted of one 7,500-gallon capacity tank for regular unleaded gasoline, one 7,500-gallon capacity tank for super unleaded gasoline, and one 4,000-galllon capacity tank for super-regular unleaded gasoline. The fuel dispensers were located approximately where the existing dispensers are located. A 1,000-gallon waste oil UST was removed south-southeast of the former fuel USTs. Hydrocarbon-impacted soil was discovered during the USTs removal. Beginning in September 1995, impacted soil in accessible areas was excavated and removed for offsite disposal. According to plates prepared by Environet Consulting in December 1995, approximately two thirds to three quarters of the entire site (northeast of the station building) was excavated to depths of between 11 and 15 feet bgs. Hydrocarbon-impacted soil was discovered during the UST removal activities performed in August 1995 when four (4) single-wall USTs and underground piping and fuel dispensers were removed. Beginning in September 1995, impacted soil in accessible areas was excavated and removed for off-site disposal. According to plates prepared by Environet Consulting in December 1995, approximately two thirds to three quarters of the entire subject property (northeast of the station building) was excavated to depths of between 11 and 15 feet bgs. During the UST removal activities, sixteen (16) soil samples were collected on August 24, 1995. The maximum concentration of petroleum hydrocarbons was detected beneath the eastern removed product island (E. Island 4) at 4 feet bgs and at the southeast corner (S.E. Corn. 8) between the eastern-most removed UST and the sidewalk adjacent to El Camino Real at 8 feet bgs. Sample E. Island 4 reported 4,700 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg), 3.3 mg/kg benzene, 3.8 mg/kg toluene, 3.8 mg/kg ethylbenzene and 12.0 mg/kg total xylenes. The analytical results for Sample S.E. Corn. 8 were similar at 3,500 mg/kg TPHg, 1.1 mg/kg benzene, 3.2 mg/kg toluene, 5.2 mg/kg

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

ethylbenzene and 17.0 mg/kg total xylenes. The sample collected at 12 feet bgs in the southeast corner, S.E. Corn 12 only contained 2.0 mg/kg TPHg and 0.013 mg/kg total xylenes. Therefore, the original release location was likely from the eastern-most product dispenser or related piping. Upon overexcavation of the UST pit a total of twenty seven (27) confirmation soil samples were collected ranging in depth from 7 to 15 feet bgs. Twenty three (23) of those samples did not contain detected concentrations of TPHg or BTEX compounds above laboratory reporting limits. The maximum residual concentration was a northern sidewall sample collected adjacent to the sidewalk along Taylor Boulevard at 9.5 feet bgs (Sample S8 at 9.5 feet bgs containing 2,300 mg/kg TPHg, 17 mg/kg benzene, 42 mg/kg toluene, 47 mg/kg ethylbenzene and 160 mg/kg total xylenes. The only other elevated residual concentration was again in the southeastern corner (S16) at 13 feet bgs containing 960 mg/kg TPHg, no detected benzene, 19 mg/kg toluene, 18 mg/kg ethylbenzene and 98 mg/kg total xylenes. A grab groundwater sample collected from the open excavation contained 27,000 micrograms per liter ("g/L) TPHg, 1,800 "g/L benzene, 1,900 "g/L toluene, 140 "g/L ethylbenzene and 2,200 "g/L total xylenes. Dewatering of the excavation was performed and four samples were collected from an onsite Baker tank between September 29 and October 23, 1995, each reported lesser concentrations of petroleum hydrocarbons. The last sample from the tank, T-4 did not contain detected concentrations of TPHg, benzene, toluene or ethylbenene, only 1,300 "g/L total xylenes. The complete original report of overexcavation was not currently accessible (only excerpts including tables and figures), therefore it is not currently known the total volume of soil and groundwater removed and disposed during UST removal and subsequent overexcavation activities. On January 20, 1999 three (3) groundwater monitoring wells (MW-1, MW-2 and MW-3) were completed to a depth of 20 feet bgs at 491 El Camino Real. A quarterly groundwater sampling program was initiated in February 1999 and included groundwater sample analyses for TPHg, benzene (B), toluene (T), ethylbenzene (E), xylenes (X), and methyl-tert-butyl ether (MTBE). Initial results from Well MW-1 reported 8,600 "g/L TPHg, 470 "g/L benzene, 490 "g/L toluene, 190 "g/L ethylbenzene, 1,500 "g/L xylenes and no detected MtBE. Well MW-2 initially reported 3,600 "g/L TPHg, no detected BTEX compounds and 3,500 "g/L MtBE. Well MW-3 initially reported only 3,500 "g/L MtBE and no detected TPHg or BTEX compounds. During the most recent groundwater monitoring well sampling event (June 29, 2006), results from Well MW-1 contained 680 "g/L TPHg, 410 "g/L benzene, 13 "g/L toluene, 62 "g/L ethylbenzene, 76 "g/L xylenes, 27 "g/L MtBE and no detected DIPE, ETBE, TAME, TBA or ethanol. Well MW-2 contained only 260 "g/L MtBE and 1,500 "g/L TBA, no TPHg, BTEX compounds or other fuel oxygenate were detected. Well MW-3 contained 160 "g/L TPHg, 630 "g/L MtBE and 160 "g/L TBA, but no detected BTEX compounds or other fuel oxygenates.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608100842
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

Phone Number:	Not reported
Global Id:	T0608100842
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608100842
Status:	Completed - Case Closed
Status Date:	09/16/2014
Global Id:	T0608100842
Status:	Open - Case Begin Date
Status Date:	10/27/1994
Global Id:	T0608100842
Status:	Open - Eligible for Closure
Status Date:	11/07/2013
Global Id:	T0608100842
Status:	Open - Remediation
Status Date:	09/01/1995
Global Id:	T0608100842
Status:	Open - Site Assessment
Status Date:	10/01/1995
Global Id:	T0608100842
Status:	Open - Verification Monitoring
Status Date:	06/15/2012

Regulatory Activities:

Global Id:	T0608100842
Action Type:	RESPONSE
Date:	01/15/2011
Action:	Site Assessment Report
Global Id:	T0608100842
Action Type:	RESPONSE
Date:	08/15/2009
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608100842
Action Type:	ENFORCEMENT
Date:	11/07/2013
Action:	Notification - Preclosure - #20131107
Global Id:	T0608100842
Action Type:	RESPONSE
Date:	02/15/2008
Action:	Monitoring Report - Semi-Annually

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

Global Id:	T0608100842
Action Type:	ENFORCEMENT
Date:	10/06/2011
Action:	Staff Letter - #20111006
Global Id:	T0608100842
Action Type:	ENFORCEMENT
Date:	05/20/2010
Action:	Staff Letter - #20100520
Global Id:	T0608100842
Action Type:	ENFORCEMENT
Date:	01/30/2014
Action:	Staff Letter - #20140130
Global Id:	T0608100842
Action Type:	RESPONSE
Date:	08/15/2010
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608100842
Action Type:	RESPONSE
Date:	02/15/2009
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608100842
Action Type:	REMEDIATION
Date:	09/01/1995
Action:	Excavation
Global Id:	T0608100842
Action Type:	ENFORCEMENT
Date:	09/16/2014
Action:	Closure/No Further Action Letter - #20140916
Global Id:	T0608100842
Action Type:	RESPONSE
Date:	04/14/2005
Action:	Soil and Water Investigation Report
Global Id:	T0608100842
Action Type:	RESPONSE
Date:	02/17/2012
Action:	Site Assessment Report
Global Id:	T0608100842
Action Type:	RESPONSE
Date:	08/15/2008
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608100842
Action Type:	ENFORCEMENT
Date:	09/01/2010
Action:	Staff Letter - #20100901
Global Id:	T0608100842
Action Type:	RESPONSE

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

Date: 08/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0608100842
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0608100842
Action Type: RESPONSE
Date: 07/30/2014
Action: Well Destruction Report

Global Id: T0608100842
Action Type: RESPONSE
Date: 09/23/2011
Action: Well Installation Workplan - Regulator Responded

Global Id: T0608100842
Action Type: RESPONSE
Date: 01/12/2010
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0608100842
Action Type: RESPONSE
Date: 08/15/2012
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: Other
Date: 08/26/1995
Action: Leak Discovery

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 07/08/2009
Action: Staff Letter - #20090708

Global Id: T0608100842
Action Type: Other
Date: 10/27/1994
Action: Leak Reported

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 12/02/2008
Action: Notice of Violation - #20081202

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 06/24/2003
Action: Staff Letter - #20030624A

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 12/16/2004
Action: Staff Letter - #20041216

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 05/19/1995
Action: Notice of Responsibility - #1

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 07/25/2002
Action: Notice of Responsibility - #20020725

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 02/28/2006
Action: Notice of Violation - #20060228

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 12/01/2003
Action: Notice of Violation - #20031201

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 12/13/2001
Action: Staff Letter - #20011213

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 06/24/2003
Action: Staff Letter - #20030624B

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 12/14/2007
Action: Staff Letter - #20071214B

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 07/08/2003
Action: Staff Letter - #20030708

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 04/19/2004
Action: Staff Letter - #20040419

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 12/14/2007
Action: Staff Letter - #20071214A

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 01/19/2010
Action: Referral to District Attorney - #20100119

Global Id: T0608100842
Action Type: ENFORCEMENT

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

Date: 05/30/2012
Action: Staff Letter - #20120530

Global Id: T0608100842
Action Type: RESPONSE
Date: 05/17/2004
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 02/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 05/16/2005
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 08/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 11/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 02/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 03/01/2004
Action: Soil and Water Investigation Report

Global Id: T0608100842
Action Type: RESPONSE
Date: 12/31/2003
Action: Other Report / Document

Global Id: T0608100842
Action Type: RESPONSE
Date: 12/31/2003
Action: Other Report / Document

Global Id: T0608100842
Action Type: ENFORCEMENT
Date: 08/02/2011
Action: Staff Letter - #20110802

Global Id: T0608100842
Action Type: RESPONSE
Date: 07/12/2004
Action: Soil and Water Investigation Workplan

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

Global Id: T0608100842
Action Type: RESPONSE
Date: 02/20/2008
Action: Soil and Water Investigation Workplan

Global Id: T0608100842
Action Type: RESPONSE
Date: 02/20/2008
Action: Electronic Reporting Submittal Due

Global Id: T0608100842
Action Type: RESPONSE
Date: 02/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0608100842
Action Type: RESPONSE
Date: 02/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 05/15/2013
Action: Monitoring Report - Quarterly

Global Id: T0608100842
Action Type: RESPONSE
Date: 02/15/2010
Action: Monitoring Report - Semi-Annually

LUST REG 2:
Region: 2
Facility Id: Not reported
Facility Status: Pollution Characterization
Case Number: 990016
How Discovered: Tank Closure
Leak Cause: Unknown
Leak Source: Unknown
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: 10/1/1995
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

SAN MATEO CO. LUST:
Region: SAN MATEO
Facility ID: 990016
Facility Status: 9- Case Closed
Global ID: T0608100842
APN Number: 024122010
Case Type: SAN MATEO CO. LUST
EDR Link ID: SAN MATEO CO. LUST

VALERO MILLBRAE GAS & FOOD (Continued) **S106448022**

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0018365
Prog Element Code:	GENERATES <27 GAL/YEAR
Record Id:	PR0047873
Description:	GENERATES <27 GAL/YEAR
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0018365
Prog Element Code:	STORES MV FUELS OR WASTE ONLY
Record Id:	PR0023846
Description:	STORES MV FUELS OR WASTE ONLY
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0018365
Prog Element Code:	UNDERGROUND TANK - GENERAL
Record Id:	PR0023014
Description:	UNDERGROUND TANK - GENERAL
Facility Status:	ACTIVE
Region:	SAN MATEO
Facility ID:	FA0018365
Prog Element Code:	GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id:	PR0012271
Description:	GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status:	INACTIVE

M57	**MILLBRAE SCHOOL DISTRICT GREEN HILLS ELEM. SCHOOL**	**LUST**	**S110734654**
WSW	**401 LUDEMAN LN**	**HAZNET**	**N/A**
1/4-1/2	**MILLBRAE, CA 94030**		
0.419 mi.			
2210 ft.	**Site 1 of 2 in cluster M**		

Relative:
Higher

Actual:
126 ft.

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	990025
Facility Status:	9- Case Closed
Global ID:	T0608101028
APN Number:	021485380
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

HAZNET:

envid:	S110734654
Year:	2013
GEPAID:	CAC002730996
Contact:	MILLBRAE SCHOOL DISTRICT
Telephone:	4088698350
Mailing Name:	Not reported
Mailing Address:	401 LUDEMAN LN
Mailing City,St,Zip:	MILLBRAE, CA 940301318
Gen County:	San Mateo
TSD EPA ID:	NVT330010000
TSD County:	99
Waste Category:	Not reported

MILLBRAE SCHOOL DISTRICT GREEN HILLS ELEM. SCHOOL (Continued) **S110734654**

Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.45
Cat Decode: Not reported
Method Decode: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County: Not reported

58
SSE
1/4-1/2
0.423 mi.
2235 ft.

FOMER BETTY BRITE
446 BROADWAY
MILLBRAE, CA 94030

ENVIROSTOR
LUST
SLIC

S106448113
N/A

Relative:
Higher

Actual:
21 ft.

ENVIROSTOR:
Facility ID: 60001046
Status: Refer: 1248 Local Agency
Status Date: 09/13/2006
Site Code: Not reported
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 1
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Not reported
Supervisor: Referred - Not Assigned
Division Branch: Cleanup Berkeley
Assembly: 22
Senate: 13
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not Applicable
Latitude: 37.60221
Longitude: -122.3930
APN: 024122120
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 024122120
Alias Type: APN
Alias Name: 60001046
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Other Report
Completed Date: 09/13/2006
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported

FOMER BETTY BRITE (Continued) **S106448113**

Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	999031
Facility Status:	5C- Pollution Characterization
Global ID:	SL0608107611
APN Number:	024122120
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

SLIC:

Region:	STATE
Facility Status:	**Open - Site Assessment**
Status Date:	04/28/2004
Global Id:	SL0608107611
Lead Agency:	SAN MATEO COUNTY LOP
Lead Agency Case Number:	999031
Latitude:	37.602215
Longitude:	-122.39307
Case Type:	Cleanup Program Site
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	Not reported
File Location:	Local Agency
Potential Media Affected:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Tetrachloroethylene (PCE)
Site History:	Extracted from Toxichem’s June 8, 2007 Sub-Slab Vapor Extraction Feasibility Testing Report, San Mateo County does not take responsibility for the accuracy of the statements made or any professional interpretations made in the referenced report. The subject site consist of a rectangular shaped parcel measuring approximately 25 feet by 100 feet in plan area. The site is developed to its boundary limits with a single-story structure. The site is bound by cit sidewalk and Broadway on the southwest, an asphalt-paved alley onthe northeast, a city-owned landscaped area and asphalt-paved parking lot on the southeast and by an immediately-adjacent structure (Sixteen Mile House restaurant) on the northwest. The site was previously used as a Citibank branch and recently has been modified and improved to operate as a real estate office. The site has its main entrance at the south corner of the building along Broadway and a rear access door at the east corner of the building along the alley. A Phase I Environmental Site Assessment (ESA) performed by Hillmann Environmental Group (HEG) in 2003 identified that the site was historically used as a laundromat with dry-cleaning machine in the 1960s. During a review of files at the City of Millbrae Building Department, PSI located a site plan for the former Betty Brite Coin-O-Mat located at the subject address, dated June 16, 1964. The site plan showed the locations of an existing (at that time) drycleaning unit (Detrex C-0-6-1) and the proposed location for a second cleaning unit (Prosperity 6-A). The historic plan indicates that the facility had the same basic building footprint as the current structure, however the Broadway entrance was more centrally

FOMER BETTY BRITE (Continued) **S106448113**

located on the southwest wall and there used to be a door on the southeast side of the building, facing the parking lot. No door at the alley is noted in the historic site plan. It is not known at this time whether the building was remodeled to the current configuration, or was demolished with a new structure built in its place. HEG performed a Phase II subsurface investigation to assess soil and groundwater conditions due to the presence of the former dry-cleaning machine(s). The Phase II investigation included the drilling of three hydraulic push borings (P1 through P3) with P1 located on Broadway in front of the subject bank building and P2 and P3 drilled in the alley at the rear of the building. Borings P1 and P3 were advanced to 11 feet below ground surface (bgs), while P2 was advanced to 16 feet bgs. Soil at the site consisted of interlayered silty sand and clay, with groundwater encountered at approximately 8 feet bgs in each of the borings. The HEG report stated that groundwater flow was expected to be towards San Francisco Bay (to the northeast). Soil samples were collected for chemical analyses at 10 or 11 feet bgs in Borings P1 through P3. Groundwater was also first encountered at approximately 8 feet bgs and collected for chemical analyses from each of the three borings. The soil and groundwater samples were analyzed for volatile organic compounds (VOCs) by Cal Tech Environmental Laboratories according to EPA Method 8260B. The results of the analyses indicated that PCE was detected only in the soil and groundwater samples collected from boring P2 at concentrations of 0.21 milligrams per kilogram (mg/kg) and 760 micrograms per liter ("g/l), respectively. Trichloroethene (TCE) was also detected in the P2 groundwater sample at a concentration of 18 "g/l. HEG recommended that additional investigation be completed at the site. PSI performed a utility survey in June, 2004 with identified utility locations. Underground utilities at the site include water, electric, gas, and sewer lines.
In conversation between PSI and Mr. Martin Creane of the City of Millbrae Streets Department it was stated that the exact depth of the sewer line going into the building was unknown, but it would not be deeper than the main line that runs along Millbrae Avenue (approximately 5 feet bgs). In a conversation between PSI and Mr. Kenneth Huo of the City of Millbrae Building Department it was stated that water, electric, and gas lines are typically not below 5 feet bgs. During the meeting between PSI and Mr. Huo, a site plan was found dated, June 16, 1964, of the former Betty Brite Coin-O-Mat located at the subject address. This plan shows the location of what appears to be a current (at that time) dry-cleaning unit (Detrex C-0-6-1) and the proposed location for a second cleaning unit (Prosperity 6-A). It is not known whether the proposed Prosperity unit was ever installed. The sewer line entering the building is located on the southern portion of the building, while the former dry-cleaning units are on the eastern portion of the building. Based on a groundwater depth of approximately 8 feet, utility lines in the upper 5 feet of soil, the lack of utility lines in the immediate area of the dry-cleaning units, the discontinued use of the dry-cleaning machine, and the lack of contaminants in the groundwater sample from HEG Boring P1 (located next to the sewer line), PSI concluded that the utility lines at the site do not appear to be a current conduit for migration of contamination in the saturated or unsaturated zone.
PSI advanced three borings on December 22, 2005; Boring B-1 was advanced adjacent to the former boiler room and Borings B-2 and B-3 were advanced in the locations of the former Prosperity and Detrex dry-cleaning Units, respectively. Soil samples were collected for

FOMER BETTY BRITE (Continued) **S106448113**

chemical analyses from all the borings and a groundwater sample was collected from Boring B-3. Borings B-1 and B-2 were only advanced to approximately 5-feet bgs due to equipment limitations relating to ceiling height restrictions. The analytical results indicated the following: At Boring B-1, PCE was only detected in the soil sample from the 4 feet bgs (0.036 mg/kg) and not from the shallow soil sample collected at 0.5 feet bgs. PCE was detected in both soil samples from Boring B-2 (0.027 and 0.072 mg/kg PCE at 0.5 and 3.5 feet bgs, respectively) in the location of a second, possible (proposed Prosperity 6-A) former dry cleaning unit. The highest concentrations of PCE detected during this investigation, and the only TCE detected in the samples collected, were from beneath the former Detrex dry cleaning unit at Boring B-3. PCE was detected in soil in Boring B-3 to the maximum total depth of 16 feet bgs. The maximum concentration of PCE in Boring B-3 was at 4 feet bgs at 1.7 mg/kg, with all other six soil samples containing 0.025 mg/kg or less PCE. The grab groundwater sample obtained from Boring B-3 contained 140 "g/l PCE. Due to limitations of the drilling equipment and inability to obtain groundwater samples at B-1 and B-2, subsequent work was warranted. The objective of the investigation was to determine if PCE is present in soil and groundwater beneath likely sources at the site, and if present, to evaluate the vertical extent of PCE and its breakdown products in soil. On September 20, 2006, three interior soil borings were advanced. Two borings were proposed, however due to no soil recovery from Boring B-1A, a third boring (B-1B) was advanced adjacent to Boring B-1A. The location of Borings B-1A and B-1B were chosen to be close to the location of previous Boring B-1, near the former boiler room. The location of Boring B-2A was chosen to be close to the location B-2, near the former proposed Prosperity dry cleaning unit. Boring B-1A was advanced to 13 feet bgs and Borings B-1B and B-2A were advanced to 19 feet bgs by Precision Sampling Inc. at the direction of PSI. Based on the report, near surface soil consisted of up to 1 foot of medium to olive brown gravelly sand or sandy gravel underlain by interbedded medium to olive brown silty sand and sandy or clayey silt with dark brown silty clay at the bottom of each of the (deeper) borings. Groundwater stabilized inthe borings at approximately 7 feet bgs prior to grab groundwater sample collection. Six soil samples were collected from Boring B-1B, near the former boiler room. The three shallow soil samples collected to a maximum depth of 10.5 feet bgs did not report detected concentrations of PCE. The highest PCE concentration detected in the boring was at 13.0-13.5 feet bgs at 0.024 milligrams per kilogram (mg/kg). Minor concentrations of PCE were detected to the bottom of the boring at 0.0058 mg/kg (14.0-14.5 feet bgs) and 0.0073 mg/kg (18.0-18.5 feet bgs). Seven soil samples were collected from Boring B-2A, near the former proposed Prosperity dry cleaning unit. Only the two shallowest soil samples reported detected concentrations of PCE; the lower five samples collected between 8 and 19 feet bgs reported concentrations below the laboratory method reporting limit of 0.002 mg/kg. The maximum concentration of PCE (1.1 mg/kg) was reported in the shallowest sample collected at 3.5-4.0 feet bgs. In addition, TCE was detected in this soil sample (3.5-4.0 feet bgs) at 0.048 mg/kg. The sample at 5.0-5.5 feet bgs in Boring B-2A contained 0.32 mg/kg PCE. During advancement of Boring B-2A, PCE (solvent) odor was noted on the boring log and photoizonization (PID) detector readings were recorded up to 74 parts per million (ppm) at 6 feet bgs. Grab groundwater samples were collected from each of the

FOMER BETTY BRITE (Continued) **S106448113**

three borings (B-1A, B-1B and B-2A) after groundwater stabilized to approximately 7 feet bgs and reported PCE concentrations of 180, 220 and 22 "g/L, respectively. PSI concluded that the highest concentration of PCE detected in soil was from Boring B-2A in shallow vadose zone soils, indicating a likely release source from the proposed Prosperity dry cleaning unit historically located in the area of B-2A. PSI also concluded that the highest concentration of PCE detected in groundwater at the site is located in the alley behind the facility and is likely the result of either plume migration to the east over the last 40 years, or due to historic spent dry cleaning solvent dumping practices. Shallow soil impact by PCE above the Environmental Screening Levels (San Francisco Regional Water Quality Control Board, February 2005) protective of vapor intrusion into buildings (above 0.24 mg/kg for commercial and above 0.087 mg/kg for residential) has been identified at the former locations of the dry cleaning machines at locations B-2A and B-3. The highest concentrations of PCE detected in groundwater are present in Boring B-1B (220 "g/L) and previous Boring P2 (760 "g/L advanced on May 1, 2003) which are both located towards the east or northeast of the former dry cleaning areas in the inferred direction of groundwater flow. The vapor sampling probes (SV-1 through SV-4) were initially proposed by PSI in the Addendum to Subsurface Vapor Investigation Work Plan and TOXICHEM installed the probes with the modification of moving SV-3 approximately 5 feet west as suggested in the SMCHD letter dated November 20, 2006. Initially during the December 8, 2006 sampling event, four sub-slab soil vapor samples were collected from immediately beneath the floor slab of the building. Representative concentrations ranged from 130,000 "g/m3 PCE (SV-3) to a high of 910,000 "g/m3 PCE (SV-1 located at the former Detrex dry cleaning unit location). All sub-slab soil vapor samples contained concentrations of PCE above the commercial and residential ESL. Additionally TCE was detected above the residential ESL in probes SV-1 (at 1,600 "g/m3) and SV-2 (at 1,400 "g/m3 and at 1,500 "g/m3 in the laboratory duplicate of SV-2). Following the communication testing event performed between February 15 and 17, 2007 (described later in this report) three vapor points were resampled (SV-1, SV-3 and SV-4). Vapor probe SV-3 was reported to contain 10,000 "g/m3 PCE and no (<62 "g/m3) TCE and vapor probe SV-4 was reported to contain 8,300 "g/m3 PCE and no (<62 "g/m3) TCE. SV-1 locatedin the back office near the center of the building contained 370,000 "g/m3 PCE and 960 "g/m3 TCE on March 7, 2007. Due to preferential flow from the rear of the building observed during the initial communication testing, a second vent location was completed near SV-1 (E-2) and second communication test performed. To aid in communication testing influence, a fifth vapor probe (SV-5) was installed near the west front corner of the building within the utility room. In order to facilitate carpet installation and building occupancy, the existing above-ground completion probes SV-1 through SV-4 were then destroyed and replaced nearby with flush-mount (or recessed) vapor probes (SV-1R through SV-4R). Additionally, the original extraction vent (E-1) near SV-2 was destroyed and a second vent (E-2) was completed near the original SV-1 probe location completed for future use by installing a threaded cleanout-style 2-inch diameter PVC fitting covered by a brass floor plate through the carpet. Two 8-hour indoor air samples (IA-1 and IA-2) and one 8-hour ambient air rooftop sample (OA-1) were collected on February 6, 2007. Both indoor air samples reported concentrations of PCE at

FOMER BETTY BRITE (Continued) **S106448113**

12.0 "g/m3. Indoor air sample IA-1 located centrally within the building also contained 0.18 "g/m3 TCE, though no TCE was detected (<0.16 "g/m3) in the IA-2 sample collected towards the rear of the building. The outdoor ambient air sample was reported to contain 0.64 "g/m3 PCE (0.63 "g/m3 PCE in the laboratory duplicate). All results (including the outdoor background ambient air sample) were reported above the residential indoor air screening level (ESL) for PCE of 0.41 "g/m3 and just below the commercial indoor air screening level (ESL) for PCE of 0.68 "g/m3. The concentrations of the constituents in the indoor air samples were all greater than the concentration reported in the outdoor ambient air sample. Subtracting the ambient background air concentration of 0.64 "g/m3 PCE from the indoor air concentrations yields results of 11.4 "g/m3 PCE for each of IA-1 and IA-2. These results are above both the residential and commercial indoor air screening levels (Table E-3 of the RWQCB ESLs) of 0.41 "g/m3 and 0.68 "g/m3, respectively. Since both the subslab soil vapor results and the indoor air sampling data are above the ESLs, mitigation is warranted.

Click here to access the California GeoTracker records for this facility:

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59 **AVIS RENT A CAR (TEMP FAC)** **LUST** **S110071413**
ENE **PLOT 1 SFIA** **N/A**
1/4-1/2 **SOUTH SAN FRANCISCO, CA 94128**
0.424 mi.
2239 ft.

Relative:
Higher

Actual:
28 ft.

LUST:

Region:	STATE
Global Id:	T0608139599
Latitude:	37.6111888116119
Longitude:	-122.388961315155
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/25/2000
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-4030
LOC Case Number:	540014
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608139599
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608139599

AVIS RENT A CAR (TEMP FAC) (Continued) **S110071413**

Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608139599
Status:	Completed - Case Closed
Status Date:	09/25/2000
Global Id:	T0608139599
Status:	Open - Case Begin Date
Status Date:	05/04/1999

Regulatory Activities:

Global Id:	T0608139599
Action Type:	ENFORCEMENT
Date:	06/04/1999
Action:	Notice of Responsibility - #1
Global Id:	T0608139599
Action Type:	Other
Date:	05/04/1999
Action:	Leak Reported

M60	**GREEN HILLS COUNTRY CLUB**	**LUST**	**S101303125**
WSW	**400 LUDEMAN**	**SWEEPS UST**	**N/A**
1/4-1/2	**MILLBRAE, CA 94030**	**HIST CORTESE**	
0.443 mi.			
2339 ft.	**Site 2 of 2 in cluster M**		

Relative:
Higher

Actual:
132 ft.

LUST:

Region:	STATE
Global Id:	T0608100241
Latitude:	37.6060093
Longitude:	-122.4046493
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/02/1993
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-0253
LOC Case Number:	990009
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608100241

GREEN HILLS COUNTRY CLUB (Continued) **S101303125**

Contact Type: Regional Board Caseworker
Contact Name: Regional Water Board
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY ST SUITE 1400
City: OAKLAND
Email: Not reported
Phone Number: Not reported

Global Id: T0608100241
Contact Type: Local Agency Caseworker
Contact Name: JACOB MADDEN
Organization Name: SAN MATEO COUNTY LOP
Address: 2000 ALAMEDA DE LAS PULGAS
City: SAN MATEO
Email: jmadden@smcgov.org
Phone Number: 6503726298

Status History:
Global Id: T0608100241
Status: Completed - Case Closed
Status Date: 09/02/1993

Global Id: T0608100241
Status: Open - Case Begin Date
Status Date: 02/22/1990

Regulatory Activities:
Global Id: T0608100241
Action Type: Other
Date: 04/06/1990
Action: Leak Discovery

Global Id: T0608100241
Action Type: Other
Date: 02/22/1990
Action: Leak Reported

Global Id: T0608100241
Action Type: ENFORCEMENT
Date: 06/11/1991
Action: Notice of Responsibility - #1

LUST REG 2:
Region: 2
Facility Id: Not reported
Facility Status: Case Closed
Case Number: 990009
How Discovered: OM
Leak Cause: Unknown
Leak Source: Unknown
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported

GREEN HILLS COUNTRY CLUB (Continued) **S101303125**

Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

SWEEPS UST:

Status: Not reported
Comp Number: 990002
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 41-000-990002-000002
Tank Status: Not reported
Capacity: 550
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 4

Status: Not reported
Comp Number: 990002
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 41-000-990002-000004
Tank Status: Not reported
Capacity: 500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 990002
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 41-000-990002-000005
Tank Status: Not reported
Capacity: 300
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: DIESEL
Number Of Tanks: Not reported

Status: Not reported

GREEN HILLS COUNTRY CLUB (Continued) **S101303125**

Comp Number:	990002
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	41-000-990002-000007
Tank Status:	Not reported
Capacity:	2000
Active Date:	Not reported
Tank Use:	OIL
STG:	PRODUCT
Content:	WASTE OIL
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	990002
Number:	1
Board Of Equalization:	Not reported
Referral Date:	04-05-94
Action Date:	04-05-94
Created Date:	10-13-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	41-000-990002-000001
Tank Status:	A
Capacity:	1000
Active Date:	04-05-94
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	2

Status:	Active
Comp Number:	990002
Number:	1
Board Of Equalization:	Not reported
Referral Date:	04-05-94
Action Date:	04-05-94
Created Date:	10-13-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	41-000-990002-000003
Tank Status:	A
Capacity:	1000
Active Date:	04-05-94
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL
Number Of Tanks:	Not reported

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0253

N61	**FORMER ARCO SITE**	**LUST**	**S111075146**
SE	**400 EL CAMINO REAL**	**San Mateo Co. BI**	**N/A**
1/4-1/2	**MILLBRAE, CA 94030**		
0.444 mi.			
2343 ft.	**Site 1 of 3 in cluster N**		

Relative:
Lower

Actual:
16 ft.

LUST:

Region:	STATE
Global Id:	T10000003068
Latitude:	37.6025745081862
Longitude:	-122.391638159752
Case Type:	LUST Cleanup Site
Status:	Open - Site Assessment
Status Date:	06/23/2011
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	990035
File Location:	All Files are on GeoTracker or in the Local Agency Database
Potential Media Affect:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Diesel, Gasoline
Site History:	Site opened 6/24/2011 based on concentrations discovered during Phase 2 investigation

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T10000003068
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T10000003068
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T10000003068
Status:	Open - Case Begin Date
Status Date:	06/10/2011
Global Id:	T10000003068
Status:	Open - Site Assessment
Status Date:	06/23/2011

Regulatory Activities:

Global Id:	T10000003068
Action Type:	RESPONSE
Date:	02/15/2015

FORMER ARCO SITE (Continued) **S111075146**

Action:	Final Remedial Action Report / Corrective Action Report
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	02/29/2012
Action:	Staff Letter - #20120229
Global Id:	T10000003068
Action Type:	RESPONSE
Date:	11/18/2011
Action:	Preliminary Site Assessment Workplan - Regulator Responded
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	06/23/2011
Action:	Staff Letter - #20110623
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	03/26/2014
Action:	Staff Letter - #20140326
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	08/27/2014
Action:	Staff Letter - #20140827
Global Id:	T10000003068
Action Type:	RESPONSE
Date:	10/26/2012
Action:	Soil and Water Investigation Workplan - Regulator Responded
Global Id:	T10000003068
Action Type:	RESPONSE
Date:	04/26/2013
Action:	Site Assessment Report - Regulator Responded
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	01/09/2013
Action:	Staff Letter - #20130109
Global Id:	T10000003068
Action Type:	RESPONSE
Date:	07/06/2012
Action:	Site Assessment Report
Global Id:	T10000003068
Action Type:	Other
Date:	06/10/2011
Action:	Leak Discovery
Global Id:	T10000003068
Action Type:	Other
Date:	06/17/2011
Action:	Leak Reported

FORMER ARCO SITE (Continued) **S111075146**

Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	07/07/2011
Action:	Staff Letter - #20110707
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	07/07/2011
Action:	Notice of Responsibility - #20110707
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	08/14/2012
Action:	Staff Letter - #20120814
Global Id:	T10000003068
Action Type:	RESPONSE
Date:	07/11/2014
Action:	CAP/RAP - Feasibility Study Report - Regulator Responded
Global Id:	T10000003068
Action Type:	ENFORCEMENT
Date:	10/07/2015
Action:	Notice of Violation - #20151007
Global Id:	T10000003068
Action Type:	RESPONSE
Date:	11/15/2012
Action:	Monitoring Report - Semi-Annually

SAN MATEO CO. LUST:

Region:	SAN MATEO
Facility ID:	990035
Facility Status:	3B- Preliminary Assessment Underway
Global ID:	T10000003068
APN Number:	024123130
Case Type:	SAN MATEO CO. LUST
EDR Link ID:	SAN MATEO CO. LUST

San Mateo Co. BI:

Region:	SAN MATEO
Facility ID:	FA0049060
Prog Element Code:	UNDERGROUND TANK - GENERAL
Record Id:	PR0067018
Description:	UNDERGROUND TANK - GENERAL
Facility Status:	INACTIVE

Map ID / Direction / Distance / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
62 **NW** **1/4-1/2** **0.456 mi.** **2407 ft.**	**HICKEY FAMILY PARTNERSHIP** **1581 EL CAMINO** **MILLBRAE, CA 94030**	**LUST** **San Mateo Co. BI** **HIST CORTESE**	**S102431362** **N/A**

Relative:
Higher

Actual:
40 ft.

LUST:

Region:	STATE
Global Id:	T0608100463
Latitude:	37.6123237
Longitude:	-122.4032827
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/20/1997
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-0487
LOC Case Number:	990019
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608100463
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608100463
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608100463
Status:	Completed - Case Closed
Status Date:	05/20/1997
Global Id:	T0608100463
Status:	Open - Case Begin Date
Status Date:	07/22/1996

Regulatory Activities:

Global Id:	T0608100463
Action Type:	Other
Date:	07/22/1996
Action:	Leak Reported

HICKEY FAMILY PARTNERSHIP (Continued) **S102431362**

Global Id: T0608100463
Action Type: ENFORCEMENT
Date: 07/24/1996
Action: Notice of Responsibility - #1

LUST REG 2:
Region: 2
Facility Id: Not reported
Facility Status: Case Closed
Case Number: 990019
How Discovered: OM
Leak Cause: Unknown
Leak Source: Unknown
Date Leak Confirmed: Not reported
Oversight Program: LUST
Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

SAN MATEO CO. LUST:
Region: SAN MATEO
Facility ID: 990019
Facility Status: 9- Case Closed
Global ID: T0608100463
APN Number: 021131080
Case Type: SAN MATEO CO. LUST
EDR Link ID: SAN MATEO CO. LUST

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0024561
Prog Element Code: GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id: PR0029347
Description: GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0024561
Prog Element Code: STORES HAZ MAT <1,199GAL,9,999LB,4,799FT3
Record Id: PR0029348
Description: STORES HAZ MAT <1,199GAL,9,999LB,4,799CF
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0023988
Prog Element Code: UNDERGROUND TANK - GENERAL
Record Id: PR0028216
Description: UNDERGROUND TANK - GENERAL
Facility Status: INACTIVE

HIST CORTESE:

HICKEY FAMILY PARTNERSHIP (Continued) **S102431362**

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0487

N63
SE
1/4-1/2
0.474 mi.
2501 ft.

MOBIL OIL CORP
390 EL CAMINO REAL
MILLBRAE, CA 94030

Site 2 of 3 in cluster N

LUST
AST
SWEEPS UST
CA FID UST
San Mateo Co. BI

S101593737
N/A

Relative:
Lower

Actual:
13 ft.

LUST REG 2:

Region:	2
Facility Id:	Not reported
Facility Status:	Case Closed
Case Number:	990005
How Discovered:	OM
Leak Cause:	Unknown
Leak Source:	Unknown
Date Leak Confirmed:	Not reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not reported
Preliminary Site Assesment Began:	Not reported
Pollution Characterization Began:	Not reported
Pollution Remediation Plan Submitted:	Not reported
Date Remediation Action Underway:	Not reported
Date Post Remedial Action Monitoring Began:	Not reported

AST:

Certified Unified Program Agencies:	Not reported
Owner:	MCC INVESTMENTS INC
Total Gallons:	Not reported
CERSID:	10064902
Facility ID:	Not reported
Business Name:	SPEE DEE OIL CHANGE & TUNE UP
Phone:	6506926740
Fax:	6506924805
Mailing Address:	390 EL CAMINO REAL
Mailing Address City:	MILLBRAE
Mailing Address State:	CA
Mailing Address Zip Code:	94030
Operator Name:	MCC INVESTMENTS, INC. DBA SPEEDEE OIL CHANGE & TUNE-UP
Operator Phone:	6506926740
Owner Phone:	6506926740
Owner Mail Address:	390 EL CAMINO REAL
Owner State:	CA
Owner Zip Code:	94030
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	CAL000377167

MOBIL OIL CORP (Continued) **S101593737**

SWEEPS UST:

Status:	Not reported
Comp Number:	990008
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	41-000-990008-000001
Tank Status:	Not reported
Capacity:	6000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	3

Status:	Not reported
Comp Number:	990008
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	41-000-990008-000002
Tank Status:	Not reported
Capacity:	10000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	990008
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	41-000-990008-000003
Tank Status:	Not reported
Capacity:	8000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	LEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	990008
Number:	1
Board Of Equalization:	Not reported
Referral Date:	10-26-93

MOBIL OIL CORP (Continued) **S101593737**

Action Date: 10-26-93
Created Date: 10-13-88
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

CA FID UST:
Facility ID: 41000351
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: Not reported
Mail To: Not reported
Mailing Address: 3800 W ALAMEDA AVE
Mailing Address 2: Not reported
Mailing City,St,Zip: MILLBRAE 94030
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

San Mateo Co. BI:
Region: SAN MATEO
Facility ID: FA0052059
Prog Element Code: 2221
Record Id: PR0072170
Description: GENERATES & RECYCLES WASTE OIL/SOLVENT - LQG
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0052059
Prog Element Code: STORES HAZ MAT <3,499GAL,27,999LB,13,999FT3
Record Id: PR0072169
Description: STORES HAZ MAT <3,499GAL,27,999LB,13,999CF
Facility Status: ACTIVE

Region: SAN MATEO
Facility ID: FA0052059
Prog Element Code: 2352
Record Id: PR0072174
Description: TIER I: TANK STOR CAP =>1,320 & <5,000 GAL
Facility Status: ACTIVE

N64	**SPEE DEE OIL CHANGE & TUNE UP**	**LUST**	**U001594249**
SE	**390 EL CAMINO REAL**	**HIST UST**	**N/A**
1/4-1/2	**MILLBRAE, CA 94030**	**San Mateo Co. BI**	
0.474 mi.		**HIST CORTESE**	
2501 ft.	**Site 3 of 3 in cluster N**		

Relative: **Lower**

Actual: **13 ft.**

LUST:

Region:	STATE
Global Id:	T0608100341
Latitude:	37.602347
Longitude:	-122.391231
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/26/1999
Lead Agency:	SAN MATEO COUNTY LOP
Case Worker:	JM
Local Agency:	SAN MATEO COUNTY LOP
RB Case Number:	41-0358
LOC Case Number:	990005
File Location:	Local Agency
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608100341
Contact Type:	Regional Board Caseworker
Contact Name:	Regional Water Board
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
Address:	1515 CLAY ST SUITE 1400
City:	OAKLAND
Email:	Not reported
Phone Number:	Not reported
Global Id:	T0608100341
Contact Type:	Local Agency Caseworker
Contact Name:	JACOB MADDEN
Organization Name:	SAN MATEO COUNTY LOP
Address:	2000 ALAMEDA DE LAS PULGAS
City:	SAN MATEO
Email:	jmadden@smcgov.org
Phone Number:	6503726298

Status History:

Global Id:	T0608100341
Status:	Completed - Case Closed
Status Date:	01/26/1999
Global Id:	T0608100341
Status:	Open - Case Begin Date
Status Date:	01/31/1989

Regulatory Activities:

Global Id:	T0608100341
Action Type:	ENFORCEMENT
Date:	01/31/1989
Action:	Notice of Responsibility - #1

SPEE DEE OIL CHANGE & TUNE UP (Continued) **U001594249**

Global Id: T0608100341
Action Type: Other
Date: 03/02/1989
Action: Leak Discovery

Global Id: T0608100341
Action Type: REMEDIATION
Date: 05/01/1991
Action: Excavation

Global Id: T0608100341
Action Type: REMEDIATION
Date: 05/01/1991
Action: Free Product Removal

Global Id: T0608100341
Action Type: Other
Date: 03/02/1989
Action: Leak Reported

SAN MATEO CO. LUST:
Region: SAN MATEO
Facility ID: 990005
Facility Status: 9- Case Closed
Global ID: T0608100341
APN Number: 024124030
Case Type: SAN MATEO CO. LUST
EDR Link ID: SAN MATEO CO. LUST

HIST UST:
File Number: 0002C07B
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002C07B.pdf
Region: STATE
Facility ID: 00000039506
Facility Type: Gas Station
Other Type: Not reported
Contact Name: ISSA AL-LAHHAM
Telephone: 4156975616
Owner Name: MOBIL OIL CORPORATION
Owner Address: 612 SO. FLOWER STREET
Owner City,St,Zip: LOS ANGELES, CA 90017
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: 1982
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor, Pressure Test

Tank Num: 002
Container Num: 2
Year Installed: Not reported

SPEE DEE OIL CHANGE & TUNE UP (Continued) **U001594249**

Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor, Pressure Test

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Visual, Stock Inventor, Pressure Test

Tank Num: 004
Container Num: 4
Year Installed: 1957
Tank Capacity: 00000285
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: Visual

Click here for Geo Tracker PDF:

San Mateo Co. BI:

Region: SAN MATEO
Facility ID: FA0012610
Prog Element Code: ABOVE GROUND TANK/SPCC
Record Id: PR0051820
Description: ABOVE GROUND TANK/SPCC
Facility Status: INACTIVE

Region: SAN MATEO
Facility ID: FA0012610
Prog Element Code: GENERATES and RECYCLES WASTE OIL/SOLVENT
Record Id: PR0012288
Description: GENERATES & RECYCLES WASTE OIL/SOLVENT
Facility Status: INACTIVE

Region: SAN MATEO
Facility ID: FA0012610
Prog Element Code: RECYCLER
Record Id: PR0051819
Description: RECYCLER
Facility Status: INACTIVE

Region: SAN MATEO
Facility ID: FA0012610
Prog Element Code: STORES HAZ MAT <3,499GAL,27,999LB,13,999FT3
Record Id: PR0005086
Description: STORES HAZ MAT <3,499GAL,27,999LB,13,999CF
Facility Status: INACTIVE

Region: SAN MATEO
Facility ID: FA0012610

SPEE DEE OIL CHANGE & TUNE UP (Continued) **U001594249**

Prog Element Code:	2352
Record Id:	PR0065658
Description:	TIER I: TANK STOR CAP =>1,320 & <5,000 GAL
Facility Status:	INACTIVE
Region:	SAN MATEO
Facility ID:	FA0012610
Prog Element Code:	UNDERGROUND TANK - GENERAL
Record Id:	PR0026627
Description:	UNDERGROUND TANK - GENERAL
Facility Status:	INACTIVE

HIST CORTESE:

Region:	CORTESE
Facility County Code:	41
Reg By:	LTNKA
Reg Id:	41-0358

65
SSW
1/2-1
0.665 mi.
3510 ft.

TAYLOR MIDDLE SCHOOL
850 TAYLOR BOULEVARD
MILLBRAE, CA 94030

ENVIROSTOR
SCH
HAZNET
NPDES

S110653104
N/A

Relative:
Higher

Actual:
102 ft.

ENVIROSTOR:

Facility ID:	60001362
Status:	No Further Action
Status Date:	07/22/2011
Site Code:	204246
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	10
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Mellan Songco
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Assembly:	22
Senate:	13
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	School District
Latitude:	37.59801
Longitude:	-122.4015
APN:	021-410-120, 024-074-170
Past Use:	AGRICULTURAL - ORCHARD, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, SCHOOL - MIDDLE
Potential COC:	Arsenic Chlordane DDD DDE DDT Lead Dieldrin
Confirmed COC:	30001-NO 30004-NO 30013-NO 30006-NO 30007-NO 30008-NO No Contaminants found 30207-NO
Potential Description:	SOIL
Alias Name:	021-410-120
Alias Type:	APN
Alias Name:	024-074-170
Alias Type:	APN

TAYLOR MIDDLE SCHOOL (Continued) **S110653104**

Alias Name:	204246
Alias Type:	Project Code (Site Code)
Alias Name:	60001362
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	11/17/2010
Comments:	DTSC mailed the fully executed Environmental Oversight Agreement to the District
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	07/21/2011
Comments:	DTSC issued a CRU Closeout memo for the Taylor MS site.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	02/17/2011
Comments:	DTSC issued the PEA Workplan approval letter.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	10/28/2010
Comments:	Hard copy of the results of additional chlorinated pesticides sampling and analysis ans response actions document.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	*Correspondence - Received
Completed Date:	12/09/2010
Comments:	On December 9, 2010, DTSC received a hard copy of the Change of Designated Manager letter. An e-copy was received on December 7, 2010 via e-mail.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	02/18/2011
Comments:	On Feb 18, 2011, DTSC observed PES Environmental implement the PEA workplan.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	06/29/2011
Comments:	DTSC approved the PEA Report with a no further action determination
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported

TAYLOR MIDDLE SCHOOL (Continued) **S110653104**

Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SCH:

Facility ID:	60001362
Site Type:	School Investigation
Site Type Detail:	School
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	10
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Mellan Songco
Supervisor:	Juan Koponen
Division Branch:	Northern California Schools & Santa Susana
Site Code:	204246
Assembly:	22
Senate:	13
Special Program Status:	Not reported
Status:	No Further Action
Status Date:	07/22/2011
Restricted Use:	NO
Funding:	School District
Latitude:	37.59801
Longitude:	-122.4015
APN:	021-410-120, 024-074-170
Past Use:	AGRICULTURAL - ORCHARD, PESTICIDE/INSECTIDE/RODENTICIDE STORAGE, SCHOOL - MIDDLE
Potential COC:	Arsenic, Arsenic, Chlordane, DDD, DDE, DDT, Lead, Dieldrin
Confirmed COC:	30001-NO, 30004-NO, 30013-NO, 30006-NO, 30007-NO, 30008-NO, No Contaminants found, 30207-NO
Potential Description:	SOIL
Alias Name:	021-410-120
Alias Type:	APN
Alias Name:	024-074-170
Alias Type:	APN
Alias Name:	204246
Alias Type:	Project Code (Site Code)
Alias Name:	60001362
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Environmental Oversight Agreement
Completed Date:	11/17/2010
Comments:	DTSC mailed the fully executed Environmental Oversight Agreement to the District

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Cost Recovery Closeout Memo
Completed Date:	07/21/2011

TAYLOR MIDDLE SCHOOL (Continued) **S110653104**

Comments:	DTSC issued a CRU Closeout memo for the Taylor MS site.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Workplan
Completed Date:	02/17/2011
Comments:	DTSC issued the PEA Workplan approval letter.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Other Report
Completed Date:	10/28/2010
Comments:	Hard copy of the results of additional chlorinated pesticides sampling and analysis ans response actions document.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	*Correspondence - Received
Completed Date:	12/09/2010
Comments:	On December 9, 2010, DTSC received a hard copy of the Change of Designated Manager letter. An e-copy was received on December 7, 2010 via e-mail.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	02/18/2011
Comments:	On Feb 18, 2011, DTSC observed PES Environmental implement the PEA workplan.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	06/29/2011
Comments:	DTSC approved the PEA Report with a no further action determination
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

HAZNET:

envid:	S110653104
Year:	2013
GEPAID:	CAC002730992
Contact:	MILLBRAE SCHOOL DISTRICT
Telephone:	4088863653
Mailing Name:	Not reported
Mailing Address:	850 TAYLOR BLVD
Mailing City,St,Zip:	MILLBRAE, CA 940302340
Gen County:	San Mateo
TSD EPA ID:	CAD982042475

TAYLOR MIDDLE SCHOOL (Continued) **S110653104**

TSD County:	Solano
Waste Category:	Not reported
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	14
Cat Decode:	Not reported
Method Decode:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County:	Not reported

NPDES:

Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	2
Regulatory Measure Id:	426713
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	2 41C363697
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	05/22/2012
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	04/08/2014
Discharge Name:	Millbrae School District
Discharge Address:	555 Richmond Drive
Discharge City:	Millbrae
Discharge State:	California
Discharge Zip:	94030
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported

TAYLOR MIDDLE SCHOOL (Continued) **S110653104**

DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

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66 **WSW** **1/2-1** **0.684 mi.** **3614 ft.**	**GREEN HILLS COUNTY CLUB** **500 LUDEMAN LANE** **MILLBREA, CA**	**Notify 65**	**S100225436** **N/A**

Relative: **Higher**

Actual: **114 ft.**

NOTIFY 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Issue Date:	Not reported
Incident Description:	Not reported

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67 **SSE** **1/2-1** **0.804 mi.** **4244 ft.**	**MILLBRAE BART** **200 MILLBRAE AVENUE** **MILLBRAE, CA 94030**	**ENVIROSTOR** **VCP**	**S118353729** **N/A**

Relative: **Higher**

Actual: **63 ft.**

ENVIROSTOR:

Facility ID:	60002244
Status:	Active
Status Date:	08/01/2015
Site Code:	202054

MILLBRAE BART (Continued) **S118353729**

Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 11
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Robert Boggs
Supervisor: Julie Pettijohn
Division Branch: Cleanup Berkeley
Assembly: , 22
Senate: , 13
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 37.59990
Longitude: -122.3862
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: 202054
Alias Type: Project Code (Site Code)
Alias Name: 60002244
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 10/22/2015
Comments: Signed VCA for development project at the Millbrae BART station.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 03/15/2016
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: PROJECT WIDE
Schedule Sub Area Name: Not reported
Schedule Document Type: Public Participation Plan / Community Relations Plan
Schedule Due Date: 05/27/2016
Schedule Revised Date: Not reported

VCP:
Facility ID: 60002244
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 11
National Priorities List: NO

MILLBRAE BART (Continued) **S118353729**

Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Robert Boggs
Supervisor:	Julie Pettijohn
Division Branch:	Cleanup Berkeley
Site Code:	202054
Assembly:	, 22
Senate:	, 13
Special Programs Code:	Not reported
Status:	Active
Status Date:	08/01/2015
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	37.59990 / -122.3862
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	202054
Alias Type:	Project Code (Site Code)
Alias Name:	60002244
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	10/22/2015
Comments:	Signed VCA for development project at the Millbrae BART station.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	03/15/2016
Comments:	Not reported

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	PROJECT WIDE
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Public Participation Plan / Community Relations Plan
Schedule Due Date:	05/27/2016
Schedule Revised Date:	Not reported

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68 **NNW** **1/2-1** **0.893 mi.** **4717 ft.**	**CORPORATION YARD** **225 HUNTINGTON AVENUE** **SAN BRUNO, CA 92260**	**Notify 65**	**S100178896** **N/A**

Relative:
Lower

Actual:
10 ft.

NOTIFY 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported

CORPORATION YARD (Continued) **S100178896**

Facility Type:	Not reported
Discharge Date:	Not reported
Issue Date:	Not reported
Incident Description:	Not reported

69
SE
1/2-1
0.967 mi.
5105 ft.

UNOCAL SERVICE STATION #3798
1876 EL CAMINO REAL
BURLINGAME, CA 92201

Notify 65 **S100179192**
N/A

Relative:
Higher

Actual:
26 ft.

NOTIFY 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Issue Date:	Not reported
Incident Description:	Not reported

Count: 2 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BURLINGAME	S100186218	BROWNING-FERRIS INDUSTRIES	AIRPORT BOULEVARD NEAR BROADWA	94010	ENVIROSTOR
MILLBRAE	S110770336	39-49 EL CAMINO REAL	39-49 EL CAMINO REAL	94030	SLIC

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/13/2015
Date Data Arrived at EDR: 01/06/2016
Date Made Active in Reports: 05/20/2016
Number of Days to Update: 135

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/06/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA’s Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/22/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/22/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/10/2016
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 13

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/12/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/09/2016
Date Data Arrived at EDR: 06/01/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/09/2016
Date Data Arrived at EDR: 06/01/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/28/2016
Date Data Arrived at EDR: 03/30/2016
Date Made Active in Reports: 05/20/2016
Number of Days to Update: 51

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 05/02/2016
Date Data Arrived at EDR: 05/04/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/02/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 05/02/2016
Date Data Arrived at EDR: 05/04/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/02/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/16/2016
Date Data Arrived at EDR: 05/18/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 34

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/16/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST: Geotracker’s Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/13/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 12/11/2015
Date Data Arrived at EDR: 02/19/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 105

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/09/2015
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 112

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015
Date Data Arrived at EDR: 10/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 118

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/25/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 02/17/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/05/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/26/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Semi-Annually

SLIC: Statewide SLIC Cases
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/13/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/08/2016
Number of Days to Update: 55

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/14/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/25/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 01/26/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 119

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/05/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/26/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Semi-Annually

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 12/03/2015
Date Data Arrived at EDR: 02/04/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 120

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 05/02/2016
Date Data Arrived at EDR: 05/04/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/02/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 02/29/2016
Date Data Arrived at EDR: 03/07/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/22/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 72

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/21/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 56

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/14/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 06/16/2016
Date Data Arrived at EDR: 06/16/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 54

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/10/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/05/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/20/2016
Next Scheduled EDR Contact: 10/07/2016
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 08/31/2016
Date Data Arrived at EDR: 09/06/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 17

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 10/10/2016
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 05/02/2016
Date Data Arrived at EDR: 05/04/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/02/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 05/10/2016
Date Made Active in Reports: 06/17/2016
Number of Days to Update: 38

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 08/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/06/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 17

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/31/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 06/07/2016
Date Data Arrived at EDR: 06/09/2016
Date Made Active in Reports: 06/23/2016
Number of Days to Update: 14

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 09/12/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/07/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 43

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/06/2016
Date Data Arrived at EDR: 06/07/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 43

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 09/07/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 06/28/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 87

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/27/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 06/03/2016
Date Data Arrived at EDR: 07/26/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 59

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/26/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing
The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 56

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/13/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing
The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/13/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/21/2016
Date Data Arrived at EDR: 06/30/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/15/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/08/2016
Date Data Arrived at EDR: 05/18/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 107

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/08/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 09/06/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/23/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/26/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/01/2016
Date Data Arrived at EDR: 05/26/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 99

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/12/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2016
Date Data Arrived at EDR: 04/28/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 127

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 03/18/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 28

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/05/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/06/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/29/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015
Date Data Arrived at EDR: 07/09/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/02/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2016
Date Data Arrived at EDR: 08/01/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 53

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/26/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/21/2016
Date Data Arrived at EDR: 07/26/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 59

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/26/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 09/09/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/07/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 148

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/08/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/05/2016
Date Data Arrived at EDR: 09/01/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 22

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/01/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/20/2015
Date Data Arrived at EDR: 09/09/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 55

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/07/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/24/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/27/2016
Date Data Arrived at EDR: 06/28/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 51

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/27/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 37

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 06/22/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 48

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/23/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 05/25/2016
Date Data Arrived at EDR: 05/27/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 54

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/22/2016
Next Scheduled EDR Contact: 10/07/2016
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/25/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/20/2016
Next Scheduled EDR Contact: 10/07/2016
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/25/2016
Date Data Arrived at EDR: 06/01/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 49

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/10/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 10/14/2015
Date Made Active in Reports: 12/11/2015
Number of Days to Update: 58

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Annually

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/23/2016
Date Data Arrived at EDR: 05/25/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 56

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/23/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/11/2016
Date Data Arrived at EDR: 07/13/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 36

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/13/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 56

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/14/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Varies

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/25/2016
Date Data Arrived at EDR: 06/07/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 43

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/07/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/16/2016
Date Data Arrived at EDR: 05/18/2016
Date Made Active in Reports: 06/23/2016
Number of Days to Update: 36

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/16/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/06/2016
Date Data Arrived at EDR: 06/07/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 43

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 09/07/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 06/13/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 56

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/14/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/10/2015
Date Data Arrived at EDR: 01/05/2016
Date Made Active in Reports: 02/12/2016
Number of Days to Update: 38

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 02/12/2016
Date Data Arrived at EDR: 03/16/2016
Date Made Active in Reports: 06/13/2016
Number of Days to Update: 89

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/14/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/15/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/23/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015
Date Data Arrived at EDR: 09/23/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 103

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/20/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Quarterly

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/23/2016
Date Data Arrived at EDR: 05/25/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 56

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/23/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/24/2016
Date Data Arrived at EDR: 05/25/2016
Date Made Active in Reports: 07/13/2016
Number of Days to Update: 49

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/23/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 07/07/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 37

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/07/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 08/08/2016
Number of Days to Update: 27

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 06/06/2016
Date Data Arrived at EDR: 06/09/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 12

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 18

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 07/20/2016
Date Data Arrived at EDR: 07/25/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 60

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 05/25/2016
Date Data Arrived at EDR: 05/26/2016
Date Made Active in Reports: 06/17/2016
Number of Days to Update: 22

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 09/06/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 05/24/2016
Date Data Arrived at EDR: 05/26/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 55

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/01/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List

Cupa Facility list

Date of Government Version: 04/08/2016	Source: Del Norte County Environmental Health Division
Date Data Arrived at EDR: 05/03/2016	Telephone: 707-465-0426
Date Made Active in Reports: 06/22/2016	Last EDR Contact: 07/27/2016
Number of Days to Update: 50	Next Scheduled EDR Contact: 11/14/2016
	Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 05/24/2016	Source: El Dorado County Environmental Management Department
Date Data Arrived at EDR: 05/26/2016	Telephone: 530-621-6623
Date Made Active in Reports: 08/09/2016	Last EDR Contact: 07/27/2016
Number of Days to Update: 75	Next Scheduled EDR Contact: 11/14/2016
	Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 07/13/2016	Source: Dept. of Community Health
Date Data Arrived at EDR: 07/19/2016	Telephone: 559-445-3271
Date Made Active in Reports: 08/09/2016	Last EDR Contact: 07/13/2016
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/17/2016
	Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 07/06/2016	Source: Humboldt County Environmental Health
Date Data Arrived at EDR: 07/08/2016	Telephone: N/A
Date Made Active in Reports: 08/18/2016	Last EDR Contact: 08/22/2016
Number of Days to Update: 41	Next Scheduled EDR Contact: 12/05/2016
	Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 07/25/2016	Source: San Diego Border Field Office
Date Data Arrived at EDR: 07/26/2016	Telephone: 760-339-2777
Date Made Active in Reports: 09/23/2016	Last EDR Contact: 07/20/2016
Number of Days to Update: 59	Next Scheduled EDR Contact: 10/07/2016
	Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 05/16/2016
Date Data Arrived at EDR: 05/20/2016
Date Made Active in Reports: 08/08/2016
Number of Days to Update: 80

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county’s Certified Unified Program Agency database. California’s Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/25/2016
Date Data Arrived at EDR: 05/27/2016
Date Made Active in Reports: 06/22/2016
Number of Days to Update: 26

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 04/26/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/17/2016
Number of Days to Update: 51

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 08/19/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 07/05/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 37

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/18/2016
Date Data Arrived at EDR: 04/20/2016
Date Made Active in Reports: 06/01/2016
Number of Days to Update: 42

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/19/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2016
Date Data Arrived at EDR: 01/26/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 56

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/18/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/29/2016
Date Data Arrived at EDR: 04/06/2016
Date Made Active in Reports: 06/13/2016
Number of Days to Update: 68

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/13/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/02/2015
Date Made Active in Reports: 04/13/2015
Number of Days to Update: 11

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/13/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 11/04/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 12/17/2015
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/23/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 28

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/07/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Semi-Annually

MADERA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/18/2016
Date Data Arrived at EDR: 08/22/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 32

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 04/07/2016
Date Data Arrived at EDR: 04/26/2016
Date Made Active in Reports: 06/01/2016
Number of Days to Update: 36

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/17/2016
Date Data Arrived at EDR: 08/22/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 32

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 05/25/2016
Date Data Arrived at EDR: 06/01/2016
Date Made Active in Reports: 06/22/2016
Number of Days to Update: 21

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/24/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/24/2016
Date Data Arrived at EDR: 06/27/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 43

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/22/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 07/25/2016
Date Data Arrived at EDR: 08/01/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 53

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2016
Date Data Arrived at EDR: 05/17/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/08/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2016
Date Data Arrived at EDR: 05/17/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/08/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2016
Date Data Arrived at EDR: 05/11/2016
Date Made Active in Reports: 06/01/2016
Number of Days to Update: 21

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/09/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

PLACER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/16/2016
Date Data Arrived at EDR: 06/20/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 50

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/13/2016
Date Data Arrived at EDR: 04/15/2016
Date Made Active in Reports: 05/09/2016
Number of Days to Update: 24

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 07/13/2016
Date Data Arrived at EDR: 07/18/2016
Date Made Active in Reports: 08/08/2016
Number of Days to Update: 21

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 05/02/2016
Date Data Arrived at EDR: 07/06/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 43

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/06/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/02/2016
Date Data Arrived at EDR: 07/06/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 43

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/05/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 06/09/2016
Date Data Arrived at EDR: 06/10/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 40

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/08/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2016
Next Scheduled EDR Contact: 09/19/2016
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/20/2016
Next Scheduled EDR Contact: 10/07/2016
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/16/2016
Date Data Arrived at EDR: 06/20/2016
Date Made Active in Reports: 08/08/2016
Number of Days to Update: 49

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/19/2016
Next Scheduled EDR Contact: 01/02/2017
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 05/23/2016
Date Data Arrived at EDR: 05/24/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 28

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/07/2016
Date Made Active in Reports: 06/22/2016
Number of Days to Update: 15

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/12/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/09/2016
Date Data Arrived at EDR: 06/13/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 57

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/12/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 05/25/2016
Date Data Arrived at EDR: 05/26/2016
Date Made Active in Reports: 06/22/2016
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/24/2016
Next Scheduled EDR Contact: 12/12/2016
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 05/26/2016
Date Data Arrived at EDR: 06/01/2016
Date Made Active in Reports: 07/20/2016
Number of Days to Update: 49

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/21/2016
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 05/31/2016
Date Data Arrived at EDR: 06/02/2016
Date Made Active in Reports: 06/21/2016
Number of Days to Update: 19

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/17/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 06/14/2016
Date Data Arrived at EDR: 06/16/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 54

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/22/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/09/2016
Date Data Arrived at EDR: 06/13/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 57

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/09/2016
Date Data Arrived at EDR: 06/14/2016
Date Made Active in Reports: 08/08/2016
Number of Days to Update: 55

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 07/10/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 28

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/01/2016
Date Data Arrived at EDR: 07/05/2016
Date Made Active in Reports: 08/18/2016
Number of Days to Update: 44

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/26/2016
Next Scheduled EDR Contact: 01/09/2017
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/07/2016
Date Made Active in Reports: 06/23/2016
Number of Days to Update: 16

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/02/2016
Next Scheduled EDR Contact: 12/19/2016
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/03/2016
Date Data Arrived at EDR: 05/10/2016
Date Made Active in Reports: 06/17/2016
Number of Days to Update: 38

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 10/07/2016
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 06/28/2016
Date Data Arrived at EDR: 08/01/2016
Date Made Active in Reports: 09/23/2016
Number of Days to Update: 53

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/28/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/10/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/28/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/22/2016
Number of Days to Update: 54

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/25/2016
Next Scheduled EDR Contact: 11/07/2016
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/26/2016
Date Data Arrived at EDR: 06/16/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 54

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/14/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 06/30/2016
Date Data Arrived at EDR: 07/05/2016
Date Made Active in Reports: 08/09/2016
Number of Days to Update: 35

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/30/2016
Next Scheduled EDR Contact: 10/17/2016
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/29/2016
Date Data Arrived at EDR: 05/03/2016
Date Made Active in Reports: 06/17/2016
Number of Days to Update: 45

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/27/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2016
Next Scheduled EDR Contact: 11/28/2016
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/17/2015
Date Made Active in Reports: 08/12/2015
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/11/2016
Next Scheduled EDR Contact: 10/24/2016
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2016
Date Data Arrived at EDR: 08/03/2016
Date Made Active in Reports: 09/09/2016
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/03/2016
Next Scheduled EDR Contact: 11/14/2016
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/24/2015
Date Made Active in Reports: 08/18/2015
Number of Days to Update: 25

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/18/2016
Next Scheduled EDR Contact: 10/31/2016
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 09/20/2016
Next Scheduled EDR Contact: 12/05/2016
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 04/14/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 50

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/12/2016
Next Scheduled EDR Contact: 12/26/2016
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association’s annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

APPENDIX D

HISTORICAL SOURCES

Legend

Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 1943

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 1946

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

Legend
Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 1956

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 1968

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

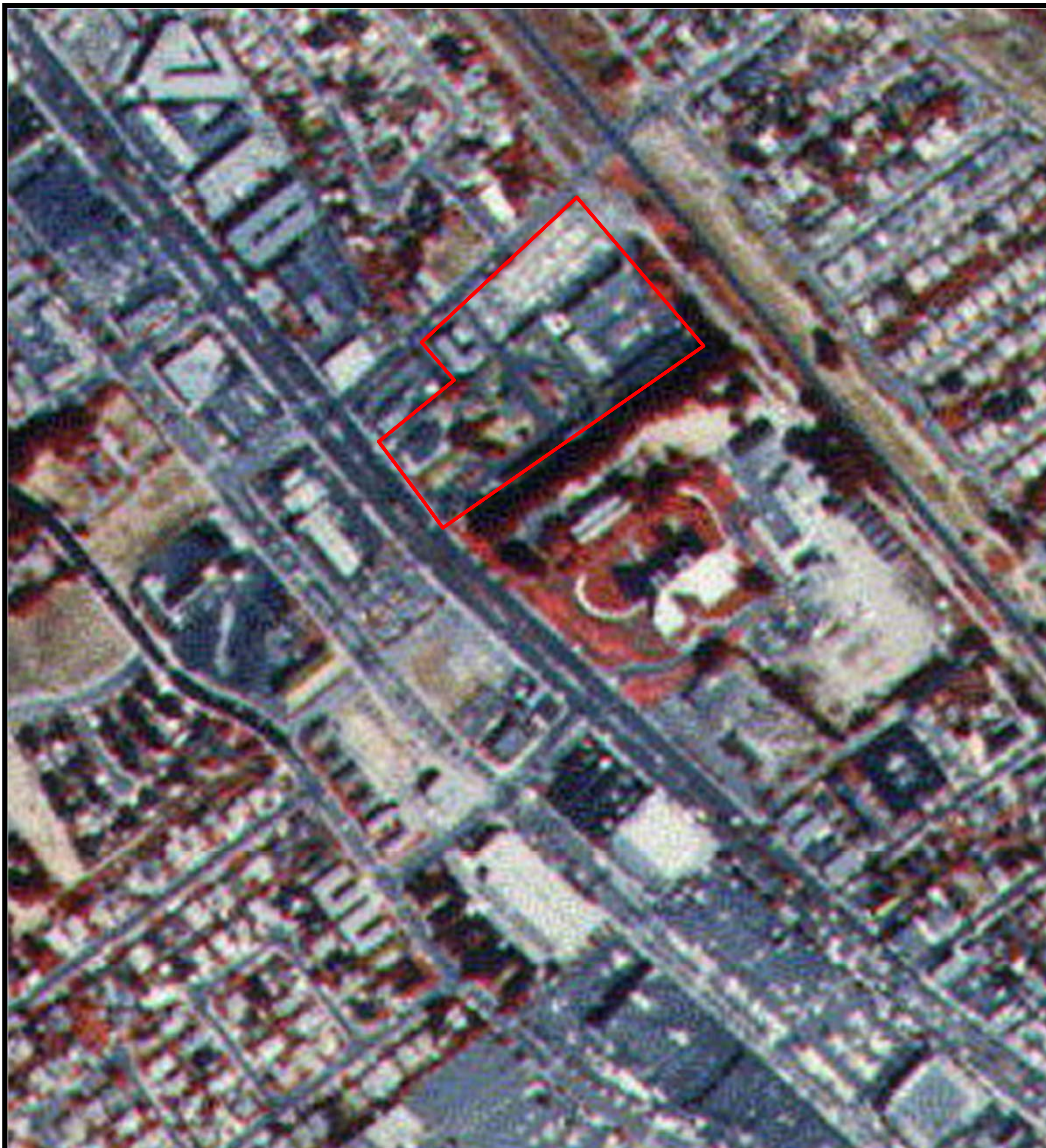
N

AERIAL PHOTOGRAPH - 1974

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants



Legend

Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 1982

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 1993

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 1998

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

Legend

Approximate Property Boundary

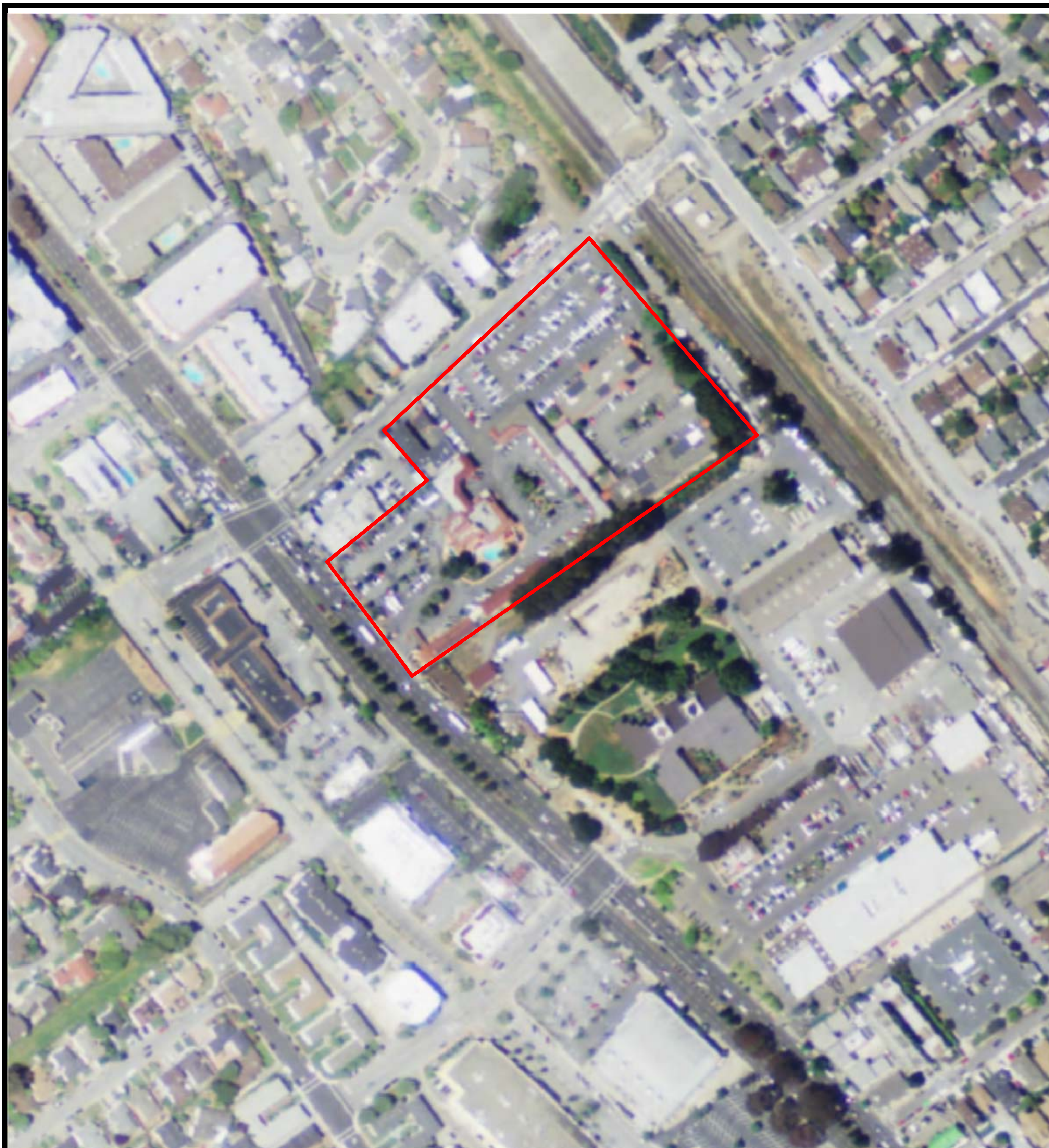
N

AERIAL PHOTOGRAPH - 2005

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants



Legend

Approximate Property Boundary

N

AERIAL PHOTOGRAPH - 2012

1100 & 1150 El Camino Real and 33 & 35 Center Street, Millbrae, California 94030

Project Number: 363712

AEI Consultants

363712

1100 & 1150 El Camino Real, 33 & 35 Center Street

Millbrae, CA 94030

Inquiry Number: 4739423.3

September 28, 2016

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/28/16

Site Name:	**Client Name:**
363712	AEI Consultants
1100 & 1150 El Camino Real, 3	2500 Camino Diablo
Millbrae, CA 94030	Walnut Creek, CA 94597
EDR Inquiry # 4739423.3	Contact: Brooke

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # EF85-4624-85BF

PO # 118432

Project 363712

Maps Provided:

1954
1949

Sanborn® Library search results

Certification #: EF85-4624-85BF

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1954 Source Sheets

Volume 1, Sheet 13

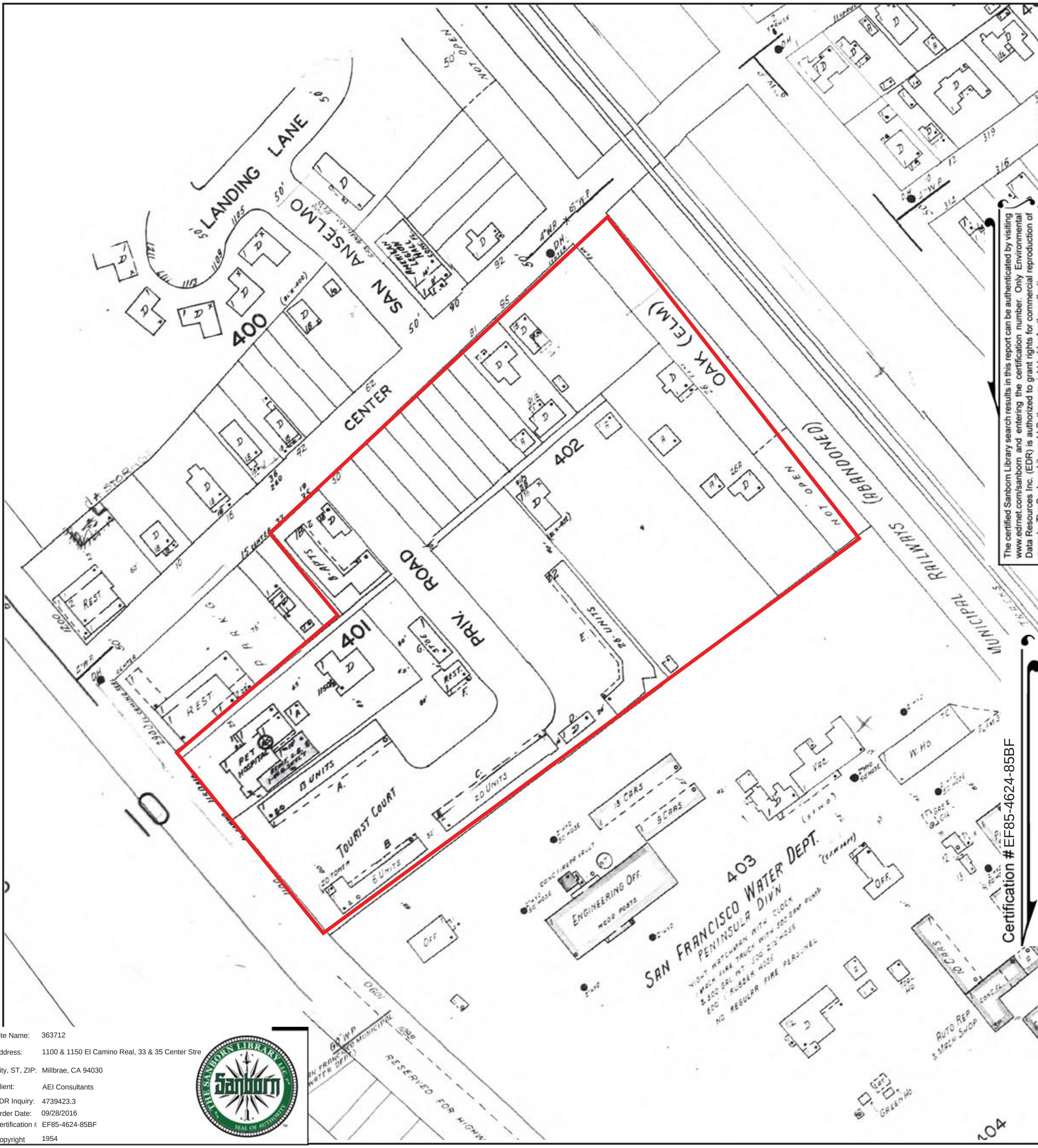
1949 Source Sheets

Volume 1, Sheet 13

Volume 1, Sheet 13

Certified Sanborn® Map

1954



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Certification # EF85-4624-85BF

Site Name: 363712
Address: 1100 & 1150 El Camino Real, 33 & 35 Center Stre
City, ST, ZIP: Millbrae, CA 94030
Client: AEI Consultants
EDR Inquiry: 4739423.3
Order Date: 09/28/2016
Certification #: EF85-4624-85BF
Copyright 1954

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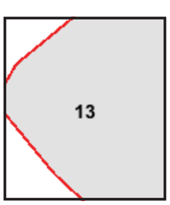
This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



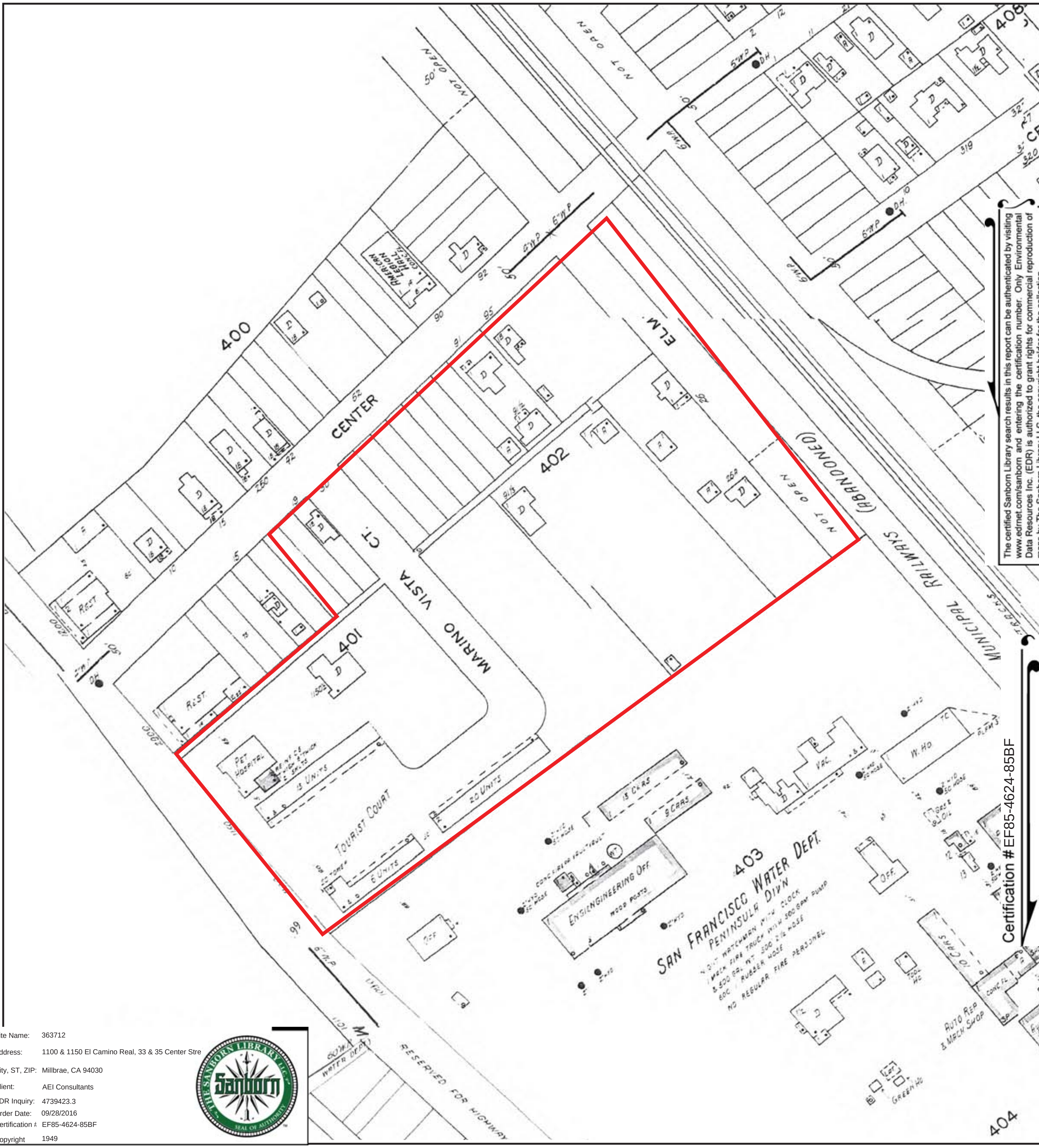
Volume 1, Sheet 13

0 Feet 150 300 600

N

Certified Sanborn® Map

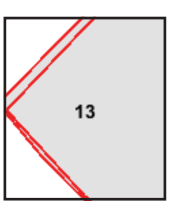
1949



Site Name: 363712
Address: 1100 & 1150 El Camino Real, 33 & 35 Center Stre
City, ST, ZIP: Millbrae, CA 94030
Client: AEI Consultants
EDR Inquiry: 4739423.3
Order Date: 09/28/2016
Certification # EF85-4624-85BF
Copyright 1949

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600



Volume 1, Sheet 13
Volume 1, Sheet 13

N

363712
1100 & 1150 El Camino Real, 33 & 35 Center Street
Millbrae, CA 94030

Inquiry Number: 4739423.5
September 29, 2016

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2013	☑	☑	Cole Information Services
2008	☑	☑	Cole Information Services
2003	☑	☑	Cole Information Services
1999	☑	☑	Cole Information Services
1995	☑	☑	Cole Information Services
1992	☑	☑	Cole Information Services
1985	☑	☑	Haines Criss-Cross Directory
1980	☑	☑	Haines Criss-Cross Directory
1977	☑	☑	Haines Criss-Cross Directory
1970	☑	☑	Haines Criss-Cross Directory

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FINDINGS

TARGET PROPERTY STREET

1100 & 1150 El Camino Real, 33 & 35 Center Street
Millbrae, CA 94030

Year	***CD Image***	***Source***
EL CAMINO REAL		
2013	pg A2	Cole Information Services
2008	pg A5	Cole Information Services
2003	pg A9	Cole Information Services
1999	pg A12	Cole Information Services
1995	pg A15	Cole Information Services
1992	pg A18	Cole Information Services
1985	pg A21	Haines Criss-Cross Directory
1985	pg A22	Haines Criss-Cross Directory
1980	pg A24	Haines Criss-Cross Directory
1977	pg A26	Haines Criss-Cross Directory
1977	pg A27	Haines Criss-Cross Directory
1970	pg A29	Haines Criss-Cross Directory
1970	pg A30	Haines Criss-Cross Directory

FINDINGS

CROSS STREETS

Year	***CD Image***	***Source***

CENTER ST

2013	pg. A1	Cole Information Services
2008	pg. A4	Cole Information Services
2003	pg. A8	Cole Information Services
1999	pg. A11	Cole Information Services
1995	pg. A14	Cole Information Services
1992	pg. A17	Cole Information Services
1985	pg. A20	Haines Criss-Cross Directory
1980	pg. A23	Haines Criss-Cross Directory
1977	pg. A25	Haines Criss-Cross Directory
1970	pg. A28	Haines Criss-Cross Directory

City Directory Images

Target Street	Cross Street	Source
-	✓	Cole Information Services

CENTER ST 2013

33	DAVID DEBONO
	DENNY LEUNG
	FRANCES LAHEY
	JESSICA ANDREWS
35	JON FROESCHLE
36	BOBBY ANDRES
42	BARRY FELLMAN
	BEDRI LAZHAR
	FELLMAN BARRY ROOFING
	LAZHAR BEDRI
	ROBIN HARRIS
	VIRGINIA VAZQUEZ
86	MILLBRAE NURSERY SCHOOL

Target Street	Cross Street	Source
✓	-	Cole Information Services

EL CAMINO REAL 2013

780	EL SUPER BURRITO
800	ATMAN COMPUTER INC
	GS ACCOUNTING CONSULTANTS
	JANG INSURANCE AGENCY
	MILLBRAE REALTY
830	ANGELA PEREA
	JUAN GONZALEZ
840	DAVID BATULA
	LAYNE UEHARA
850	AIMEE VILLAS
	ANTONIO RUIZ
	HERBERT SOLAS
	MARIA RODRIGUEZ
	PATRICIA POSADA
	ROBERT CUNNINGHAM
900	ORCHARD SUPPLY HARDWARE
950	KFC
959	OFFICE DEPOT
1009	ROB BAKER GARAGE
	UHAUL NEIGHBORHOOD DEALER
1055	SHANGHAI BISTRO
1065	SUPER WASH
1069	YUMI YOGURT
1085	WINGSTOP
1095	CATHAY BANK
1100	BEST WESTERN PLUS EL RANCHO INN & SU
	TERRACE CAFE
1101	MCDONALDS
1135	RED WING SHOES
1145	OREILLY AUTO PARTS
1155	SAN BRUNO TIRE CENTER
1178	AVIS
1180	ENTERPRISE 1180 INC
	ZEN PENINSULA
1201	FIRESTONE COMPLETE AUTO CARE
1234	CLIFF LI
1260	NICASIO YUMUL
1275	CRYSTAL ESPARZA
	DIANA MORGAN
	GINA ESPITIA
	MARK SCUITTI
	REBECCA WONG
	TES SALDANA
1280	BRIAN HART
	CANDACE HOLROYD
	CHRISTINE VILLALOBOS
	DAVID COYLE
	ELAINE KOSTUROS
	ELENA RIOS
	JAMES SPELL

EL CAMINO REAL 2013 (Cont'd)

1280	JANET WHITE
	JOHN COTTON
	LINDA KOPITTKE
	MARY STANYAN
	MIRNA AVILA
	RASHAD GETTONE
	RICARDO MORALES
	ROBERT MADELOSO
	STEVE ROBINSON
	SUSAN YOSHIOCA
	TYRONE GRAY
	VERONICA CLARK
	XIAN TANG
1300	ALICIA VALENCIA
	CAROLINA RIGUERO
	CHERYL BRYAN
	ELENA GARCIA
	ELIZABETH DITO
	HAI YANG
	JIAYIN WEI
	MARCO TELLO
	MAURICE ALHAJ
	PATRICK KELLY
	PAUL FREEMAN
	SANGITA KUMAR
	ZIAD MASHNI
1301	MILLBRAE PANCAKE HOUSE
1320	CHEF WANG RESTAURANT
	LOCKSMITH EXPRESS
1325	OCCUPANT UNKNOWN
1330	CLASSY NAILS

CENTER ST 2008

33	DAVID DEBONO
	DENNY LEUNG
	FRANCES LAHEY
	HO CHAN
35	JON FROESCHLE
36	BOBBY ANDRES
42	BARRY FELLMAN
	FELLMAN ROOFING
	VIRGINIA VAZQUEZ
86	MILLBRAE NURSERY SCHOOL

Target Street	Cross Street	Source
✓	-	Cole Information Services

EL CAMINO REAL 2008

780	EL SUPER BURRITO
800	ATMAN COMPUTERS & GRAPHICS
	MILLBRAE REALTY
830	ANGELA PEREA
	ELIZABETH MARQUINA
840	ERIC WONG
	MALIA TEAUPA
	TOM OMICTIN
850	LORENA DURAN
	MARCIA DUNSMORE
	MARIA RODRIGUEZ
	TRINIDAD OLIVAS
890	JAMES HAYS
900	ORCHARD SUPPLY HARDWARE
915	DENNIS MANGANO
950	HARMAN IKE & ALVINA INC
	KENTUCKY FRIED CHICKEN
	KFC
	QUALITY DISTRIBUTING
959	OFFICE DEPOT
1009	BAKER ROB GARAGE
	U HAUL
1055	FAMILY CHINA BISTRO
	SU GIA RESTAURANT
1065	SUPER WASH
1069	YOGURT I YUMI
1075	MOBILE CELLULAR COMMUNICATIONS
	STAR CELLULAR OF MILLBRAE
1080	FASHION NAILS
1085	TOGOS EATERY
1095	CATHAY BANK
1100	EMJP PARTNERS LP
	WESTERN EL RANCHO INN & SUITES
1101	MAC DUFF RESTAURANTS INC
1135	RED WING SHOE STORE
1145	CSK AUTO INC
	KRAGEN AUTO PARTS
1155	SAN BRUNO TIRE CENTER INC
1180	ENTERPRISE 1180 INC
	ZEN PENINSULA
1200	CORNERS
	KAISER PERMANENTE
1201	BFS RTAIL COMMERCIAL OPRTNS LLC
	FIRESTONE INC
1275	CONGENIAL BUSINESS SOLUTIONS I
	CUI HUANG
	DIANA MORGAN
	HOUNGFER JIANG
	JACKY FENG
	JANINE HANEPEN

EL CAMINO REAL 2008 (Cont'd)

1275	KENNETH BRENNAN
	MARTY PATT
	MARY JOHNSON
	PETER CASPER
	ROBERT SHWEID
	RODRIGO MELENDREZ
	TIMOTHY WALTER
	TOM BARRY
	WILLIAM BERG
1280	BAO LIN
	CHARLES FETNER
	CHRISTINE VILLALOBOS
	DAVID BROWN
	DAVID COYLE
	GISELA PERRY
	ISAIAH SINAPOPO
	ISAM ZUMOT
	JIM YON
	JOHN COTTON
	JOHN MAKI
	KRISTIN LEFEVRE
	LEONEL CANEPA
	LINDA KOPITTKE
	MARIA MADELOSO
	MARY STANYAN
	MIRNA AVILA
	ROY TSE
	VERONICA CLARK
	WILLIAM ZOWASKY
	YUK LAU
1300	BERNICE CUMMINGS
	CHERYL BRYAN
	DAWNETTE TELLO-LOEZIUS
	ELENA GARCIA
	ELY MAP
	H CHIANG
	JAHELLE FINE
	JANELLE ELISAIA
	MARCO TELLO
	MICHAEL CORBETT
	MINH LA
	PATRICK KELLY
	PATRICK OMAHONY
	PRISCILLA MCCORD
	SONIA FREEMAN
	TANIA AYALA
	TREMAINE FAGA
	VICTOR KUSMAN
	ZHIJUAN SONG
1301	MILLBRAE PANCAKE CORP

EL CAMINO REAL 2008 (Cont'd)

1320	CHEF WANGS RESTAURANT
1325	ABC TAX & BOOKKEEPING SERVICE
	OCCUPANT UNKNOWN
	ROLLING PIN MANUFACTURING

CENTER ST 2003

33	DAVID DEBONO
	TALIFILI FAULALO
35	JON FROESCHLE
36	BOBBY ANDRES
86	ALAIN ERDOZAINCY
	MILLBRAE NURSERY SCHOOL

Target Street	Cross Street	Source
✓	-	Cole Information Services

EL CAMINO REAL 2003

780	EL SUPER BURRITO
	OCCUPANT UNKNOWN
800	ATMAN COMPUTERS & GRAPHICS
	INJURY & CONSUMER LAW CTR INC
	MCCAMMACK GEORGE EDWARD ATTY
	MILLBRAE REALTY
	NATIONAL MARKETING ALLIANCE
	TRUCK WRITER INSURANCE SRVC
840	BAO LU
	BRIAN FUERTES
	EILEEN CHANG
	LIJUN LIN
850	EFREN SOLIMAN
	LORENA DURAN
	MARIA RODRIGUEZ
900	ORCHARD SUPPLY HARDWARE
915	DENNIS MANGANO
950	KENTUCKY FRIED CHICKEN
959	CALA FOODS INC
	OFFICE DEPOT
1000	OCCUPANT UNKNOWN
1009	BAKER ROB GARAGE
	OCCUPANT UNKNOWN
	U HAUL CO
1055	OCCUPANT UNKNOWN
	SHANG HAI WANG RESTAURANT
	SU GIA RESTAURANT
1065	OCCUPANT UNKNOWN
	SUPER WASH
1069	YUMI YOGURT
1075	STAR CELLULAR
1085	SEIFU ABEBE
	TOGOS EATERY
1095	CATHAY BANK
1100	EL RANCHO MOTEL INC
	TERRACE CAFE
1111	FOUR SEASONS FOOD CO
	RAMZI KHOURY
1125	OCCUPANT UNKNOWN
1135	RED WING SHOE STORE
1145	KRAGEN AUTO PARTS
1155	AJKL INC
	OCCUPANT UNKNOWN
	SMOG CHECK STATIONS MILLBRAE
1180	MARTINELLIS STEAK PIT
	TOM BOCCI
1200	CORNERS
1201	FIRESTONE TIRE & SERVICE CNTR
1260	FERNANDO BERAUN
1275	DIANA MORGAN

EL CAMINO REAL 2003 (Cont'd)

1275	EUGENE LAGRIMAS
	GAR YUEN
	GREG MCCORMICK
	LEO TEALDI
	MONA NELSON
	PATRICIA MELENDREZ
	SARAH CASTRO
	TIMOTHY PIGGOTT
	TIMOTHY WALTER
	WILLIAM ANDERSON
	WILLIAM CADIZ
1280	F PHELAN
	HUGO GARCIASALAS
	J WONG
	JIM YON
	JOCELYN CERDA
	JOHN COTTON
	KOSTA KOUTOULAS
	LAINE MAEDA
	MARIAN DAVIES
	P TIBERIUS
	PAULINE ALLEN
	SAMI RBAIHAT
	STEVE ROBINSON
	VIVIENNE BROWN
1300	ASAD BAZLAMIT
	B OLIVERA
	BERNICE CUMMINGS
	ELENA GARCIA
	JAHELLE FINE
	JANE LUJAN
	KIERAN OSULLIVAN
	OBED KUSMAN
	PATRICK KELLY
	ROSALIA FREGOZO
	RUTH RAMIREZ
1301	MILLBRAE PANCAKE HOUSE
	OCCUPANT UNKNOWN
1320	OCCUPANT UNKNOWN
1330	CLASSY NAILS
	OCCUPANT UNKNOWN
	VALENTINE NAIL SALON

CENTER ST 1999

33	DAVID DEBONO
	DENNY LEUNG
	FRANCES LAHEY
	HO CHAN
35	JON FROESCHLE
36	BOBBY ANDRES
42	BARRY FELLMAN
	ROBIN HARRIS
	VIRGINIA VAZQUEZ
86	MILLBRAE NURSERY SCHOOL

EL CAMINO REAL 1999

780	EL SUPER BURRITO
800	ATMAN COMPUTERS & GRAPHICS
	RAMIREZ INSURANCE
830	ANGELA PEREA
	ELIZABETH MARQUINA
850	CHRISTOPHER MALIGASO
	ENRIQUE OLIVAS
900	ORCHARD SUPPLY HARDWARE
915	DENNIS MANGANO
950	KENTUCKY FRIED CHICKEN
959	OFFICE DEPOT INCORPORATED
1009	BAKER ROB GARAGE
	HERTZ PENSKE TRUCK RENTAL
1055	SU GIA CHINESE RESTAURANT
1065	SUPER WASH
1069	YUMI YOGURT
1075	ALL ABOUT LIGHTS
1085	TOGOS EATERY
1095	CATHAY BANK
1100	BEST WESTERN EL RANCHO INN
	EL RANCHO MOTEL
	TERRACE CAFE
1101	MCDONALDS RESTAURANT
1135	RED WING SHOE STORE
1145	KRAGEN AUTO PARTS
1155	GOODYEAR OLYMPIAN AUTO & TIRE CENTER
	SMOG CHECK STATIONS MILLBRAE
1180	MARTINELLIS STEAK PIT MILLBRAE
1201	FIRESTONE TIRE & SERVICE CE
1275	ADAMS GIFTS EXCHANGE
	CUI HUANG
	DA FENG
	DIANA MORGAN
	GLENDA COUCHMAN
	HOUNGFER JIANG
	JACKY FENG
	JANET HAYNER
	JANINE HANEPEN
	M OREILLY
	MAN CHU
	MICHELLE KARLEGAN
	PETER CASPER
	ROBERT SHWEID
	RODRIGO MELENDREZ
	THOI PHAM
	TIMOTHY WALTER
1280	BAO LIN
	CHARLES FETNER
	CHRISTINE VILLALOBOS
	DAVID BROWN

EL CAMINO REAL 1999 (Cont'd)

1280	DAVID COYLE
	ELAINE KOSTUROS
	FRED COKE
	GISELA PERRY
	ISAIAH SINAPOPO
	ISAM ZUMOT
	JIM YON
	JOHN MAKI
	LINDA KOPITTKE
	MARIA MADELOSO
	MARY STANYAN
	MIRNA AVILA
	ROY TSE
	STEPHANE LEFEVRE
	TRACY ROBINSON
	TYRONE GRAY
	VERONICA CLARK
1300	CHERYL BRYAN
	ELENA GARCIA
	JANELLE ELISAIA
	LLEWELYN LU
	MARCO TELLO
	MICHAEL CORBETT
	MINH LA
	PATRICK KELLY
	PAUL FREEMAN
	PRISCILLA MCCORD
	SHERRY CLARK
	TANIA AYALA
	VALERIY PASHCHENKO
	VICTOR KUSMAN
	ZIAD MASHNI
1301	MILLBRAE PANCAKE HOUSE
	PANCAKE HOUSE THE MILLBRAE PANCAKE HOUSE
1305	CHEAT A LITTLE II
1309	BEAUTY CHATEAU
1320	CHEF WANGS RESTAURANT
1325	OCCUPANT UNKNOWN
1330	JUDYS NAIL SALON

CENTER ST 1995

16	CUROTTO, MABEL E
33	DEBONO, DAVID
35	FROESCHLE, V
36	ANDRES, BOBBY D
42	BARRY FELLMAN CO
	CLAM BAKE OF CALIFORNIA
	FELLMAN, BARRY
86	MILLBRAE NURSERY SCHOOL
92	OCCUPANT UNKNOWNN

Target Street	Cross Street	Source
✓	-	Cole Information Services

EL CAMINO REAL 1995

780	EL SUPER BURRITO
800	ALLIANCE BANCORP
830	OCCUPANT UNKNOWNN
840	OCCUPANT UNKNOWNN
850	OLIVAS, MARIA
	RODRIGUEZ, MARIA
	SOLIMAN, MAURA
900	ORCHARD SUPPLY HARDWARE
950	KFC
959	BELL MARKETS
1009	ROB BAKER GARAGE
	U HAUL CO
1055	SU GIA CHINESE RESTAURANT
1065	SUPER WASH
1069	YUMI YOGURT
1075	RENATOS HAIR DESIGN FOR MEN
1085	TOGOS EATERY
1095	NATIONAL VIDEO SUPERSTORE
1100	CLARK, GARY
	EL RANCHO EXECUTIVE SUITES
	MILLER, SIDNEY S
	TERRACE CAFE
	VILLAGRANA, RENE J
1101	MC DONALDS
1125	ACHIEVERS
	RE/MAX OF AMERICA
	TIM MC AULIFFE
1135	CITY VIDEO
1145	KRAGEN AUTO PARTS
1155	GOODYEAR OLYMPIAN AUTO & TIRE
1180	MARTINELLIS STEAK PIT
1200	BJORNER ELECTRICAL SUPPLIES
1201	FIRESTONE TIRE & SVC CTR
1250	RETAIL DEBIT NETWORK
1275	BOYLE, EDWARD
	BRUGHELLI, HELEN M
	GARRETT, THOMAS A
	HAYNER, DALE
	KIM, MICHAEL
	KING, HARVEY
	MORGAN, DIANA M
	OSZE, EVELYN
	STOWERS, CLYDE H JR
	WILLIAMS, JOHN W
1280	ALLEN, PAULINE
	COKE, FRED
	COQUIN, G K
	CUMOT, J
	DAVIES, MARIAN
	EAGLE MORTGAGE & FINANCIAL SVC

EL CAMINO REAL 1995 (Cont'd)

1280	HENDERSON, F E
	JANANPOUR, MEHDI
	JANANPOUR, N
	LAKE, GARY
	MCKENZIE, HARRY
	NAZARI, VAZGEN
	NEALON, C
	PRPICH, MARK
	SAAB, S
	SAYAD, HASHMAT
	SPISAK, M A
1300	BALDWIN, CLARA
	CUMMINGS, M
	ELMASRI, YOUSEF
	FINE, ROXANA
	MCQUADE, JAMES W JR
	PAN, SHERRY
	SERRESSEQUE, FRANK
	WATTS, DENNIS
1301	MILLBRAE PANCAKE HOUSE
1309	BEAUTY CHATEAU
	SCHULZE, E
1311	BUTLER, BARBARA
	COLLECTIBLES AT THE MAIL DEPOT
	CREECH, RALPH E
	LEJ, MANUEL
	RUSSELL BROTHERS TOWING
	SCHWARTZ, KENNETH
1313	BARBERS WORKSHOP
1315	CASTAGNO & MIRAMONTES
	OCCUPANT UNKNOWNN
	SUSAN MIRAMONTES
1320	CHEF WANGS RESTAURANT
1325	ABC TAX & BOOKKEEPING SVC
	GELCO SALES & MARKETING
	MAHARANI TOURS & TRAVEL INTL
	MARRIAGE LICENSE BUREAU
	REAL MC COY JANITORIAL SVC
	RESIDENTIAL VALUATION CO
	ROLLING PIN DONUTS
	WONG, C W
1330	JUDYS NAIL SALON

Target Street	Cross Street	Source
-	✓	Cole Information Services

CENTER ST 1992

16	CUROTTO, MABEL E
33	ALDALFONZO, JORGE
35	CERON, OSCAR
42	CLAM BAKE OF CA
	FELLMAN BARRY CO
86	MILLBRAE NURSERY SC
331	DEBONO, DAVID

Target Street	Cross Street	Source
✓	-	Cole Information Services

EL CAMINO REAL 1992

780	EL SUPER BURRITO
800	ALLIANCE BANCORP
	MARGARITAS BTY SLN
	SERVICE CENTER INC
830	ERDOGAN, CEM
850	RODRIGUEZ, MARIA
900	ORCHARD SUPPLY HDWR
959	QUALITY FOODS INC
1009	BAKER ROB GARAGE
	U HAUL CO DEALERS
1055	SU GIA CHINESE REST
1069	YUMI YOGURT
1075	RENATOS HAIR DESIGN
1085	TOGOS EATERY
1095	NATL VIDEO SUPER ST
1100	BEST WESTRN INN
	EL RANCHO EXEC STS
	FUNG, BENSON
	TERRACE CAFE
1101	MCDONALDS REST
1125	REAL VEST
1135	AND BASEBALL CARDS
	CITY VIDEO
1145	KRAGEN AUTO PARTS
1155	GOODYEAR MILLBRAE
	GOODYEAR, M
1180	MARTINELLIS MLLBRAE
1200	BJORNER ELCTRCL SPL
1201	FIRESTONE TIRE&SERV
1260	VANDERPLAATS, M
1275	BRUGHELLI, H M
	GARRETT, THOMAS A
	HAYNER, D
	HAYNER, DALE
	MORGAN, DIANA M
	MURTZ, WILLIAM
	WILLIAMS, JOHN W
1280	CUMOT, J
	DAVIES, M
	MCKENZIE, HARRY
	SAYAD, HASHMAT
1300	ELMASRI, YOUSEF
	FINE, R
	SERRESSEQUE, FRANK
1301	MILLBRAE PNCK HOUSE
1305	MOE GREENBERGS DELI
1309	BEAUTY CHATEAU
1311	COLLECTIBLES DEPOT
1313	BARBERS WORKSHOP
1315	FARMERS INS

EL CAMINO REAL 1992 (Cont'd)

1315	MIRAMONTES, SUSAN
1320	CHEF WANGS REST
1325	A B C TAX&BKKPG SRV
	EIRE CONST&DSGN INC
	EL CAMINO ENTERPRSE
	GELCO SLS&MKTG INTL
	LLOYDS INTL RNT CAR
	MAHARANI TOURS&TRVL
	MARRIAGE LCNS BUR
	MILLBRAE BOWL
	REAL MCCOY JNTRL SV
	ROLLING PIN DONUTS
1330	JUDYS NAIL SALON

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CENTER ST 1985

CENTER 94030 MILLBRAE

16	CUROTTO M	588-4736	
33	HOLSTER THERESA	589-8611	+5
	ISSEL DAVID	952-9270	+5
35	BELIK KATHY	872-3865	3
36	GIUSTO FLORA	588-2721	6
42	CLAYWORTH JANET	588-3206	4
	FELLMAN BARRY CO	**952-4340**	0
62	GINESTRA JIM	589-3810	0
86	**MILLBRAE NURSERY SC**	**589-3028**	
91	XXXX	00	
92	ALBINANA M I	589-3235	1

★ 2 BUS 9 RES 2 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

EL CAMINO REAL 1985

850	RODRIGUEZ MARIA	583-3099	3
950	XXXX	00	
959	QUALITY FOODS INC	692-3840	0
1000	SANFRAN WATER DEPT	697-4424	1
1009	BAKER TEXACO SERV	697-9752	
	U HAUL CO	697-5063	3
1099	BARRYS CHRSTMS TREE	697-2543	+5
1100	BEST WESTRN INN	588-2912	9
	ELRANCHO INN BEST	588-2912	
	ELRANCHO MOTEL	588-2912	
	ELRANCHO RESTAURANT	589-3973	
	SANFRAN AIRPORT S	697-7373	+5
	WILMS EARL M	588-2912	
1101	MCDONALDS RESTRNT	873-3680	
1105	XXXX	00	
1111	XXXX	00	
1125	BALTZER RICH	952-5678	1
	BRODSKY DAVE	872-2657	+5
	REAL VEST	872-2600	3
	RICH BALTZER&ASC	952-5678	1
1135	CAL VIDEO	872-1863	4
1145	KRAGEN AUTO SUPPLY	583-0443	+5
1150	CONKLING DONALD DVM	952-6454	4
	MILLBRAE BRDNG KNNL	952-6454	3
	MILLBRAE VTRNRY HSP	952-6454	
	SLOAN L DOUGLAS DVM	952-6454	+5
	WILMS JOHN	873-9058	8
1155	GOODYEAR TIRE STORE	583-2417	2
	OLYMPIAN AUTO&TIRE	583-2417	
1160	GAMA SPORTS	583-1234	2
1180	MARTINELLIS MILLBRE	588-6767	
	MARTINELLIS STEAK	588-6767	
1200	BJORNER ELCTRCL SPL	871-0499	4
1201	FIRESTONE STORE DIV	871-9096	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

EL CAMINO REAL 1985

EL CAMINO REAL 94030 CONT

1250	APARTMENTS		
	BADET MICHAEL	589-0273	+5
	BON M E	873-1121	3
	CALCIANO TONY	873-4232	4
	CHAN M SHARIR	873-8535	+5
	DENNING T	873-8975	9
	DOYLE JOHN A	873-2854	
	EMERSON E HOYT	583-0204	+5
	FISCHER S	589-1650	3
	GUNN ROBERT	589-3979	+5
	HARRY JOHN	588-4510	+5
	HAYES JAMES	583-8220	4
	HILL K J	589-1962	+5
	KHANLARIAN BABKEN	588-0359	+5
	LAUBE RANDAL	588-7947	+5
	MCCARTHY WM B	583-4640	+5
	NIELSEN KEITH V	871-1208	0
	RODEHEAVER MARGARET	588-0297	0
	RYAN KEVIN L	871-1208	0
12	SATTERLEE RUSSELL	588-7925	
	SCHULTZ CYNTHIA	872-1612	+5
	SFAKIOTAKIS STEVE	589-3862	0
1250			

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CENTER ST 1980

CENTER 94030 MILLBRAE

16	CUROTTO M	588-4736
33	GOODRICH VIRGINIA	952-7871 9
35	XXXX	00
36	GIUSTO FLORA	588-2721 6
42★	**FELLMAN BARRY CO**	**952-4340+0**
62	GINESTRA JIM	589-3810+0
86★	**MILLBR COOP NRSY SC**	**589-3028**
91	XXXX	00
★	2 BUS	6 RES 2 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

EL CAMINO REAL 1980

840	CARLSON PHILIP F	589-8161	6
	MORENO CUTBERTO	589-4907	8
	OLIVAS ENRIQUE	589-3309+0	
850	BAYANI MARIA	583-3099	7
950★	GREEN GARDEN FLRSTS	589-8289	2
★	GREEN GARDEN NURSRY	589-1190	2
★	MILLBR RENTS	589-1901	
959★	QUALITY FOODS INC	692-3840+0	
1000	XXXX	00	
1009★	BAKER ROB TEXACO SV	697-9752	4
1100★	BEST WESTRN INN	588-2912	9
★	ELRANCHO INN	588-2912	4
★	ELRANCHO MOTEL	588-2912	8
★	ELRANCHO RESTAURANT	589-3973	
★	WILMS EARL M	588-2912	
1101★	MCDONALDS RESTAURNT	873-3680	5
1111	XXXX	00	
1125★	REAL ESTATERS THE	871-0430	9
1145★	CONSUMERS LIQUOR	583-4575+0	
1150★	CONKLING DONALD DVM	588-1254	8
★	MILLBR BOARDNG KNNL	697-2680	8
★	MILLBR VETERNRY HSP	697-2680	8
★	WILMS JOHN	873-9058	8
1155★	OLYMPIAN ATO&TR CTR	583-2417	5
1160★	GAMA SPORTS	583-1234	9
1180★	MARTINELLIS MILBRAE	588-6767	5
★	MARTINELLIS STK PIT	588-6767	
★	STEAK PIT THE	588-6767	
1200★	BOYSENS COLOR FAIR	871-4883	9
★	COLOR FAIR INC	871-4883	
1201★	FIRESTONE STR MLLBR	871-9096	
1250	APARTMENTS		
	BACKOVIC MILOS	583-9757	9
	BROOKS CARL J	952-4509+0	
	BYRD LYNN D	583-4129+0	
	CARRASCO JUDY E	583-5748+0	
	COBB RICHARD C	583-1953+0	
	DENNING T	873-8975	9
300	DOYLE JOHN A	873-2854	5
	ENGLAND JOHN T	588-9925+0	
	GORMAN TOM	588-0239+0	
313	HUFSCHMIDT ERNEST	583-3700	4
305★	INNLINE SUPPLY	583-3700	4
202	LAZZARINI GEO J	589-0443	
	MAR JAMES	952-9251+0	
	NIELSEN KEITH V	871-1208+0	
	PAYNE MARC	583-3911	9
	PIRZADEH IRAJ	583-3617+0	
	POTOCHICK M	589-2057	9
207	RAYBURN LILLIAN K	873-7845	2
	RIESSEN CATHY	583-4673	8
	RODEHEAVER M	588-0297+0	
	RYAN KEVIN L	871-1208+0	
	SANDERS R T	583-9951+0	
312	SATTERLEE RUSSELL	588-7925	2
308	SCHLOSSER ROBT A	589-1393	
	SFAKIOTAKIS STEVE	589-3862+0	
112	STARR RICHARD C	588-4474	4
1250			

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CENTER ST 1977

CENTER 94030 MILLBRAE

16	CUROTTO M	588-4736
33	MANERS BERTHA	583-3071
35	XXXX	00
36	GIUSTO FLORA	588-2721 6
42	MYERS LAWRENCE	588-5279
86*	MILLBR COOP NRSY SC	589-3028
91	XXXX	00
95	BIDGOOD GERALD	589-6771

* 1 BUS 7 RES 0 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

EL CAMINO REAL 1977

830	BRENNAN JOHN H	588-1722	
	SPRY BRUCE	873-9042	6
840	CARLSON PHILIP F	589-8161	6
	PACKAINEAU EMERSON	588-0131	
850	BAYANI MARIA	583-3099+	7
	GRIMENSTEIN VIVIAN	692-3694	
950	*GREEN GARDEN FLRSTS	589-8289	2
	*GREEN GARDEN NURSRY	589-1190	2
	*MILLBR RENTS	589-1901	
1000	*SF WATER DEPT	697-4424	5
1009	*BAKER ROB TEXACO SV	697-9752	4
	*U HAUL CO NBRHD DLR	697-9752	6
1100	*ELRANCHO INN	588-2912	4
	*ELRANCHO RESTAURANT	589-3973	
	*WILMS EARL M	588-2912	
	WILMS JOHN	588-4306	5
1101	*MCDONALDS RESTAURNT	873-3680	5
1111	TODD ROBERT	583-2861+	7
1125	*CENTURY 21 MILLBRAE	871-0430	6
	*HUNTER ASSOCIATES	871-0430+	7
1145	*DAHNKEN MILLBRAE	871-0550	6
1150	*HAND P H	697-2680	4
	*HANDS DR PET HOSP	697-2680	
	*HANDS DR PET HOSP	588-1254	
	*MILLBR BOARDNG KNNL	588-1254	2
1155	*GOODYEAR TIRE RUBBR	583-2417	5
	*OLYMPIAN ATO&TR CTR	583-2417	5
1180	*MARTINELLIS MILBRAE	588-6767	5
	*MARTINELLIS STK PIT	588-6767	
	*STEAK PIT THE	588-6767	
1200	*COLOR FAIR HM IMPRV	871-4883	3
1201	*FIRESTONE STR MLLBR	871-9096	
1250	....APARTMENTS		
103	*ANDERSEN TERRY	873-7814	6
	ARENA JOSEPH J	589-6775+	7
304	ARNOLD G	589-9951	5
201	BERNAL LOIS	588-5871	6
311	BERTANI NINA M	588-2296	6
204	COKER A	588-5307	6
205	COMAROTO ROSEMARY	692-3292	6

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

EL CAMINO REAL 1977

..EL CAMINO RL		94030 CONT..
	DAVIS WILLIAM M 3D	871-6639+7
	DONOVAN L M	952-5110+7
300	DOYLE JOHN A	873-2854 5
	FRY TODD	583-1844+7
	GALLAGHER DAN	583-1844+7
210	GRASSE F J	589-4417 6
	HENDERSON WILL E	871-1439+7
313	HUFSCHMIDT ERNEST	583-3700 4
	HYER B	871-8958+7
305	*INNLINE SUPPLY	583-3700 4
213	KUKULA M	871-5728 5
202	LAZZARINI GEO J	589-0443
211	MCGONAGLE HUGH	873-5609 6
	MORPHEW R	871-7296+7
203	MURPHY WM E	583-6243 6
104	RAMOS CAROLYN C	871-5148 5
207	RAYBURN LILLIAN K	873-7845 2
312	SATTERLEE RUSSELL	588-7925 2
313	SCHAUER D M	583-5402 5
308	SCHLOSSER ROBT A	589-1393
	SHAW MURRAY	873-5514+7
112	STARR RICHARD C	588-4474 4
	STEVENSON MIKE	583-2797+7
	WATERBURY ROBERT W	583-7103+7
1250......................		
1260....WILLOWBRAE APTS		
304	BEAULIEU FERNAND	588-6641 6
	BELVINI RICHARD	588-6037+7
303	BREWSTER J W	589-1185 5
209	BROCATO SALVADOR	583-3853 2
	BULLWINKEL FRANK	873-8109+7
	BURKE LOUIS D	588-4744 6
214	*BURLEY INS AGCY	588-7343
214	BURLEY WILLARD E	588-7343
	BURNS BEVERLY ANN	583-2611+7
	COOLEY BURL D	589-4102+7
	CRAWLEY JOHN C	589-1861+7
	DALY WILLIAM R	588-8455 3
309	DEWAAL MARINUS D	589-3102 3
302	EPPEL SANDOR	583-9785 4
	GARDNER JAMES W	873-3129 6
	HART WILLIAM	589-8962+7
205	HINKLE F D	588-4486 3
	HORGAN GERARD W	588-5132+7
	HOWLAND GORDON O	589-9632+7
101	HUBBARD LUTHER L	588-4557
106	LEVIN P	873-0538 5
312	LOVELAND MAX	871-5773
100	PEARL TOM G	589-8176 5
	PINTO NEAL G	873-3457+7
111	PLATH GLADYS E	588-1848
210	PRINCE JOHN	588-6133 6
	REILLY V	583-0196+7
203	SCHUETTE CLYDE E	589-3183 6
	SHEPPARD STAN	871-0223 5
305	STULB JOHN F	589-1140 2
211	SULLIVAN CHRISTINE	873-9426 6
	VANDERPLAATS M	589-4471+7
	VIESS SAMUEL	589-0788 2
301	WILLIAMS OLIVER	588-5244 6
101	*WILLOWBRAE APTS	588-4557
212	WOLDMAN B	873-0538 5
1260......................		

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

CENTER ST 1970

CENTER 94030 MILLBRAE

16	CUROTTO MABEL	588-4736
33	DOUGLAS STAR	588-4605
	MANERS BERTHA	583-3071
	NETTLES M I	871-8001
	OSWALD MILDRED	871-8001
	TAYLOR GILES A	588-4807
35	TOUCHATT RONALD	589-0970
36	GIUSTO LORENZO	588-2721
42	MYERS LAWRENCE	588-5279
	SCHUMACKER STEVEN	588-5279
86	*MILLBRAE NURSRY SCH	589-3028
91	LANZA ANGIE	588-1527
A	MENCARELLI Q M	588-4136
95	BIDGOOD GERALD	589-6771

* 1 BUS 13 RES

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

EL CAMINO REAL 1970

830	BRENNAN JOHN H	588-1722
	RUSH DAVE J	589-5755
	STEVENS WALTER F	873-0511
	SULLIVAN GARY	589-5239
840	BLISS BOB	588-2233
	FEFERMAN PEARL	588-3700
	PACKAINEAU EMERSON	588-0131
	PEDRO JULIO	589-5174
850	GRIMENSTEIN VIVIAN	692-3694
	LIONBERGER MIKE	583-4627
950	*GREEN GRDN NRSY SPL	589-1190
	*MILLBRAE RENTS	589-1901
	*U HAUL RNTL DEALERS	589-1901
1000	*SF WATER DEPT	697-4424
1009	*MALS TEXACO SERV	697-9707
	*RYDER TRK RNTL 1 WY	697-9707
1100	*ELRANCHO MOTEL	588-2912
	*ELRANCHO RESTAURANT	589-3973
	*WILMS EARL M	588-2912
1150	HAND P H	588-1254
	*HAND P H DR	697-2680
	*HANDS DR PET HOSP	588-1254
	*HANDS DR PET HOSP	697-2680
	LAW GEO K	697-9520
	LAW JUDITH K	697-9520
1180	*MARTINELLIS RSTRNTS	588-6767
	*MARTINELLIS STK PIT	588-6767
	*STEAK PIT THE	588-6767
1200	*COLOR FAIR PAINT	871-4883
	*HOWATT SCOTT O	589-3227
	*SIXTEEN MILE HSE	589-3227
1201	*FIRESTONE STORES	871-9096
1250	APARTMENTS	
	BARKER P B	589-9445
	BOYD SUSAN	589-3406
	BRILLIANT HENRY B	589-4176
	BROMLEY DEBBIE	589-3406
	CANNING JEROME	589-5416
	CARLSEN KAREN	583-6474
	COSENZA PAT	589-2769
	DICKERMAN ED D	589-8942
	EAST MOSE	873-0985
	GRANDSAERT P	583-6474
	GARABEDIAN DON	697-6110
	HICKOK ERIC	692-0933
	HUCKSTADT JOHN	871-7126
	HUGHES H A	692-0933
	JENSEN JAMES A	589-1838
	JONES EARL	873-1233
	KARAGIORGOS A	871-8606
	KINCADE CHARLES	589-9809
	LAZZARINI GEO J	589-0443
	MACDONALD ROBT F	588-8452
	MAGLIO SALVATORE	583-8395
	MCCOY DAVE S	588-7210
	MORGAN D M	588-0702
	MORRIS JACK	871-5987
	MORTON RICHARD	588-7210
	OLSON ERIC H	583-4368
	OSSOWSKI J M	589-9445
	PETERSEN PAM	873-0576
	POWELL M	583-9598
	SCHLOSSER ROBT A	589-1393
	SEGELKE ELTON	588-2881
	SHEA TIMOTHY	873-7385
	SMALL MICHAEL	873-7385
	SOULT KEN	588-6240
	SPLETTSTOESSER J W	873-7385
	STAUFFER H EUGENE	589-0610
	WELSH W H	588-0861
1260	WILLOWBRAE APTS	
	ACKMAN JOAN	871-6109
	AVERY N E	583-3028
	BEACH DOUGLAS	873-1578
	BUNKER KAY F	583-3484
	*BURLEY INS AGCY	588-7343
	BURLEY WILLARD E	588-7343
	BREWSTER J W	589-1185
	CLOTERE BILLIE S	697-8351
	COOLEY BURL	583-1206
	DOBLER LU	871-8152
	DONAHOO W	873-0132
	DONALDSON ELLIS	588-0558
	DONOVAN PAUL	583-3871
	EISENMAN THOS L	588-3968
	FASSON MARGUERITE	589-9460
	GILPIN CHAS MRS	871-9970
	GRANIERI JENEAL A	871-8152
	HANSON RAYMOND W	589-1869
	HAWLEY MARTHA J	871-9519
	HINZE B J	871-9519
	HOLLIDAY EDWARD A	589-1864
	HUBBARD LUTHER L	588-4557
	HUNSAID PAUL E	589-2498
	IRWIN ROBT A	589-7745
	LEVIN PEARL	873-0538
	LOCHER A H	697-0707
	LOCKE FRED	873-0844
	LOVELAND MAX	871-5773
	MATOSICH MARIN A	697-0707
	MCCLEARY JOHN	583-2503
	MCCORD ROBT L JR	697-4438
	MCGONAGLE JOHN	589-5202
	MONTE C J	871-6920
	PEARL TOM G	761-2829
	PERRY VICKI	583-3028
	PLATH GLADYS E	588-1848
	PRICE E JANE MRS	873-0452
	RICHARDSON HOWARD	589-8145
	SAVAGE SYDNEY	589-4093

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

EL CAMINO REAL 1970

	SPENCER JOHN W	871-7128
	STEWARD JIM	583-3871
	STULB JOHN F	589-3045
	STYLE RAY H	589-4577
	TAYLOR GAYLE	583-3484
	TONELLI RANDALL W	871-6081
	WAUGH P L	871-6920
	*WILLOWBRAE APTS	588-4557
	WOLDMAN BETTIE	873-0538
	WOODMAN KARL W	873-3223
1275	APARTMENTS	
	BELLEISLE VOLLOA	583-4171
	CHASE BILL	873-3538
	CONWAY PAUL J	583-0317
	GALLUP WALLACE H JR	873-3583
	GOUAILHARDOU PHIL	589-2693
	HOSKINSON WM D	589-1846
	JAEGER HARRY	871-6985
	JENSEN KERMIT	588-8942
	KLIMOSKI YOLANDA	589-3212
	MCCARTHY JOS F MRS	583-0530
	OCONNELL LYLE	583-1210
	RAMP H G	871-6824
	REYNOLDS PAUL G JR	589-6554
	SABONES ELEANOR E	583-9091
	STILLWELL B	589-8340
	WINKLER H	583-3752

APPENDIX E

REGULATORY AGENCY RECORDS

HEALTH SERVICES AGENCY

February 24, 2000

John Wilms
Best Western El Rancho Inn
1100 El Camino Real
Millbrae, CA 94030

SUBJECT: CASE CLOSURE OF SITE #990021, TWO 1,000 GALLON GASOLINE USTs AT BEST WESTERN EL RANCHO INN, 1000 EL CAMINO REAL, MILLBRAE, CALIFORNIA

Dear Mr. Wilms:

This letter confirms the completion of site investigation and corrective action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on the information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivision (a) and (b) or Section 25299-37 of the Health and Safety code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

Dean D. Peterson, PE, REHS
Deputy Director, Environmental Health

cc: RWQCB
SWRCB

455 County Center • Redwood City, CA 94063 • PHONE 650.363.4305 • TDD 650.573.3206 • FAX 650.363.7882
http://www.health.co.san-mateo.ca.us

SAN MATEO COUNTY CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANKS PROGRAM

Response requested by
FEB 21 2000

I. AGENCY INFORMATION

455 County Center, Redwood City, CA 94063
County Project Manager: Tania Haeri-McCarroll
Title: Haz-Mat Specialist
Telephone Number: 650-363-4356

II. CASE INFORMATION

Site Name: Best Western El Rancho Inn
Site Address: 1100 El Camino Real, Millbrae, CA 94030

LUSTIS Case #: N/A	*Local Case #:* 990021	*RWB case #*
Record ID #: 001594	*URF Filing Date:*	*SWEEPS#:*

Responsible Party Information

Name	*Address*	*Phone #*
John Wilms	Best Western El Rancho Inn 1100 El Camino Real Millbrae, CA 94030	650-588-2912

Tank Information

Tank #	*Size in Gallon*	*Contents*	*Closed in place/Removed*	*Date*
1	1000	Gasoline	Removed	02/13/87
1	1000	Gasoline	Removed	02/13/87

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: *Unknown*
Site Characterization Complete? *Yes*
Date Approved by Oversight Agency: 02/24/87
Number of Monitoring wells Installed: *None*
Proper screened interval? *N/A*
Highest GW depth BGS: *7 feet 2 inches*
Flow Direction: *East*
Most sensitive GW use: *Discharge to San Francisco Bay*
Are Drinking Water affected? *No* Aquifer Name: *N/A*
Is Surface Water Affected? *No* Nearest/Affected SW: *San Francisco Bay*
Off-Site Beneficial use Impacts (Location): *None*
Report(s) on File? *Yes* Where is it filed? *SMCo*

Treatment and Disposal of Affected Material

Material	*Amount (Include units)*	*Treatment or disposal*	*Date*
Tank	1000-gallon	Disposal under manifest	02/13/87
Tank	1000-gallon	Disposal under manifest	02/13/87

Maximum Documented Contaminant Concentrations - Before and After cleanup

	SOIL (PPM)		GROUNDWATER (PPB)	
Contaminant	*Before*	*After*	*Before*	*After*
TPH-gasoline	N/A	<1.0	850000	<50
TPH-diesel	N/A	N/A	N/A	N/A
MtBE	N/A	<0.05	N/A	<3.0
Benzene	N/A	<0.005	4400	<0.50
Toluene	N/A	<0.005	30,000	<0.50
Ethyl-benzene	N/A	<0.005	N/A	<0.50
Xylene	N/A	<0.005	8,400	<0.50
Lead	N/A	<5.0	N/A	0.030

N/A Not Analyzed.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? *Yes*
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? *Yes*
Does corrective action protect public health for current land use? *Yes*
Site Management Requirements: *None*
Should corrective action be reviewed if land use changes? *No*
Monitoring Wells to be Decommissioned? *N/A* Number Decommissioned: *N/A* Number Retained: *N/A*
List Enforcement Actions Taken: *None*
List Enforcement Action Rescinded: *None*

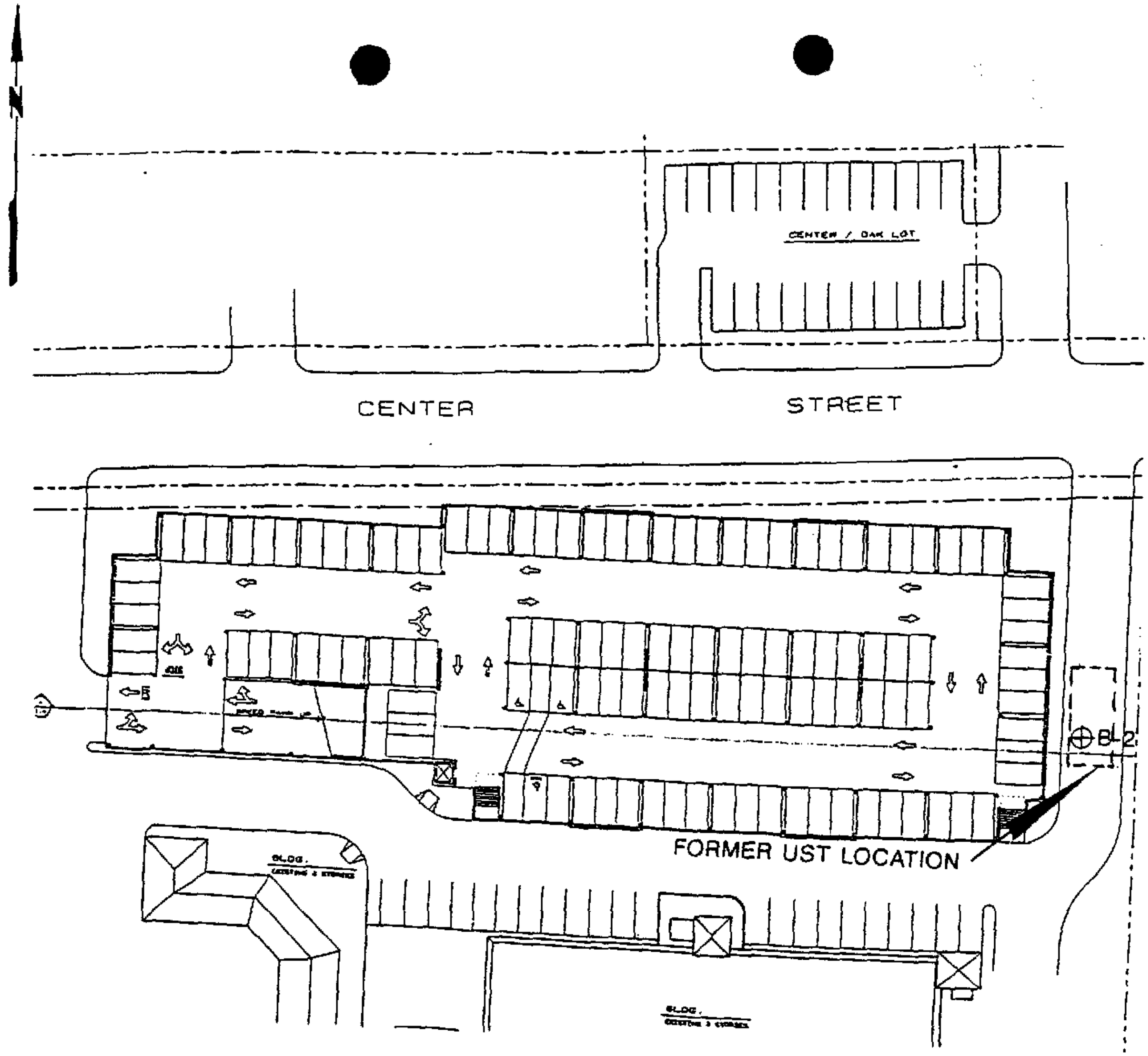
V. RWQCB Notification

Date Submitted to RB:	*RB Response:*
RB Staff:	*Title*:

Brian Zamora, Director, Environmental Health

FEB 24 2000

Date



⊕B-2 SOIL BORING LOCATION

SCALE : 1"=62'

NOTES

SITE PLAN SOURCE:
WATRY DESIGN GROUP'S SCHEMATIC DESIGN, "EL RANCHO INN PARKING STRUCTURE", SHEET 1 OF 1, JOB NO. 9770.

DATE	MARCH, 1998
JOB NO.	6718-02
DWG NO.	671802-2
DRAWN	A CONSTANTINESCU
CHK'D	A CONSTANTINESCU
APP'D	DANIEL RHOADES

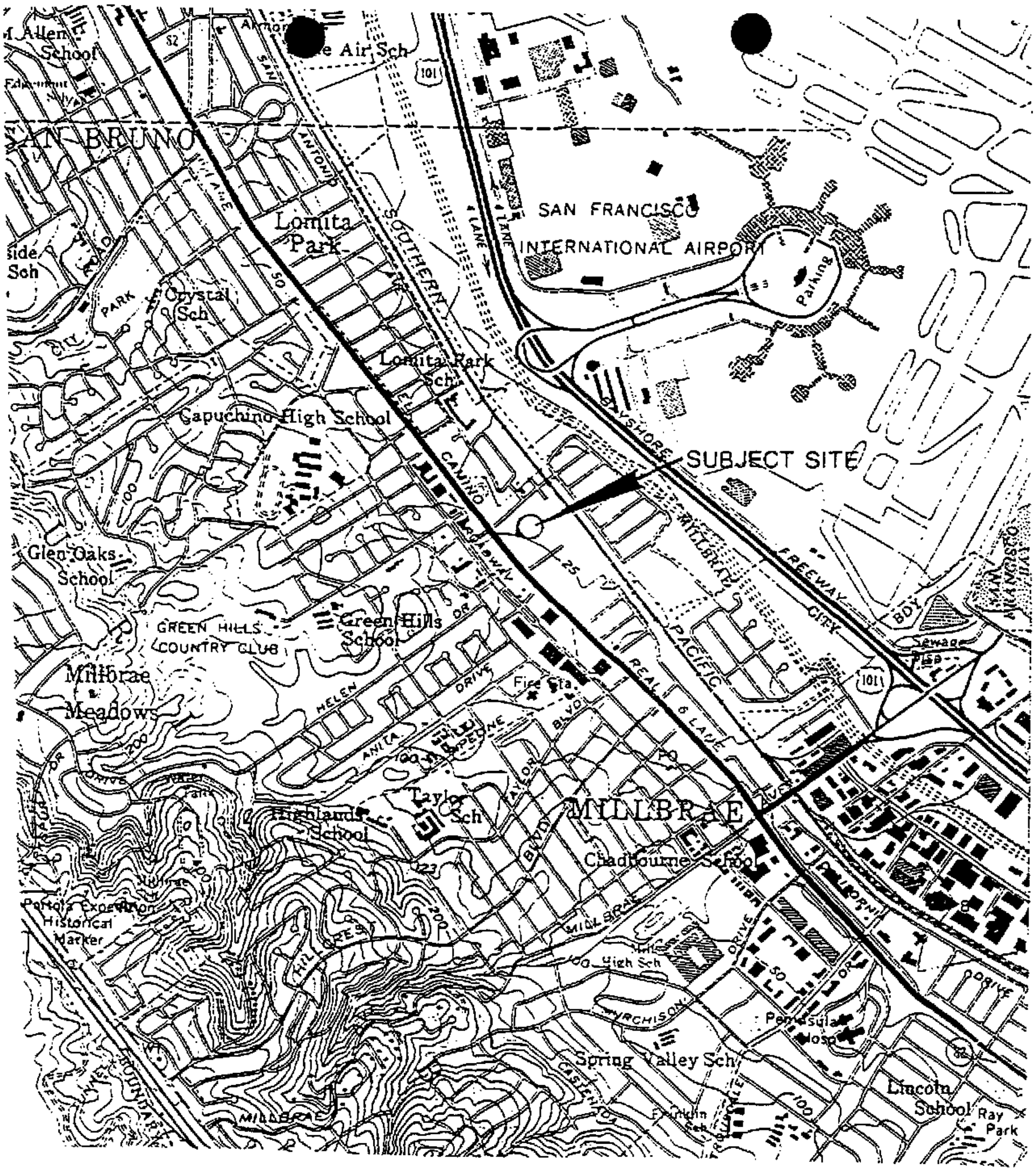
Purcell, Rhoades & Associates
Consultants in the Applied Earth Sciences

SITE PLAN
1100 EL CAMINO REAL
MILLBRAE, CALIFORNIA

JOHN & PAUL WILMS

FIGURE NO. 2

REV NO.



SCALE 1:24,000

NOTES		
MAP SOURCE: USGS TOPOGRAPHIC MAP, MONTARA MOUNTAIN QUADRANGLE, 7.5 MINUTE QUADRANGLE, 1956, PHOTOREVISED 1980.	DATE MARCH, 1998	Purcell, Rhoades & Associates Consultants in the Applied Earth Sciences
	JOB NO. 6718-02	
	DWG NO. 671802-1	SITE LOCATION MAP 1100 EL CAMINO REAL MILLBRAE, CALIFORNIA — FIGURE NO. 1
	DRAWN A CONSTANTINESCU	
	CHK'D A CONSTANTINESCU	
	APP'D DANIEL RHOADES	JOHN & PAUL WILMS — REV NO.

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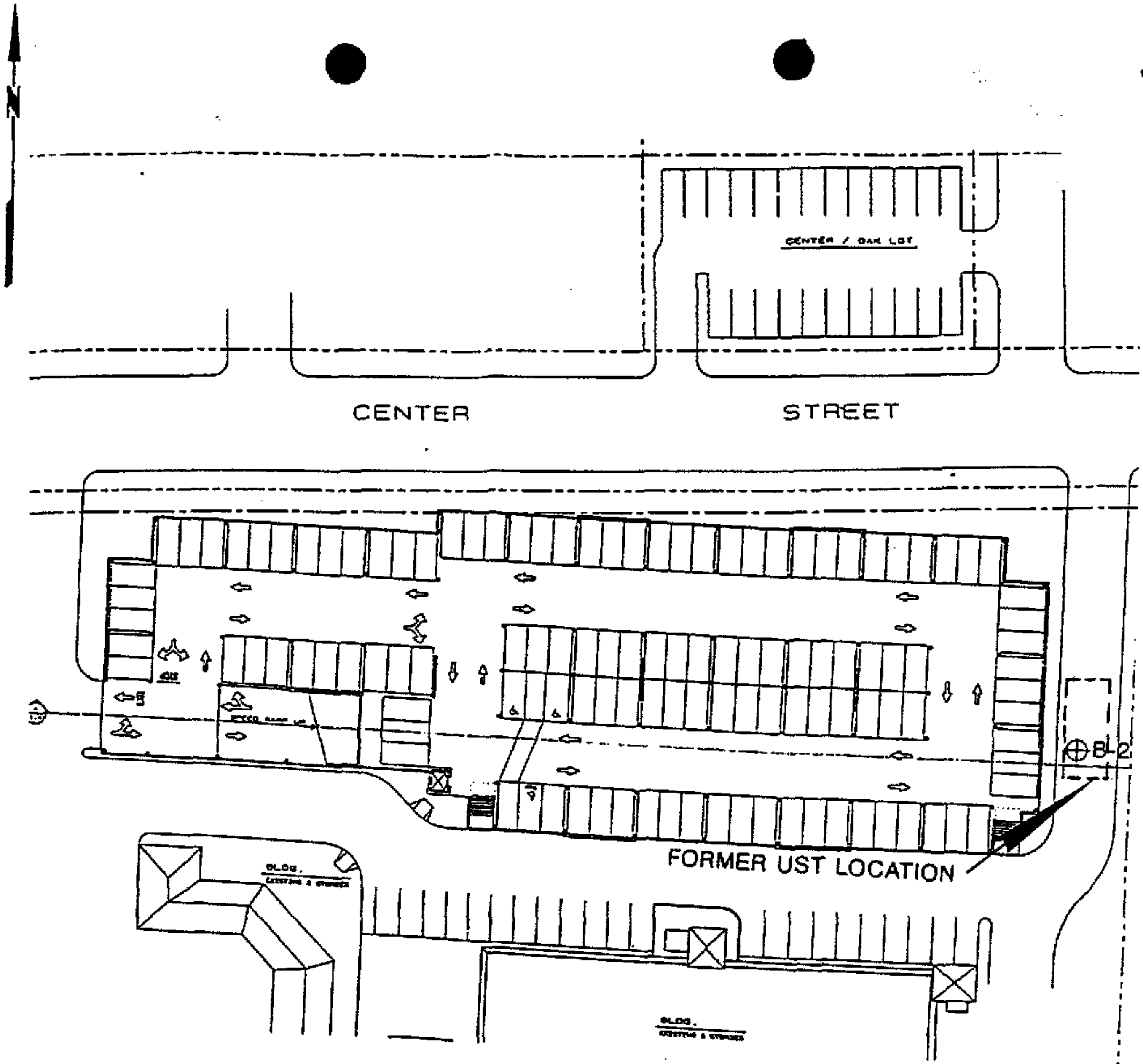


⊕B-2 SOIL BORING LOCATION

SCALE : 1"=62'

NOTES

SITE PLAN SOURCE:
WATRY DESIGN GROUP'S SCHEMATIC DESIGN, "EL RANCHO INN PARKING STRUCTURE", SHEET 1 OF 1, JOB NO. 9770.

DATE	MARCH, 1998
JOB NO.	6718-02
DWG NO.	671802-2
DRAWN	A CONSTANTINESCU
CHK'D	A CONSTANTINESCU
APP'D	DANIEL RHOADES

Purcell, Rhoades & Associates
Consultants in the Applied Earth Sciences

SITE PLAN
1100 EL CAMINO REAL
MILLBRAE, CALIFORNIA

JOHN & PAUL VILMS

FIGURE NO. 2

REV NO.

HEALTH SERVICES AGENCY

February 24, 2000

John Wilms
Best Western El Rancho Inn
1100 El Camino Real
Millbrae, CA 94030

SUBJECT: CASE CLOSURE OF SITE #990021, TWO 1,000 GALLON GASOLINE USTs AT BEST WESTERN EL RANCHO INN, 1100 EL CAMINO REAL, MILLBRAE, CALIFORNIA

Dear Mr. Wilms:

This letter confirms the completion of site investigation and corrective action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on the information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivision (a) and (b) or Section 25299-37 of the Health and Safety code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

Dean D. Peterson, PE, REHS
Deputy Director, Environmental Health

cc: RWQCB
SWRCB

Purcell, Rhoades & Associates

Consultants in the Applied Earth Sciences

2504 Technology Drive
Hayward, CA 94545
Tel (510) 732-9890
Fax (510) 732-0289
Please Reply to This Office ☐

1041 Hook Avenue
Pleasant Hill, CA 94523
Tel (510) 932-1177
Fax (510) 932-2795
☐ *Please Reply to This Office*

Job No. 23-217/6718-02
~~April 20, 1998~~

Mr. John Wilms
Best Western El Rancho Inn
1100 El Camino Real
Millbrae, CA 94030

Subject: Preliminary Site Assessment, Former Underground Storage Tank Location, 1100 El Camino Real, Millbrae, California.

References: Blaine Tech Services, Inc., June 22, 1987, "Sampling Report at El Rancho Inn, 1100 El Camino Real, Millbrae, CA."

County of San Mateo, Public Health and Environmental Protection Division's Letter Dated December 17, 1997, Regarding Best Western El Rancho Inn At 1100 El Camino Real, Millbrae , California.

Dear Mr. Wilms:

Purcell, Rhoades and Associates (PRA) is pleased to present the results of a Preliminary Site Assessment (PSA) performed in March 1998, for the above mentioned site. PRA's subsurface environmental investigation was performed in accordance with the scope of work presented in our Work Plan, dated February 3, 1998, according to San Mateo County, Public Health and Environmental Protection Division's letter dated December 17, 1997, and our proposal number PH-1454, dated January 12, 1998.

PRA's review of Blaine Tech Services's Report revealed that a water sample collected at 9 feet below ground surface from an exploratory soil boring located at a former underground storage tanks (UST) location contained 850,000 parts per billion (ppb) total petroleum hydrocarbon as gasoline (TPH-G). In a letter dated December 17, 1997, County of San Mateo, Public Health and Environmental Protection Division (CSM-PHEPD) presented two options for a PSA. Based upon a phone conversation with the CSM-PHEPD office and our previous experience with UST sites, we proposed a scope of work for this PSA consisting of the following tasks:

- Prepare a project work plan and a site safety plan.
- Obtain necessary permits from CSM-PHEPD.

- Observe the drilling of one soil boring at the location of the former gasoline tanks pit to determine soil/groundwater contamination, if any.
- Perform a grab groundwater sampling.
- Laboratory testing of one soil and one groundwater sample set by a state certified analytical laboratory
- Prepare a report describing the work performed, summarizing the results of our soil and groundwater sampling and presenting our conclusions and recommendations.

Environmental Drilling, Soil and Groundwater Sampling

One soil boring was advanced using a truck-mounted drill rig with 6-inch continuous flight augers at the location plotted on Figure 2, Site Plan. One soil sample was collected above groundwater level and at the bottom of former underground storage tanks excavation pit with a California Modified split-spoon sampler driven 18 inches by a 140-pound hammer falling 30 inches as a minimum from total depth of boring. The number of blows necessary to drive the sampler were recorded on the boring log to help to evaluate the consistency of the materials encountered. Soil removed from the top two liners and the end cone were used for visual logging purposes and disposed with cuttings removed during drilling operations. The bottom liner was saved for laboratory analysis. Soil samples from each sampling interval was lithologically described by a PRA geologist in accordance with the Unified Soil Classification System. The soil boring geologic log is presented on Figure 3.

The soil samples were screened in the field using a portable Organic Vapor Meter and no soil discoloration or obvious hydrocarbon odor were noted in the field. The ends of the soil brass-tube were sealed using teflon tape and plastic end caps. The soil samples was labeled with the project name, time and date, placed in a sealed bag and stored on ice for subsequent transport under chain of custody protocol to a California Department of Health Services (DHS) certified hazardous waste laboratory.

At the time of the soil boring excavation, one grab groundwater sample was collected using a new bailer and placed into containers provided by the analytical laboratory. Groundwater sample collected for total lead test was filtered in the field. The containers were labeled with the project name, date and time of sample, sample location and placed in a cooler on ice for transport to a State-certified analytical laboratory. A detailed PRA's Soil and Groundwater Sampling Protocol is presented in Appendix A.

All drilling activities were supervised by PRA's project manager and a geologist. The soil boring was backfilled with grout cement. All sample equipment was thoroughly scrubbed with Alconox solution and rinsed with distilled water prior to beginning of sampling and between all samplings. Soil cuttings were stored on site, on a 6-mil visqueen for proper disposal.

Chemical Analysis

One soil and one groundwater sample set was submitted to Columbia Analytical Services, Inc., a state certified analytical laboratory in San Jose to be tested for following compounds:

- Total petroleum hydrocarbons as gasoline (TPH-G),
- Volatile hydrocarbons as Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) and MethylTeritary ButhylEther (MTBE), using EPA Method 8020, and
- Total lead using EPA Methods 6010 and 7421, respectively.

All samples submitted to the laboratory were delivered under chain-of custody (COC) protocol. Copies of the COC along with the analytical results are included in Appendix B. Results of laboratory analysis tests are summarized in Table 1.

Conclusions and Recommendations

Table 1 presents the results of the analysis of one soil sample and one grab groundwater sample collected from soil boring B-2. TPH-G, BTEX, and MBTE levels were below the detection limits. Total lead was detected only in the tested grab groundwater sample at a level of 30 parts per billion (ppb). This level is below the recommended clean-up level of 50 ppb presented in California Code of Regulations, Title 26, §22-64435.

PRA recommends that copies of this report be provided to:

- San Mateo County
  Public Health and Environmental Protection Division
  5990 Hamilton Street, Fourth Flour
  Redwood City, CA-94063

- California Regional Water Quality Control Board
  San Francisco Bay Region
  2101 Webster Street, Suite 500
  Oakland, CA-94612

Limitations

Our services consist of professional opinions and recommendations made in accordance with generally accepted environmental testing principles and practices. This warranty is in lieu of all other warranties either express or implied. The conclusions submitted in this report are based upon information obtained from subsurface exploration, laboratory testing, and appropriate analyses. Unanticipated hydrologic and geologic conditions are frequently encountered and cannot be evaluated by test borings, sampling and chemical analysis. The test boring data and chemical analyses refer to the boring explored and sampled on the date indicated and may not be representative of subsurface or chemical conditions elsewhere at this site at some other time.

No warranty, expressed or implied, is given regarding the overall environmental condition of the subject property. Any additional information that becomes available concerning this site should be submitted to PRA so that our conclusions may be reviewed and modified, if necessary.

If you have questions regarding this report, please call us at (510) 732-9890.

Very truly yours,

PURCELL, RHOADES & ASSOCIATES

Daniel J. Rhoades, P.E.
Principal

Adriana Constantinescu
Project Geologist

PROFESSIONAL ENGINEER
JAY RHOADES
6-30-00
CIVIL
STATE OF CALIFORNIA

Attached: Table 1: Summary of Soil and Groundwater sample Analytical Laboratory Results
Figure 1: Site Location Map
Figure 2: Site Plan
Figure 3: Exploratory Soil Boring B-2.
Appendix A: Environmental Drilling and Sampling Protocols
Appendix B: Laboratory Test Results and COC Documentation
Appendix C: San Mateo County Environmental Health Permit.

TABLE 1

SUMMARY OF SOIL AND GROUNDWATER SAMPLE ANALYTICAL LABORATORY RESULTS
BEST WESTERN EL RANCHO INN
1100 EL CAMINO REAL, MILLBRAE, CA.
Sampling Event on March 11, 1998

ANALYSIS METHOD Analyte	**SAMPLE ID** (Matrix)		
	B2-8.5 (Soil)	**B2** (Water)	**MRL**
EPA Method 8020			
TPH-G	ND	ND	1000/50
Benzene	ND	ND	5/0.5
Toluene	ND	ND	5/0.5
Ethylbenzene	ND	ND	5/0.5
Total Xylenes	ND	ND	5/0.5
MTBE	ND	ND	50/3
EPA Method 6010/7421			
Lead	ND	30	5000/5

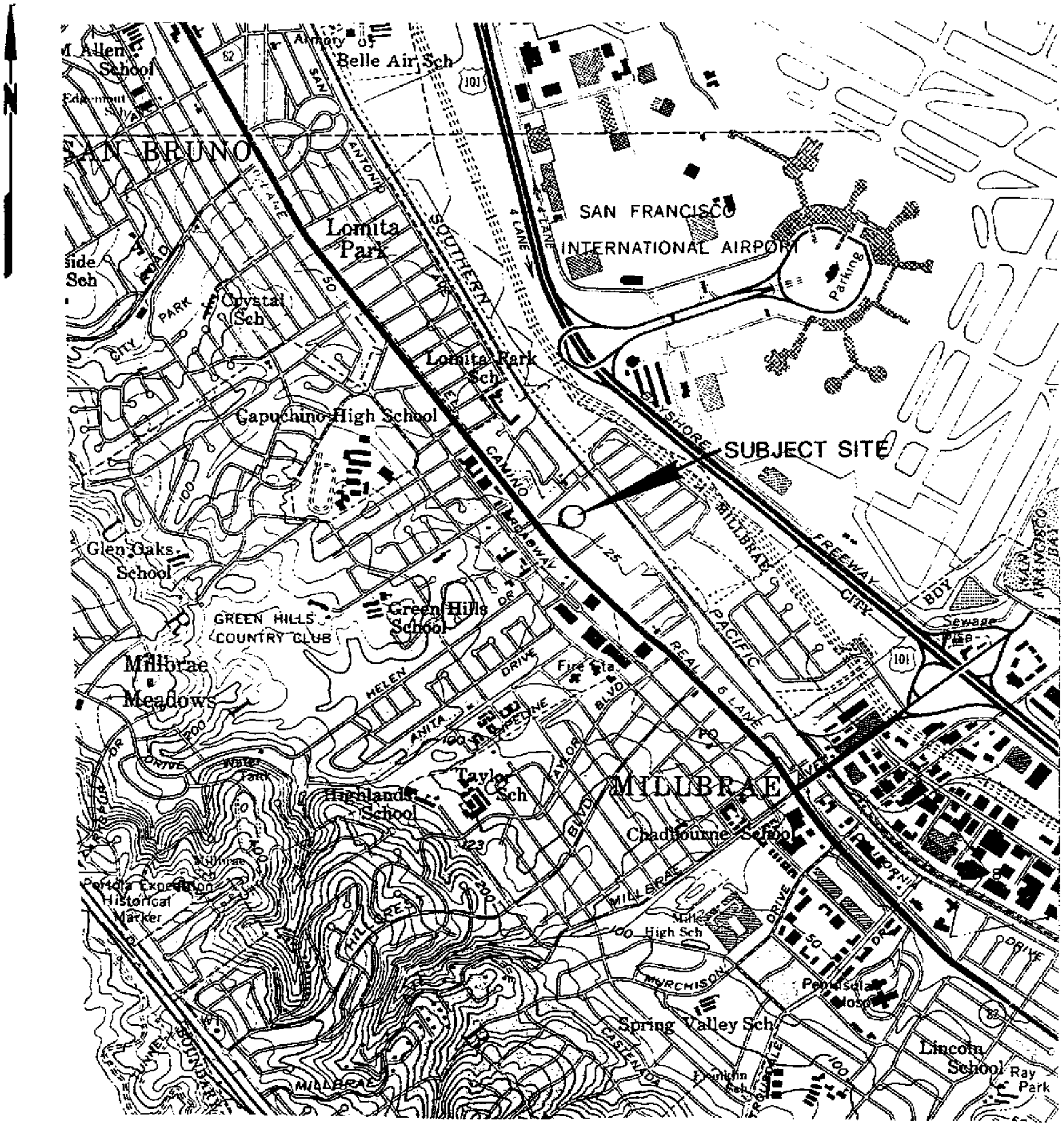
All tested analytes are reported in parts per billion (ppb)= µg/Kg

TPH-G ... Total Petroleum Hydrocarbon as Gasoline

MTBE ... Methyl *Tert*-Butyl Ether

ND ... Not Detected at the Detection Limit or above the Detection Limit

MRL ... Method Reporting Limit



SCALE 1:24,000

NOTES			
MAP SOURCE: USGS TOPOGRAPHIC MAP, MONTARA MOUNTAIN QUADRANGLE, 7.5 MINUTE QUADRANGLE, 1956, PHOTOREVISED 1980.	DATE MARCH, 1998	Purcell, Rhoades & Associates Consultants in the Applied Earth Sciences	
	JOB NO. 6718-02		FIGURE NO.
	DWG NO. 671802-1	SITE LOCATION MAP 1100 EL CAMINO REAL MILLBRAE, CALIFORNIA	1
	DRAWN A CONSTANTINESCU		
	CHK'D A CONSTANTINESCU		
	APP'D DANIEL RHOADES	JOHN & PAUL WILMS	REV NO.

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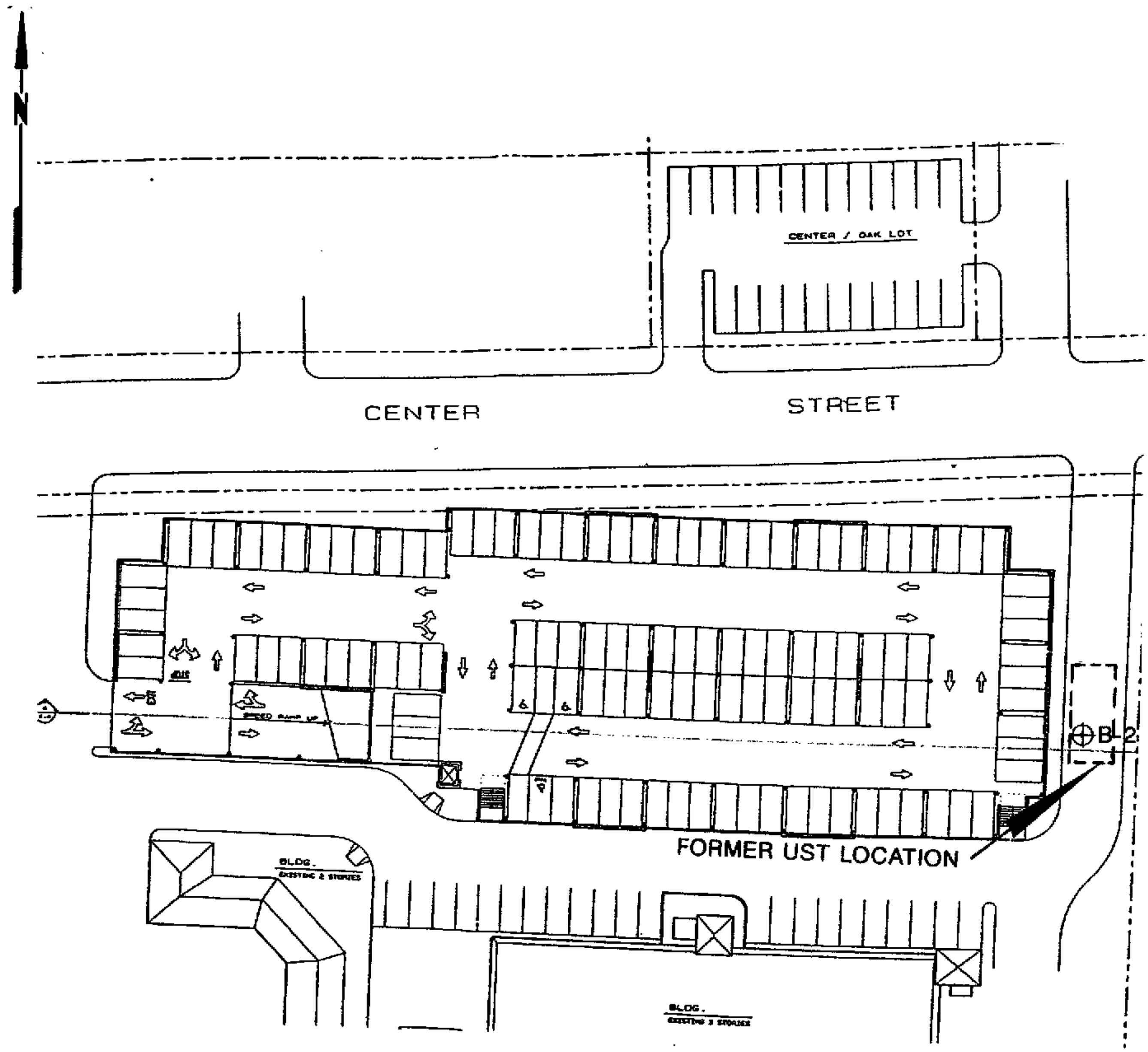


⊕B-2 SOIL BORING LOCATION

SCALE : 1"=62'

NOTES		
SITE PLAN SOURCE: WATRY DESIGN GROUP'S SCHEMATIC DESIGN, "EL RANCHO INN PARKING STRUCTURE", SHEET 1 OF 1, JOB NO. 9770.	DATE MARCH, 1998	Purcell, Rhoades & Associates Consultants in the Applied Earth Sciences
	JOB NO. 6718-02	
	DWG NO. 671802-2	SITE PLAN 1100 EL CAMINO REAL MILLBRAE, CALIFORNIA
	DRAWN A CONSTANTINESCU	FIGURE NO. 2
	CHK'D A CONSTANTINESCU	
	APP'D DANIEL RHOADES	JOHN & PAUL WILMS
		REV NO.

EXPLORATORY BORING LOG

CLIENT: JOHN & PAUL WILMS PROJECT NO.: 6718-01	LOGGED BY: ADRIANA CONSTANTINESCU	DATE DRILLED: 3/11/98	PAGE 1 OF 1
DRILL RIG: CME-75 DRILLER: ADVANCED DRILLING CO. WEIGHT OF HAMMER/DROP: 140 POUNDS/30 INCHES		BORING ELEV: GROUND BORING DIAM: 6"	BORING NO. B-2

FIELD				DESCRIPTION			LABORATORY					
DEPTH (FT)	SAMPLE	SAMPLE NO.	BLOWS/6"	MATERIAL DESCRIPTION AND REMARKS	CONSISTENCY	USCS LETTER SYMBOL	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	PERCENT PASSING #200	PLASTICITY INDEX (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)	OTHER
4–5.5		B2-5	4 6 12	LIGHT BROWN CLAYEY SAND, ANGULAR, MEDIUM DENSE, WELL GRADED (BACKFILL)	MEDIUM DENSE	SW						
7.5–9		B2-8.5	4 6 8	BROWN TO LIGHT GRAY SAND, FINE, MOTTLED, MOIST, WITH 5-10% FINES, MEDIUM DENSE, NO HYDROCARBON ODOR.	MEDIUM DENSE	SP						
17–18.5		B2-18	8 12 18	LIGHT BROWN SAND, FINE TO MEDIUM, ANGULAR, WET, WELL GRADED, DENSE.	DENSE	SW						
24–25.5		B2-25	5 6 9	LIGHT BROWN CLAYEY SAND, FINE TO MEDIUM, WET, ANGULAR, MEDIUM DENSE, WELL GRADED.	MEDIUM DENSE	SW						
				SOIL BORING WAS STOPPED AT 25 ' BELOW GROUND SURFACE AND WAS BACKFILLED WITH GROUT CEMENT.								

NOTES:
AT THE DRILLING TIME, GROUNDWATER ENCOUNTERED AT 9' BELOW GROUND SURFACE.

DATE	MARCH, 1998
JOB NO.	6718-02
DWG NO.	671802-3
DRAWN	A CONSTANTINESCU
CHK'D	A CONSTANTINESCU
APP'D	D. RHOADES

Purcell, Rhoades & Associates
Consultants in the Applied Earth Sciences

EXPLORATORY SOIL BORING B-2
1100 EL CAMINO REAL, MILLBRAE, CALIFORNIA
JOHN & PAUL WILMS

FIGURE NO. 3

APPENDIX A
ENVIRONMENTAL DRILLING AND SAMPLING PROTOCOLS

ENVIRONMENTAL DRILLING AND SAMPLING PROTOCOLS

Drilling Protocol

Prior to any drilling activities, Purcell, Rhoades and Associates (PRA) will verify that necessary drilling permits have been secured.

Prior to drilling, underground and above ground utilities will be located. To the extent possible, drilling will be conducted so as not to disrupt activities at a project site. PRA shall obtain and review available public data on subsurface geology and if warranted, the location of wells within a quarter-mile of the project site will be identified. Drilling equipment will be properly inspected prior to performing work.

Subsurface investigations are typically performed to assess the lateral and vertical extent of petroleum hydrocarbons or other contaminants which might be present in soils and groundwater. Drilling methods will be selected to optimize field data requirements as well as to be compatible with known or suspected subsurface geologic conditions.

Shallow soil borings will be drilled dry using a truck-mounted hollow-stem auger drilling rig, unless site conditions favor a different drilling method. Drilling and sampling methods will be consistent with ASTM Method D-1452-80. The auger size will be a minimum 8-inch nominal outside-diameter O.D. No drilling fluids will be used during this drilling method. All augers and drill rods will initially be thoroughly steam-cleaned before arriving on-site, to prevent the introduction of contaminants from off-site, and will again be steam-cleaned between borings away from boring locations. Working components of the drilling rig (subs, collars and all parts of the rig chassis near the borehole) will also be steam-cleaned. Cleaned augers, rods and other tools, if required, will be stored and covered when not in use. Decontamination of drilling equipment will consist of steam cleaning, and/or Alconox wash. Cleaning operations will be observed by a representative of this office and noted on the drilling log.

Soil Sampling Protocol

Soil samples are typically collected at 5-foot intervals with a California Modified split-spoon sampler driven 18 inches by a 140-pound hammer falling 30 inches as a minimum from ground surface to total depth of boring. The number of blows necessary to drive the sampler will be recorded on the boring log to help evaluate the consistency of the materials encountered. Additional soil samples may be collected based on significant lithologic changes and/or potential chemical content. Soil removed from the top two liners (typically each 6 inches in length) and the end cone will be used for visual logging purposes and disposed of with cuttings removed during drilling operations. The bottom liner will be saved for laboratory analysis. Soil samples from each sampling interval will be lithologically described by an PRA geologist in accordance with the Unified Soil Classification System. The exact depth of all borings to 0.5-foot will be determined in the field. Exploratory boring logs shall be prepared under the direction of a Registered Geologist.

Head-space analyses will be performed in the field to check for the presence of volatile organic compounds. Head-space analyses will be performed using an organic vapor analyzer (either an TIP, HNU, or OVM). Organic vapor concentrations will be recorded on the PRA field log of boring. The selection of soil samples for chemical analysis are typically based on the following criteria:

a. Soil discoloration
b. Soil odors
c. Visual confirmation or chemical in soil
d. Depth with respect to underground tanks
e. Depth with respect to groundwater
f. OVA reading

The soil sampler and brass liners will be cleaned with a tri-sodium phosphate solution, rinsed with clean tap water and air-dried prior to each sampling. Soil samples (full brass liners) selected for chemical analysis are covered with aluminum foil and the ends are capped to prevent volatilization. The samples are labeled and entered onto a Chain-of-Custody form, and placed in a cooler on blue ice for transport to a State-certified analytical laboratory.

Soil borings will be backfilled (sealed) to ground surface using either a neat cement or cement-bentonite grout mixture in accordance with appropriate local regulations.

Pending results by laboratory analysis, excess drill cuttings will remain on-site and, when deemed necessary, covered with a plastic tarp. Confirmed uncontaminated soils may be appropriately disposed of on-site by the client. Soils found to contain levels of contaminants above local or state action levels will be placed in properly labeled 55-gallon drums and left on-site for proper disposal by the client. At the client's request, we will act as the client's agent by assisting in the disposal of the drum-contained material.

GROUNDWATER SAMPLING AND ANALYSIS

Quality Assurance/Quality Control Objectives

The sampling and analysis procedures employed by PRA for groundwater sampling and monitoring follow specific Quality Assurance/Quality Control (QA/QC) guidelines. Quality Assurance objectives have been established by PRA to develop and implement procedures for obtaining and evaluating water quality and field data in an accurate, precise and complete manner so that sampling procedures and field measurements provide information that is comparable and representative of actual field conditions. Quality Control (QC) is maintained by PRA by using specific field protocols and requiring the analytical laboratory to perform internal and external QC checks. It is the goal of PRA to provide data that are accurate, precise, complete, comparable, and representative. The definitions for accuracy, precision, completeness, comparability, and representativeness are as follows:

1. Accuracy - the degree of agreement of a measurement with an accepted reference or true value.

2. Precision - a measure of agreement among individual measurements under similar conditions. Usually expressed in terms of the standard deviation.

3. Completeness - the amount of valid data obtained from a measurement system compared to the amount that was expected to meet the project data goals.

4. Comparability - expresses the confidence with which one data set can be compared to another.

5. Representativeness - a sample or group of samples that reflects the characteristics of the media at the sampling point. It also includes how well the sampling point represents the actual parameter variations which are under study.

As part of the PRA QA/QC program, applicable federal, state and local reference guidance documents are to be followed. The procedures outlined in these regulations, manuals, handbooks, guidance documents and journals are incorporated into the PRA sampling procedures to assure that: (1) groundwater samples are properly collected, (2) groundwater samples are identified, preserved, and transported in a manner such that they are representative of field conditions, and (3) chemical analyses of samples are accurate and reproducible.

GUIDANCE AND REFERENCE DOCUMENTS USED TO COLLECT GROUNDWATER SAMPLES

U.S.E.P.A. - SW-846#, 3rd Edition	Test Methods for Evaluating Solid Waste - Physical/Chemical Methods (November, 1986)
40 CFR 136.3e. Table II (Code of Federal Regulations)	Required Containers, Preservation Techniques, and Holding Times
Resources Conservation and Recovery Act (OSWER 9950.1)	Groundwater Monitoring Technical Enforcement Guidance Document(Sept., 1986)
California Regional Water Quality Control Board (Central Valley Region)	A Compilation of Water Quality Goals (September, 1988); Updates (October, 1988
California Regional Water Quality Control Board (North Coast, San Francisco Bay, and Central Valley)	Regional Board Staff Recommendations for Initial Evaluations and Investigation of Underground Tanks: Tri-Regional Recommendations (June, 1988)
State of California Department of Health Services	Hazardous Waste Testing Laboratory Certification List (March, 1987)

State of California Water Resources Control Board	Leaking Underground Fuel Tank (LUFT) Field Manual (May, 1988), and LUFT Field Manual Revision (April, 1989)
State of California Water Resources Control Board	Title 23, (Register #85.#33-8-17-85), Subchapter 16: Underground Tank Regulations; Article 3, Sections 2632 and 2634; Article 4, Section 2647 (October, 1986)

Because groundwater samples collected by PRA are analyzed in the parts per billion (ppb) range for many compounds, care is exercised to prevent contamination of samples. When volatile or semi-volatile organic compounds are included for analysis, PRA sampling crew members will adhere to the following precautions in the field:

1. A clean pair of new, disposable gloves are worn for each well being sampled.

2. When possible, samples are collected from known or suspected wells that are least contaminated (i.e., background) followed by wells in increasing order of contamination.

3. All sample bottles and equipment are kept away from fuels and solvents. When possible, gasoline (used in generators) is stored away from bailers, sample bottles, purging pumps, etc.

4. Bailers are made of Teflon or Stainless Steel. Other materials such as plastic may contaminate samples with phthalate esters which interfere with many Gas Chromatography (GC) analyses.

5. Volatile organic groundwater samples are collected so that air passage through the sample does not occur or is minimal (to prevent volatiles from being stripped from the samples); sample bottles are filled by slowly running the sample down the side of the bottle until there is a positive convex meniscus over the neck of the bottle; the Teflon side of the septum (in cap) is positioned against the meniscus, and the cap screwed on tightly; the sample is inverted and the bottle lightly tapped. The absence of an air bubble indicates a successful seal; if a bubble is evident, the cap is removed, more sample is added, and the bottle is resealed.

6. Extra Teflon seals are brought into the field in case seals are difficult to handle and/or are dropped. Dropped seals are considered contaminated and are not used. When replacing seals or if seals become flipped, care is taken to assure that the Teflon seal faces down.

Laboratory and field handling procedures of samples are monitored by including QC samples for analysis with every submitted sample lot from a project site. QC samples may include any combination of the following:

1. Trip Blank. Used for purgeable organic compounds only; QC samples are collected in 40 milliliter (ml) sample vials filled in the analytical laboratory with organic-free water. Trip

blanks are sent to the project site, and travel with project site samples. Trip blanks are not opened, and are returned from a project site with the project site samples for analysis.

2. Field Blank. Prepared in the field using organic-free water. These QC samples accompany project site samples to the laboratory and are analyzed for specific chemical parameters unique to the project site where they were prepared.

3. Duplicates. Duplicate samples are collected "second samples" from a selected well and project site. They are collected as either split samples or second-run samples collected from the same well.

4. Equipment Blank. Period QC sample collected from field equipment rinsate to verify decontamination procedures.

The number and types of QC samples are determined on a site-specific basis.

SAMPLE COLLECTION

This section describes the routine procedures followed by PRA while collecting groundwater samples for chemical analysis. These procedures include decontamination, water-level measurements, well purging, physical parameter measurements, sample collection, sample preservation, sample handling, and sample documentation. Critical sampling objectives for PRA are to:

1. Collect groundwater samples that are representative of the sampled matrix.

2. Maintain sample integrity from the time of sample collection to receipt by the analytical laboratory.

Decontamination Procedures

All physical parameter measuring and sampling equipment are decontaminated prior to sample collection using Alconox or equivalent detergent followed by steam cleaning with deionized water. Any sampling equipment surfaces or parts that might absorb specific contaminants, such as plastic pump valves, impellers, etc., are cleaned in the same manner.

Sample bottles, bottle caps and septa used for sampling volatile organics are thoroughly cleaned and prepared in the laboratory. Sample bottles, bottle caps and septa are protected from all potential chemical contact before actual usage at a sample location.

During field sampling, equipment which has been placed in a well shall be decontaminated by cleaning with Alconox or equivalent detergent followed by steam cleaning with deionized water before purging or sampling the next well.

DOCUMENTATION

Sample Container Labels

Each sample container will be labeled immediately after the sample is collected. Label information will include:

Sample point designation (i.e., well number or code)
Sampler's identification
Project number
Date and time of collection
Type of preservation used

Chain-of-Custody

A Chain-of-Custody record shall be completed and accompany every shipment of samples to the analytical laboratory in order to establish the documentation necessary to trace sample possession from time of collection. The record will contain the following information:

Sample or station number or sample identification (ID)
Signature of collector, sampler, or recorder
Date and time of collection
Place of collection
Sample type
Signatures of persons involved in chain of possession
Inclusive dates of possession

Samples shall always be accompanied by a Chain-of-Custody record. When transferring the samples, the individual relinquishing and receiving the samples will sign, date, and note the time on the Chain-of-Custody record. EGC will be responsible for notifying the laboratory coordinator when and how many samples will be sent to the laboratory for analysis, and what types of analyses shall be performed.

Sample Handling Storage and Transport

All chemical sampling, handling and storage will be conducted under the direction of our consulting Analytical Chemist. All laboratory chemical testing will be accomplished by a State approved laboratory.

All equipment that contacts samples will be thoroughly cleaned prior to arrival to a site and between samplings. New or used samplers will be steam-cleaned or washed with an anionic detergent solution (i.e., Liquinox or Alconox), rinsed well with tap water, rinsed with distilled water, drained of excess water and air-dried or wiped dry with a clean towel.

Equipment blanks will be taken during the final stage of decontamination at the rate of no more than one per groundwater monitoring well. Selected method blanks will be subjected to chemical analysis for quality control.

All samples will be collected in an order such that those parameters most sensitive to volatilization will be sampled first. A general order of collection for some common groundwater parameters follows:

- Volatile Organic Compounds (VOC's)
- Total Organic Halogens (TOX)
- Total Organic Carbon (TOC)
- Extractable Organics
- Total Metals
- Dissolved Metals
- Phenols
- Sulfate and Chloride
- Turbidity
- Nitrate and Ammonia

All samples will be held at 4°C by packing in ice in a covered ice chest specifically designated for that purpose. At no time will the elapsed time between sample collection and delivery at the outside laboratory be greater than 72 hours. Preservatives will not be added to any sample unless instructed, and preservatives will be supplied and requested by the outside laboratory. Under no circumstances will sample containers be opened by anyone other than laboratory personnel who will perform the specified chemical analysis.

If it is necessary for samples or sample chests to leave the immediate control of the sampler prior to delivery to the laboratory, such as shipment by a common carrier (e.g., Federal Express), a custody seal will be placed on each sample container and/or sample chest to ensure that the samples have not been tampered with during transportation. The custody seal will contain the sampler's signature, the date and time the seal was emplaced.

APPENDIX B
LABORATORY TEST RESULTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Columbia Analytical Services inc.

April 17, 1998

Service Request No.: S9800556

Adriana Constantinescu
PRA GROUP
2504 Technology Drive
Hayward, CA 94545

RE: EL RANCHO INN/6718-02

Dear Ms. Constantinescu:

The following pages contain analytical results for sample(s) received by the laboratory on March 12, 1998. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 11, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Bernadette T. Cox
Project Chemist

3334 Victor Court • Santa Clara, CA 95054 • Telephone (408) 437-2400 • Fax (408) 437-9356

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: PRA Group
Project: EL RANCHO INN/6718-02
Sample Matrix: Soil

Service Request: S9800556
Date Collected: 3/11/98
Date Received: 3/12/98

Total Metals
Lead

Prep Method: EPA 3050BM
Analysis Method: 6010A
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
B2-8.5	S9800556-001	5	1	3/20/98	3/20/98	ND	
Method Blank	S980320-MB	5	1	3/20/98	3/20/98	ND	

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: PRA Group
Project: EL RANCHO INN/6718-02
Sample Matrix: Water

Service Request: S9800556
Date Collected: 3/11/98
Date Received: 3/12/98

Metals
Lead

Prep Method: EPA 3005
Analysis Method: 7421
Test Notes:

Units: mg/L (ppm)
Basis: NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
B2	S9800556-002	0.005	1	3/19/98	3/23/98	0.030	
Method Blank	S980319-MB	0.005	1	3/19/98	3/23/98	ND	

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: PRA Group
Project: EL RANCHO INN/6718-02
Sample Matrix: Soil

Service Request: S9800556
Date Collected: 3/11/98
Date Received: 3/12/98

BTEX, MTBE and TPH as Gasoline

Sample Name: B2-8.5
Lab Code: S9800556-001
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	3/14/98	3/15/98	ND	
Benzene	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Toluene	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	3/14/98	3/15/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: PRA Group
Project: EL RANCHO INN/6718-02
Sample Matrix: Soil

Service Request: S9800556
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S980314-SB1
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	3/14/98	3/15/98	ND	
Benzene	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Toluene	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	3/14/98	3/15/98	ND	
Methyl-tert-butyl ether	EPA 5030	8020	0.05	1	3/14/98	3/15/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: PRA Group
Project: EL RANCHO INN/6718-02
Sample Matrix: Water

Service Request: S9800556
Date Collected: 3/11/98
Date Received: 3/12/98

BTEX, MTBE and TPH as Gasoline

Sample Name: B2
Lab Code: S9800556-002
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	3/13/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	3/13/98	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	PRA Group	**Service Request:**	S9800556
Project:	EL RANCHO INN/6718-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX, MTBE and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	S980313-WB1	Basis:	NA
Test Notes:			

Analyte	**Prep Method**	**Analysis Method**	**MRL**	**Dilution Factor**	**Date Extracted**	**Date Analyzed**	**Result**	**Result Notes**
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	3/13/98	ND	
Benzene	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Toluene	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	3/13/98	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	3/13/98	ND	

1S22/020597p

APPENDIX A

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	PRA Group	**Service Request:**	S9800556
Project:	EL RANCHO INN/6718-02	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	NA

Surrogate Recovery Summary
BTEX and TPH as Gasoline

Prep Method:	EPA 5030	Units:	PERCENT
Analysis Method:	8020 CA/LUFT	Basis:	NA

Sample Name	**Lab Code**	**Test Notes**	**Percent Recovery** 4-Bromofluorobenzene	a,a,a-Trifluorotoluene
B2-8.5	S9800556-001		105	75
Method Blank	S980314-SB1		103	77
CAS Acceptance Limits:			51-137	51-137

SUR2/020397p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: PRA Group
Project: EL RANCHO INN/6718-02
Sample Matrix: Water

Service Request: S9800556
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
BTEX, MTBE and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: 8020 CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 4-Bromofluorobenzene	Percent Recovery a,a,a-Trifluorotoluene
B2	S9800556-002		104	78
Method Blank	S980313-WB1		100	78
		CAS Acceptance Limits:	69-116	69-116

SUR2/020397p

Columbia Analytical Services M PC F

2059 Junction Avenue • San Jose, CA 95131 • (408) 437-2400 • FAX (408) 437-9356

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. S9800556 P.O.# ______ PAGE 1 OF 1

PROJECT NAME EL RANCHO INN, 6718-02

PROJECT MGR. ADRIANA CONSTANTINESCU

COMPANY PURCELL, RHOADES & ASSOC

ADDRESS 2504 TECHNOLOGY Drive

HAYWARD CA - 94545 PHONE (510) 732 9898

FAX (510) 732-0289

SAMPLER'S SIGNATURE A Constantinescu

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Volatile Organics GC/MS 624/8240/8260 (HCl)	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐ (HCl)	TPH as Gas/BTEX MTBE DHS LUFT / 8020 (HCl)	TPH as Diesel/HBHC DHS LUFT (NP)	Base/Neu/Acid Organics GC/MS 625/8270 (NP)	Pesticides / PCBs 608/8080 (NP)	TRPH - 418.1 (HCl)	Oil and Grease Method (HCl)	Metals (total or dissolved) List Below LEAD (HNO_3)	pH, Cond, Cl, SO_4, F, TDS, TSS Alk, NO_3, NO_2 (circle) (NP)	NH_3-N, COD, Total-P, TKN, NO_3 / NO_2 (circle) (H_2SO_4)	Total Organic Carbon TOC (H_2SO_4)	Total Phenols (H_2SO_4)	Cyanide (NaOH)			REMARKS
B2-0.5	3-11-98	8:50am	1	soil	1			✓						✓								
B2	3-11-98	9:45am	2	water	5			✓						✓								Container Preserved #4 VOAs for 556-2

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature A Constantinescu	Signature [signature]	Signature	Signature
Printed Name ADRIANA CONSTANTINESCU	Printed Name [illegible]	Printed Name	Printed Name
Firm PURCELL, RHOADES & ASSOC.	Firm CAS	Firm	Firm
Date/Time 3-12-98 / 10:50am	Date/Time 3-12-98 10:50 am	Date/Time	Date/Time

TURNAROUND REQUIREMENTS

___ 1 day ___ 2 day ___ 3 day

___ 5 day ___ Other

✓ Standard (10 working days)

Results Due 3/24/98

REPORT REQUIREMENTS

___ I. Routine Report

___ II. Report (includes MS. MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ MDLs/PQLs/Trace I

___ Electronic Data Deliverables

RELINQUISHED BY:	RECEIVED BY:
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

S[redacted] Via/[redacted]ing #

SAMPLE RECEIPT: Condition ______ Custody Seals ______

SPECIAL INSTRUCTIONS/COMMENTS:

Circle which metals are to be analyzed:

Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn As Pb Se Tl Hg

Soil and water samples were held in a dedicated refrigerator at the PRA's office.

A Constantinescu

Storage: R11/D3

APPENDIX C
SAN MATEO COUNTY ENVIRONMENTAL HEALTH PERMIT

SAN MATEO COUNTY DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH SERVICES DIVISION

PERMIT NO. 14223

MW-045-98

ENVIRONMENTAL PERMIT HEALTH

FEE CATEGORY 2010 SOIL BORINGS/VADOSE/VAPOR/MONITORING WELLS

ORDINANCE NO. 03101

DATE ISSUED 02/17/98 EXP. DATE 05/17/98 ISSUED BY: TANYA H-M

ENVIRONMENTAL HEALTH SPECIALIST

ISSUED TO

OWNER:
J B WILMS TRUST ET AL
1100 EL CAMINO RL
MILLBRAE 94030

CONTRACTOR:
PURCELL RHOADES & CO
2504 TECHNOLOGY DR
HAYWARD 94545

CONSULTANT: ACCESS SOIL DRILLING/L.BACHMAN

APN/CN ______ CT AMOUNT PAID: 88.00

TERMS AND CONDITIONS

CONSTRUCT SOIL BORINGS (1) (GWP)

LOCATION: 1100 EL CAMINO RL, MILLBRAE

THIS PERMIT IS NONTRANSFERABLE AND MUST BE ON SITE.

Best Western
EL RANCHO INN

1100 El Camino Real • Millbrae, CA 94030 • 1-415-588-2912
Adjacent San Francisco Airport

WORLDWIDE LODGING

May 24, 1988

Paul Dana
San Mateo County Dept.
of Health Services
590 Hamilton St.
Redwood City, CA 94063

Dear Mr. Dana:

Enclosed is the sampling report for the gas tanks we had removed from the property.

Sincerely,

John Wilms
Corporate Officer

Enclosed

BLAINE
TECH SERVICES INC.
P.O. BOX 5745
SAN JOSE, CA 95150
(408) 723 3974

June 22, 1987

John Wilms
1100 El Camino Real
Millbrae, CA 94030

Re: Field sampling at

EL RANCHO INN
1100 EL CAMINO REAL
MILLBRAE, CA

JUNE 8, 1987

SAMPLING REPORT

Field sampling was undertaken in accordance with State and local enforcement agency standards and requirements for objective analytical information on the levels of residual contaminants found outside the primary containment structure. This project concerned the following:

SAMPLING WAS CONDUCTED IN ORDER TO DETERMINE THE FEASIBILITY OF ABANDONMENT-IN-PLACE OF TWO UNDERGROUND STORAGE TANKS

Type -- two 1,000 gallon gasoline

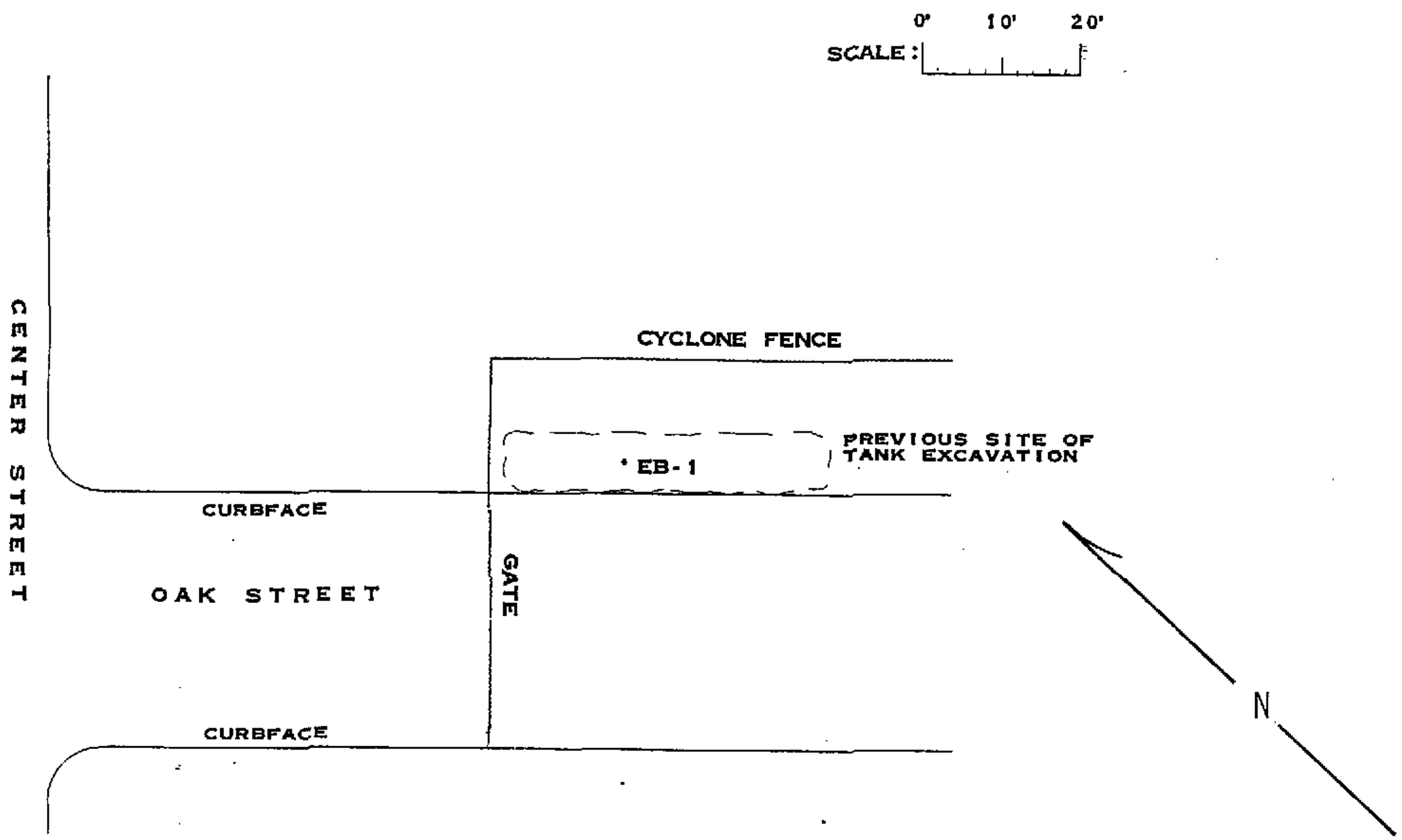
Sampling was performed in accordance with approved methodology at the locations shown on the accompanying site diagram. Additional information is presented on the diagram including our field sampling designations and the lab identification numbers which reference the analytical results which will be found in the separate laboratory report. Sample material was collected in special containers appropriate to the type of analysis intended. Sample containers were sealed, chilled, and transported to the laboratory with standard chain of custody records maintained at each transmittal. This sampling report, the chain of custody, and the analytical report comprise the formal documentation of the sampling conducted during this phase of work at the site.

REPORTAGE

Submission to the Regional Water Quality Control Board and the local regulatory/enforcement agency should include copies of the sampling report, the chain of custody, and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.

MAP REF: THOMAS BROS.
SAN MATEO COUNTY
P. 26 C-5

LEGEND: EB = EXPLORATORY BORE



#1 WATER SAMPLE FROM EXPLORATORY BORE EB-1 AT 9'
ANALYSIS FOR TOTAL HYDROCARBONS (THC) AS GASOLINE AND BENZENE, TOLUENE, AND XYLENES (BTX) AT SEQUOIA ANALYTICAL LABORATORY
SEQUOIA LAB NO. 7060507

SAMPLING PERFORMED BY
RICHARD C. BLAINE
DIAGRAM PREPARED BY
BRENT E. ADAMS

BLAINE
TECH SERVICES INC.
P.O BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

PROJECT NUMBER: 87159B2

SITE ADDRESS:
BEST WESTERN EL RANCHO INN
1100 EL CAMINO REAL
MILLBRAE, CALIFORNIA

PLEASE INCLUDE PROJECT NUMBER AND SITE ADDRESS ON LAB REPORTS AND INVOICES

TURN-AROUND ROUTINE RESULTS BY ____ LAB USED SEQUOIA

BILLING
( ) Bill Blaine Tech Services
( ) BILL

SPECIAL INSTRUCTIONS
FOLLOW REGION 2 RWQCB GUIDELINES ON ANALYTICAL PROCEDURES FOR GASOLINE (TPH) AND (BTX)

I.D.	TYPE	ANALYSIS TO DETECT	LAB #	LAB RESULTS
#1	WATER	GAS AND BTX		

Field sampling completed 3:29 AM/PM 6-8-87 performed by [signature]

RELEASED BY	ACCEPTED BY
6:19 AM/PM 6-8-87 [signature]	6:20 AM/PM 6-8-87 [signature]
__:__ AM/PM - -87	__:__ AM/PM - -87
__:__ AM/PM - -87	__:__ AM/PM - -87

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 06-08-87
Date Received: 06-08-87
Date Reported: 06-18-87

BTS #87159-B2

Sample Number

7060507

Sample Description

Water #1
Best Western-El Rancho Inn at
1100 El Camino Real in
Millbrae, CA

ANALYSIS

	Detection Limit ppb	Sample Results ppb
Total Hydrocarbons as Gasoline	50	850000
Benzene	0.5	4400
Toluene	0.5	30000
Xylenes	0.5	8400

NOTE: Analysis was performed using EPA method 602.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

jao

SAN MATEO COUNTY DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH SERVICES DIVISION

PERMIT NO. 14223

MW-045-98

ENVIRONMENTAL HEALTH PERMIT

FEE CATEGORY 2010 SOIL BORINGS/VADOSE/VAPOR/MONITORING WELLS

ORDINANCE NO. 03101

DATE ISSUED 02/17/98 **EXP. DATE** 05/17/98 ISSUED BY: TANYA H-M

ENVIRONMENTAL HEALTH SPECIALIST

ISSUED TO

OWNER:
J E WILMS TRUST ET AL
1100 EL CAMINO RL
MILLBRAE 94030

CONTRACTOR:
PURCELL RHOADES & CO
2504 TECHNOLOGY DR
HAYWARD 94545

CONSULTANT: ACCESS SOIL DRILLING/L.BACHMAN

APN/CN **CT** AMOUNT PAID: 88.00

TERMS AND CONDITIONS

CONSTRUCT SOIL BORINGS (1) (GWP)

LOCATION: 1100 EL CAMINO RL, MILLBRAE

THIS PERMIT IS NONTRANSFERABLE AND MUST BE ON SITE.

ALLOW A MINIMUM OF FIVE WORKING DAYS FOR PROCESSING

SUBSURFACE DRILLING APPLICATION

ENVIRONMENTAL HEALTH DIVISION
SAN MATEO COUNTY DEPARTMENT OF HEALTH SERVICES
590 HAMILTON ST, REDWOOD CITY, CA 94063
Voice (650) 363-4305; Fax (650) 599-1071

Date Issued 1-30-98
Permit #
Fee $88.00
~~Receipt#~~ CK#0007967
Assign To: ______

SAN MATEO COUNTY ENVIRONMENTAL HEALTH
JAN 30 1998
RECEIVED

PURPOSE OF APPLICATION: ☐ MONITORING WELL INSTALLATION ☐ MONITORING WELL DESTRUCTION ☐ GW EXTRACTION ☑ CONSTRUCT SOIL BORINGS ☐ VAPOR EXTRACTION ☐ AIR SPARGING ☐ VADOSE

NO. OF WELLS ______ NO. OF BORINGS 1

WELL/BORING LOCATION:
Business Name: EL RANCHO INN ASSESSOR'S PARCEL# 02[illegible]
Address 1100 EL CAMINO REAL City,State,ZIP MILLBRAE, CA 94030
Well/Boring # B-1

PROPERTY OWNER:
Name: J E. WILMS TRUST Et. AL Contact Person JOHN WILMS
Address: 1100 EL CAMINO REAL City,State,ZIP MILLBRAE, CA 94030
Telephone # (650) 588-800

WELL/BORING OWNER: (IF DIFFERENT FROM PROPERTY OWNER)
Name: ______ Contact Person ______
Address: ______ City,StateZIP ______
Telephone # ______

DRILLING COMPANY NAME: ACCESS SOIL DRILLING ContactPerson LARRY BACHMAN
Address: 1306 SOUTH DELAWARE STREET City,State,ZIP SAN MATEO, CA-94402
Telephone # (650) 994 3771 DRILLERS LICENSE # C-57 # 620540

CONSULTANT COMPANY NAME: PURCELL, RHOADES AND ASSOCIATES Contact Person ADRIANA CONSTANTINESCU
Address: 2504 TECHNOLOGY Drive City,State,ZIP HAYWARD, CA 94545
Telephone # (510) 732-9890 x127

[signature] CE# 16691
Signature of Responsible Professional Registration No. of RG/PE/CEG

Depth of Proposed Wells/Borings: 15 Drilling Method: ______

Purpose of Drilling: ☑ County Groundwater Protection Program ☐ Exploration Studies (PSA) ☐ Title 22 Requirements ☐ Geotechnical

Well/Boring is to be Constructed in: ☐ A Public Sidewalk ☐ A Roadway ☐ Public Property ☐ Private Property ☐ Refuse

Well/Boring Information: Well Diameter: 6" Slot Size N/A
Gravel Pack Size: N/A Est Screen Interval Depth: N/A
Development Method (proposed) N/A
Planned Drilling Date: 2-~~10~~-98 (Required 72 working day hours confirmation)

Certification by Well/Boring Construction / Destruction , Owner/Agent and Driller/Agent:
I certify that this application is correct to the best of my knowledge. I certify that the well/boring will be constructed in compliance with the conditions of this permit (see reverse), the San Mateo County Ordinance and the State Water Well Standards. It is my responsibility as the well/boring owner/agent to notify the County of any changes in the purpose of this well/boring from that which is indicated on this application.

☐ I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH THIS PERMIT IS BEING ISSUED, I SHALL NOT EMPLOY ANY PERSON IN ANY MANNER SO AS TO BECOME SUBJECT TO THE WORKMEN'S COMPENSATION LAWS OF CALIFORNIA OR ☑ I CERTIFY THAT I HAVE WORKMEN'S COMPENSATION COVERAGE.

[signature] 1-28-92 AND A Constantinescu 1-28-92
OWNER/AGENT DATE DRILLER/AGENT DATE

REVISED12/08/97

SUBSURFACE DRILLING APPLICATION

Upon review of the information on this application and submitted workplan and subject to approval noted below, a permit will be issued allowing owner/agent driller/agent to construct the described well/boring. Permission to mobilize may be withheld until a field check verifies all statements made on application by Permittee and is also subject to the "General" and "Special" Conditions stated below.

In addition to the well location map included in the workplan, attach a copy to the permit. The well/boring location map shall include the following:

1. Sketch well location to scale, show dimension to nearest foot
2. Show a minimum of two dimensions at right angles. Dimensions shall be from the centerline of the closest named street and or property lines. These dimensions may be estimated and subsequently finalized in the report of findings.
3. North Arrow, existing site features, existing wells and any other pertinent information.

GENERAL CONDITIONS:

A. Construction under this permit is subject to any instructions by a Health Department representative relative to the "Standards for the Construction of Wells in San Mateo County" and the State Water Well Standards.
B. Permit may be voided before work begins if field check reveals any misrepresentation under "well location" of the submitted workplan.
C. The permit is valid only for the purpose specified herein. No change in construction procedure as prescribed in the workplan and in the special conditions below will be allowed except upon written permission of the County.
D. Permittee shall assume entire responsibility for all activities and uses under the permit and shall indemnify, defend and save the County of San Mateo, its' officers, agents and employees free and harmless from any and all expense, cost or liability in connection with or resulting from the exercise of the permit including, but not limited to property damage, personal injury and wrongful death.
E. The wells may not be used for domestic water supplies unless separately approved by the Office of Environmental Health.
F. Permit will be automatically canceled if not exercised or if an extension is not requested by Permittee within 90 calendar days of above date.
G. Driller is to complete State DWR Form 188 and mail original to San Mateo County Environmental Health within 30 days of completion of well construction.
H. For the construction of water producing wells a Permittee must be a licensed water well drilling contractor unless the work is to be done by the landowner or employees of the landowner. (See Business & Professions Code 7026.3, 7028).
I. Dry holes and/or soil borings must be grouted within one week of drilling.
J. Well destruction shall be done in accordance with State and County Standards.
K. All workplans and reports need to conform to County Groundwater Protection Program guidelines as well as Regional Water Quality Control Board guidelines and the State Water Well Standards.
L. If contamination is discovered, verbal notification to the county is required within 48 hours. A written report is required within 30 days.
M. All wells are to be surveyed to Mean Sea Level.

SPECIAL CONDITIONS:

____

____

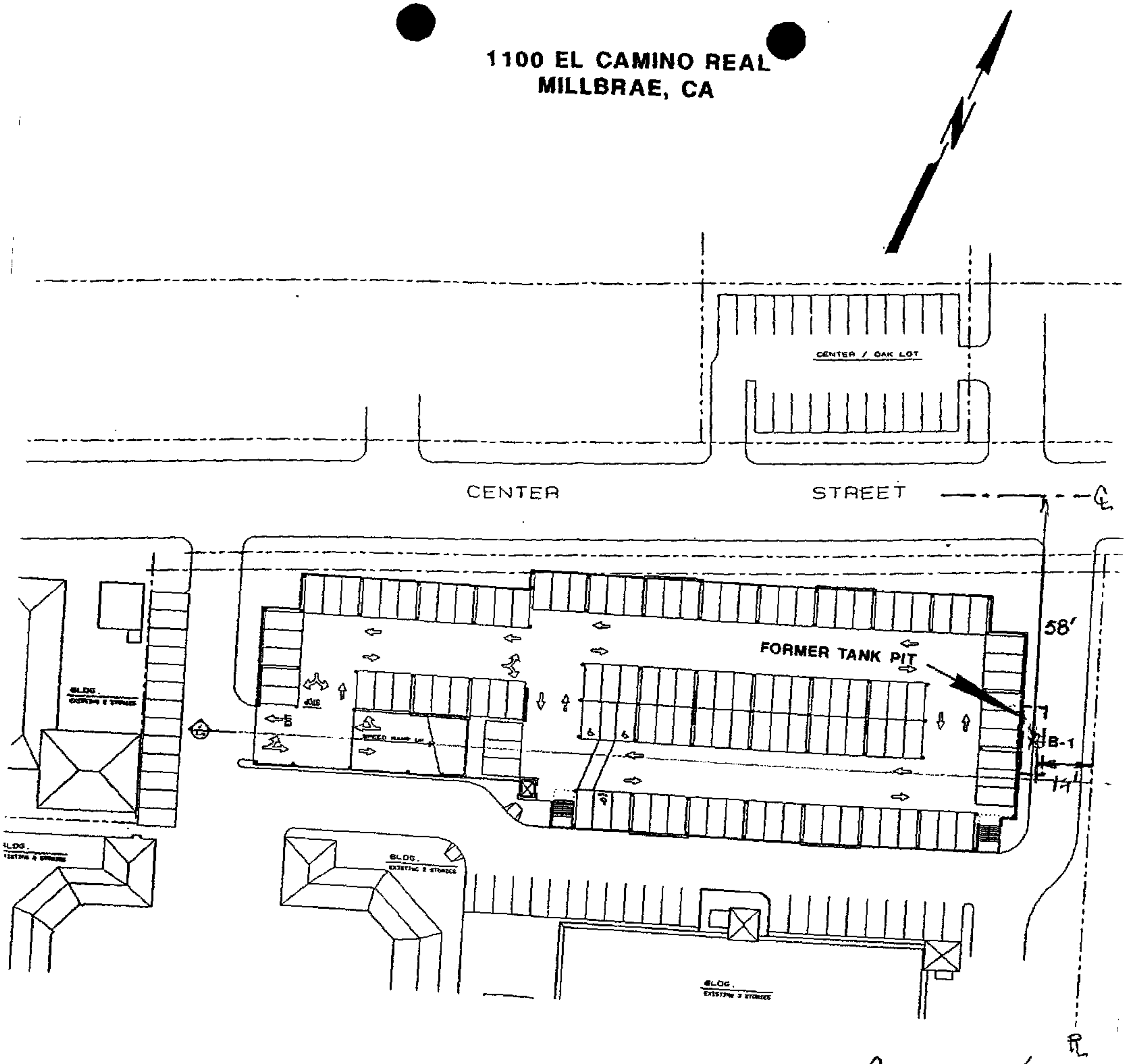
____

____

Approved: T. MacDall ______________________ Date: 2/10/98

12/08/97

1100 EL CAMINO REAL
MILLBRAE, CA



⊕B-1 PROPOSED SOIL BORING

FIGURE 1

Purcell, Rhoades & Associates

San Mateo - Bureau of Environmental Health
SMBEH Coversheet

R	O	0	0	0	1	5	9	4

Section (1-7)	4
Month (MM) **(only for section 4 docs)**	04
Day (DD) **(only for section 4 docs)**	21
Year (YYYY) **(only for section 4 docs)**	1999

SAN MATEO COUNTY GROUNDWATER PROTECTION PROGRAM
CASE CLOSURE
MEMORANDUM

TO: File

FROM: Groundwater Protection Program staff

DATE: **April 21, 1999**

SUBJECT: **Site no. 990021**
Best Western El Rancho Inn
1100 El Camino Real
Millbrae, California 99430

I. BACKGROUND HISTORY OF THE CASE

Two 1,000-gallon gasoline underground storage tanks (USTs) were previously located on the subject site. On February 13, 1987, Oil Heat Engineering removed the two USTs from the subject site and Livermore Auto Sales and Salvage, Inc. disposed them under manifest. ***The tank removal procedure has not been documented.*** Two small holes about ½ an inch to ¾ of an inch were observed on the underside of both the removed USTs. A small amount of floating product was observed in the excavation pit, which had accumulated rain water. On June 8, 1987, Blain Tech Services drilled a boring in one of the tank excavations and collected a groundwater sample at 9 feet bgs. Groundwater was encountered at 7 feet and 2 inches below ground surface (bgs). The analytical results of the groundwater sample analyzed by Seqouia Analytical Laboratory were as follows:

Table 1

Sample	TPH-gasoline	TPH-diesel	Benzene	Toluene	Ethyl Benzene	Xylenes
Water	850000 ppb	N/A	4400 ppb	30,000 ppb	N/A	8,400 ppb

N/A Not Analyzed

Soil samples were not collected and analyzed. *It is not known if the contaminated groundwater was pumped and disposed appropriately.* The excavated soil was subsequently used as backfill. On March 11, 1998, Purcell, Rhoades & Associates advanced a soil boring up to a depth of 25 feet bgs, within 2-3 feet from the former locations of the removed USTs. Please refer to figure 2 for details of the soil boring location. Groundwater was encountered at 9 feet bgs. A soil sample was collected at 8.5 feet bgs and a grab groundwater sample was also collected. Both samples were analyzed by Columbia Analytical Services, Inc. The respective analytical results were as follows:

Table 2

Sample	TPH-gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Lead
Soil	<1.0 ppm	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.005 ppm	<0.05 ppm	<5 ppm
Water	<50 ppb	<0.5 ppb	<0.5 ppb	<0.5 ppb	<0.5 ppb	<3.0 ppb	0.03 ppb

The boring was subsequently grouted.

The lithology of the subject site is predominantly comprised of sand. The hydraulic gradient has not been defined but is likely to be east, in the direction of San Francisco Bay.

The status of the location and quantity of drill cuttings is not known.

Please refer to figure 1 and 2 for details of the location of the site, site-layout, and the soil boring location.

II. INVESTIGATIVE METHODS

The investigative methods used to assess the contamination at the subject site included soil and groundwater sampling and analysis, involving borehole drilling.

(a) A California modified split spoon sampler driven 18 inches by a 140 pound hammer falling 30 inches as a minimum from total depth of boring was used to collect soil samples from boreholes. Soil samples were collected following established County guidelines.

(b) Grab groundwater samples were collected utilizing bailers. Groundwater sampling was conducted in compliance with established County sampling protocols.

(c) Certified laboratory, chain of custody procedures, holding times, sampling preparation methods, sample preservation and detection methods were followed as pursuant to established County protocols.

(d) Method used to measure free product thickness that was encountered during tank excavations has not been documented. Free product was not encountered during the subsequent sampling episode.

(e) The hydraulic gradient has not been defined but is likely to be in the eastern direction, towards the Bay.

III. EXTENT OF SOIL AND GROUNDWATER POLLUTION

The initial groundwater sample collected from the tank excavation on June 8, 1987 indicated high contamination levels in the groundwater collected at 9 feet bgs. Please refer to table 1 of Section I for the details of the analytical results. The lateral and vertical extent of soil and groundwater contamination was not defined. After a period of approximately 11 years, on March 11, 1998, soil and groundwater samples were collected and analyzed from within 2-3 feet from the worst affected location of the subject site, namely, the backfill of the excavated USTs. A soil sample was collected at 8.5 feet bgs and the groundwater sample was a grab sample. The analytical results indicated non-detect levels for all contaminants analyzed except lead in the groundwater was 0.030 ppb. The analytical results hence indicate that the contaminants no longer exist in the soil and groundwater of the subject site.

IV. LOCAL AND REGIONAL HYDROGEOLOGY

The local and regional hydrogeology has not been documented. The San Francisco Bay is located approximately 1 mile east of the subject site. The lithology of the subject site is comprised of an upper stratum of well graded, light brown clayey sand extending to about 7.5 feet bgs and is most likely to be backfill. Sands with 5 to 10 % fines and of medium density extend from 7.5 to 17 feet bgs. A well graded, dense, fine to medium sand stratum extends from 17 to 24 feet bgs, followed by fine to medium, well graded clayey sand that extends to the maximum explored depth of 25 feet bgs.

The hydraulic gradient has not been determined. However, based on the gradient trends in the area of the subject site, the gradient is likely to be in the eastern direction, towards the Bay.

V. BENEFICIAL USES

The Basin Plan for San Francisco Bay currently defines the aquifers in San Mateo County to be suitable for municipal supply, industrial supply and agricultural uses. It is likely that the groundwater flowing below the subject site discharges into San Francisco Bay. Therefore, any potential surface water impacts would be on San Francisco Bay.

A well survey was not conducted and the factors affecting long-term fate of contaminants have not been addressed.

VI. REMEDIATION ACTIVITIES

The source of the contamination, the USTs were removed and properly disposed offsite. Soil and groundwater sampling and analysis were conducted to assess impacts on soil and groundwater on the subject site. Groundwater sampling was conducted initially in June 8, 1987 and the analytical results indicated high contamination levels in the groundwater. Subsequent soil and groundwater sample collection was conducted after approximately 11 years, in March 11, 1998. Please refer to Tables 1 and 2 of Section I for details of the analytical results. The rationale for not undertaking any other remedial action in light of the high groundwater contamination levels indicated by the initial groundwater sample analysis, has not been addressed.

VII. REMEDIATION EFFECTIVENESS

Other than the removal of the USTs, and soil and groundwater sampling and analysis, other remediative action was not implemented. The analytical results of soil and groundwater sample analysis conducted in March 11, 1998 indicated non-detect levels of contaminants, except for lead in the groundwater. Please refer to table 2 in Section I for details of the respective analytical results. Considering the predominantly sandy lithology of the subject site, the relatively shallow groundwater level of approximately 7 feet bgs, and the close proximity of the site to the Bay (1 mile), it is possible that the groundwater contaminants migrated into the Bay over the period of 11 years between the two sampling episodes. It is also possible that the contaminants could have naturally attenuated over the 11-year period. The sandy lithology of the subject site that is generally inducive for natural attenuation, could have encouraged biodegradation of the groundwater contaminants.

VIII. CONCLUSION

Based upon the Region 2 Interim Guidance, this site meets the criteria of Low Risk Groundwater case as follows:

1. **The source has been removed.**
   The source of the contamination, the USTs, have been removed.

2. **The site has been adequately characterized.**
   The lateral and vertical extent of soil and groundwater contamination have been defined adequately. The analytical results indicate that hydrocarbon contaminants in the soil and groundwater in the vicinity of the excavation backfills, are at non-detect levels.

3. **The dissolved hydrocarbon plume is not migrating.**
   The analytical results indicate that a hydrocarbon plume does not exist.
4. **No water wells or other sensitive receptors are likely to be impacted.**
   Since the soil and groundwater sample analysis indicate that a hydrocarbon plume does not exist on the subject site, any wells or other sensitive receptors are unlikely to be impacted.

5. **The site presents no significant risk to human health.**
   The analytical results indicate that hydrocarbon contaminants in the soil and groundwater in the subject site are at non-detect levels. Lead was shown to exist in relatively low levels in

the groundwater. Based on the analytical results, the site presents no significant risk to human health.

6. **The site presents no significant risk to the environment.**
The analytical results indicate that hydrocarbon contaminants are at non-detect levels in the soil and groundwater of the subject site. Lead is present in relatively low levels in the groundwater. On the basis of the respective analytical results, the site presents no significant risk to the environment.

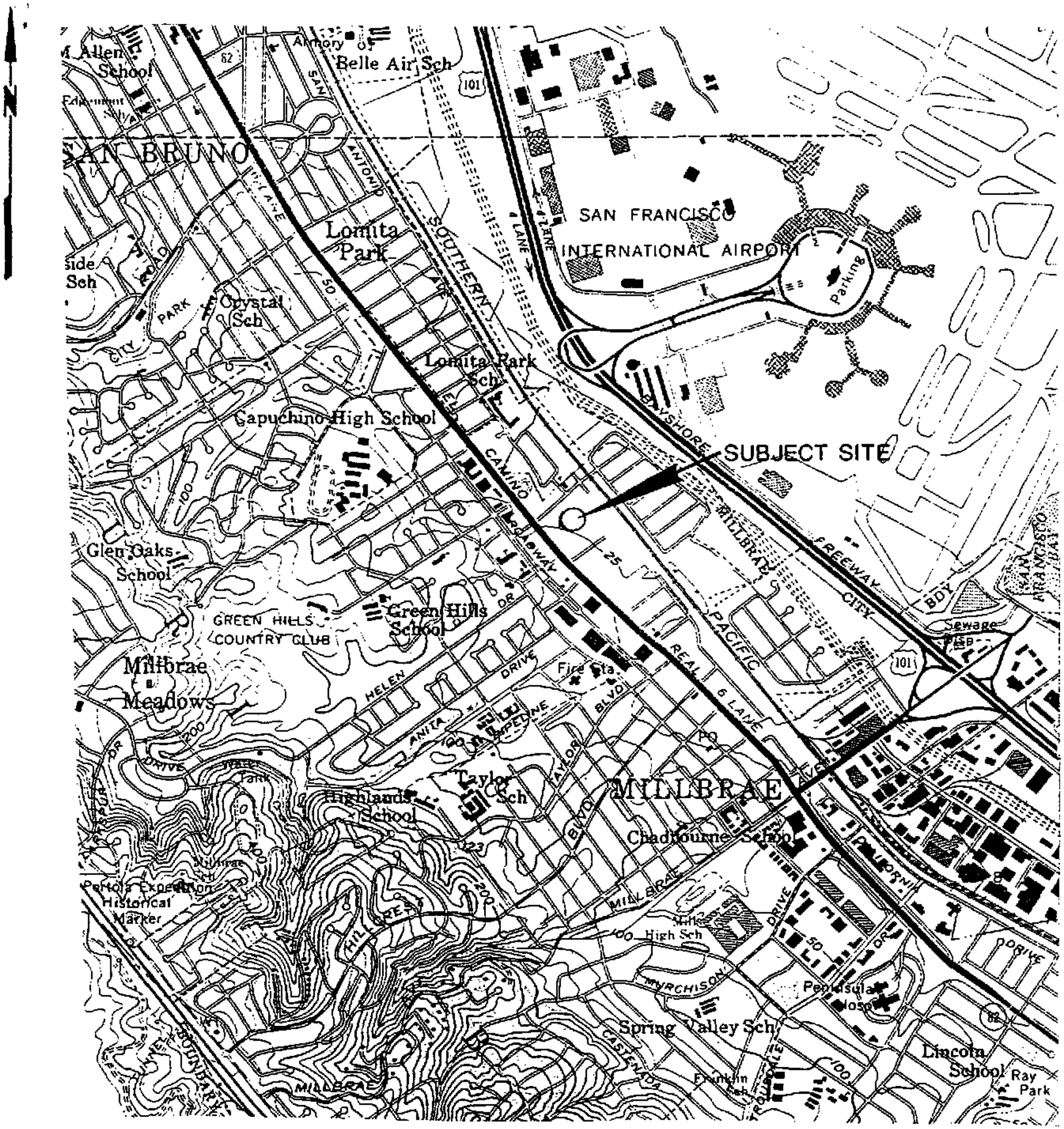
7. **Passive bio-remediation of remaining soil contamination over time is expected.**
Passive bio-remediation of any remaining soil and groundwater contamination is expected over time. The parameters for bio-remediation were not analyzed.

IX. RECOMMENDATIONS

Based on the investigation, and other information which is currently and actually known to this agency, we have determined that all appropriate response actions have been completed, all acceptable or remedial practice were implemented, and further investigation, remedial/removal action, or monitoring is not required at the site with regard to a release of hazardous waste or substance from the underground storage tanks located at the site. We have determined that a significant release of diesel and/or gasoline fuel has not occurred and the shallow waters have not been significantly impacted. San Mateo County Remedial Oversight Program staff have determined that the water quality objectives of the San Francisco Bay Regional Water Quality Control Board have been satisfied.

Srijesh
Srijesh Thapa, Haz-Mat Specialist I

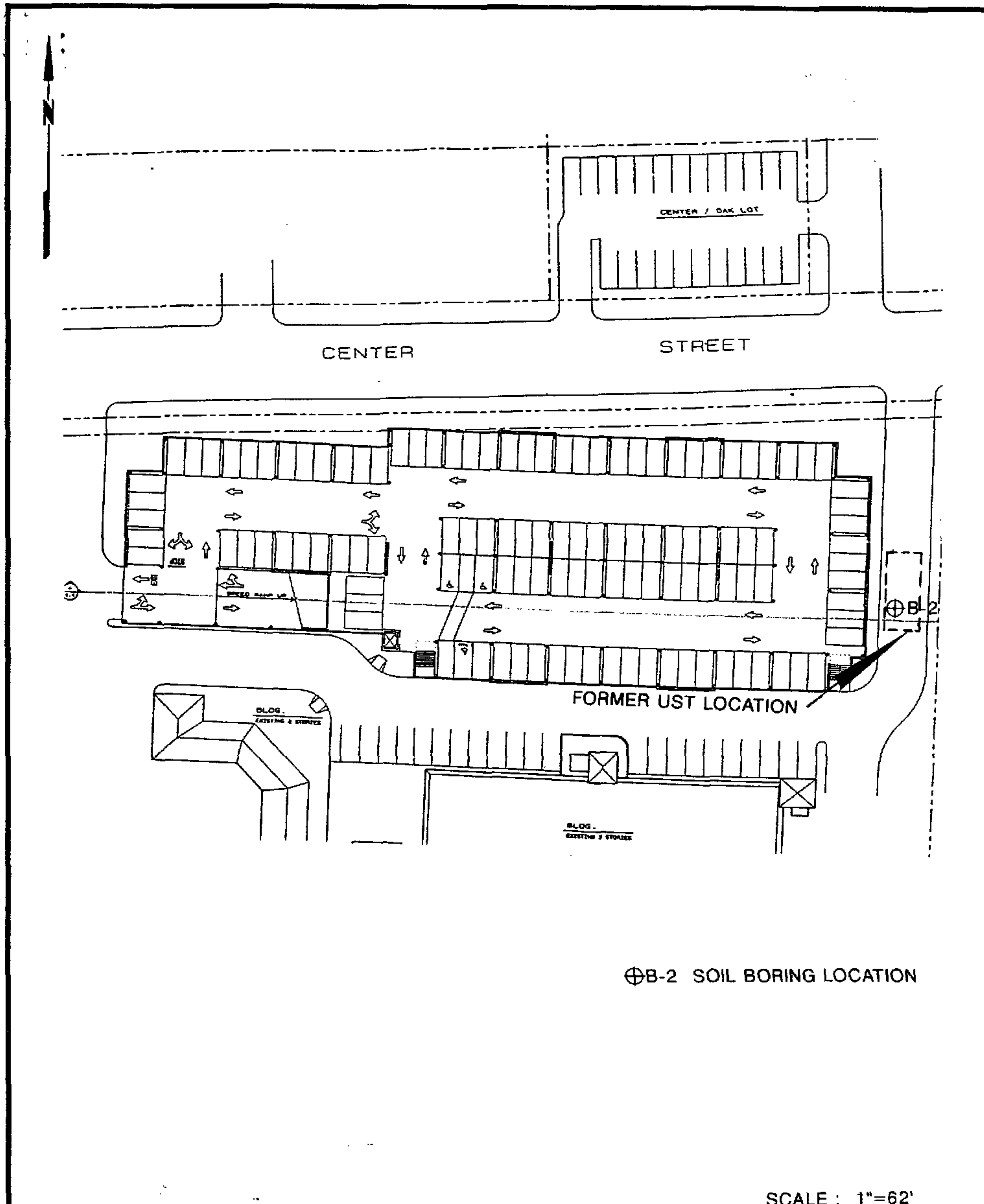
04/22/99
Date



SCALE 1:24,000

NOTES		
MAP SOURCE: USGS TOPOGRAPHIC MAP, MONTARA MOUNTAIN QUADRANGLE, 7.5 MINUTE QUADRANGLE, 1956, PHOTOREVISED 1980	DATE MARCH, 1998	Purcell, Rhoades & Associates Consultants in the Applied Earth Sciences
	JOB NO. 6718-02	
	DWG NO. 671802-1	SITE LOCATION MAP 1100 EL CAMINO REAL MILLBRAE, CALIFORNIA — FIGURE NO. 1
	DRAWN A CONSTANTINESCU	
	CHK'D A CONSTANTINESCU	
	APP'D DANIEL RHOADES	JOHN & PAUL WILMS — REV NO.

G:\PRA\6706-01\670801-1.DWG



NOTES
SITE PLAN SOURCE:
WATRY DESIGN GROUP'S SCHEMATIC DESIGN, "EL RANCHO INN PARKING STRUCTURE", SHEET 1 OF 1, JOB NO. 9770.

DATE	MARCH, 1998
JOB NO.	6718-02
DWG NO.	671802-2
DRAWN	A CONSTANTINESCU
CHK'D	A CONSTANTINESCU
APP'D	DANIEL RHOADES

Purcell, Rhoades & Associates
Consultants in the Applied Earth Sciences

SITE PLAN
1100 EL CAMINO REAL
MILLBRAE, CALIFORNIA

JOHN & PAUL WILMS

FIGURE NO. 2

REV NO.

Matthew Rodriquez
Secretary for
Environmental Protection

Department of Toxic Substances Control

Barbara A. Lee , Director
1001 I Street
P.O. Box 806
Sacramento , CA 958120806

Edmund G. Brown Jr.
Governor

EPA ID PROFILE

Map

ID Number:	CAC002871265	**Status:**	ACTIVE
Name:	35 CENTER STREET JOB	**Inactive Date:**	
County:	SAN MATEO	**Record Entered:**	7/28/2016 12:22:29 PM
NAICS:	N/A	**Last Updated:**	7/28/2016 12:22:29 PM

	Name	Address	City	State	Zip Code	Phone
Location	35 CENTER STREET JOB	35 CENTER ST	MILLBRAE	CA	940302006	
Mailing		1100 EL CAMINO REAL	MILLBRAE	CA	94030	
Owner	BEST WESTERN EL RANCHO INN & SUITES	1100 EL CAMINO REAL	MILLBRAE	CA	94030	7079659310
Operator/Contact	JOHN WILMS	1100 EL CAMINO REAL	MILLBRAE	CA	94030	7079659310

Based Only Upon ID Number: **CAC002871265**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
N/A	N/A	ACTIVE

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

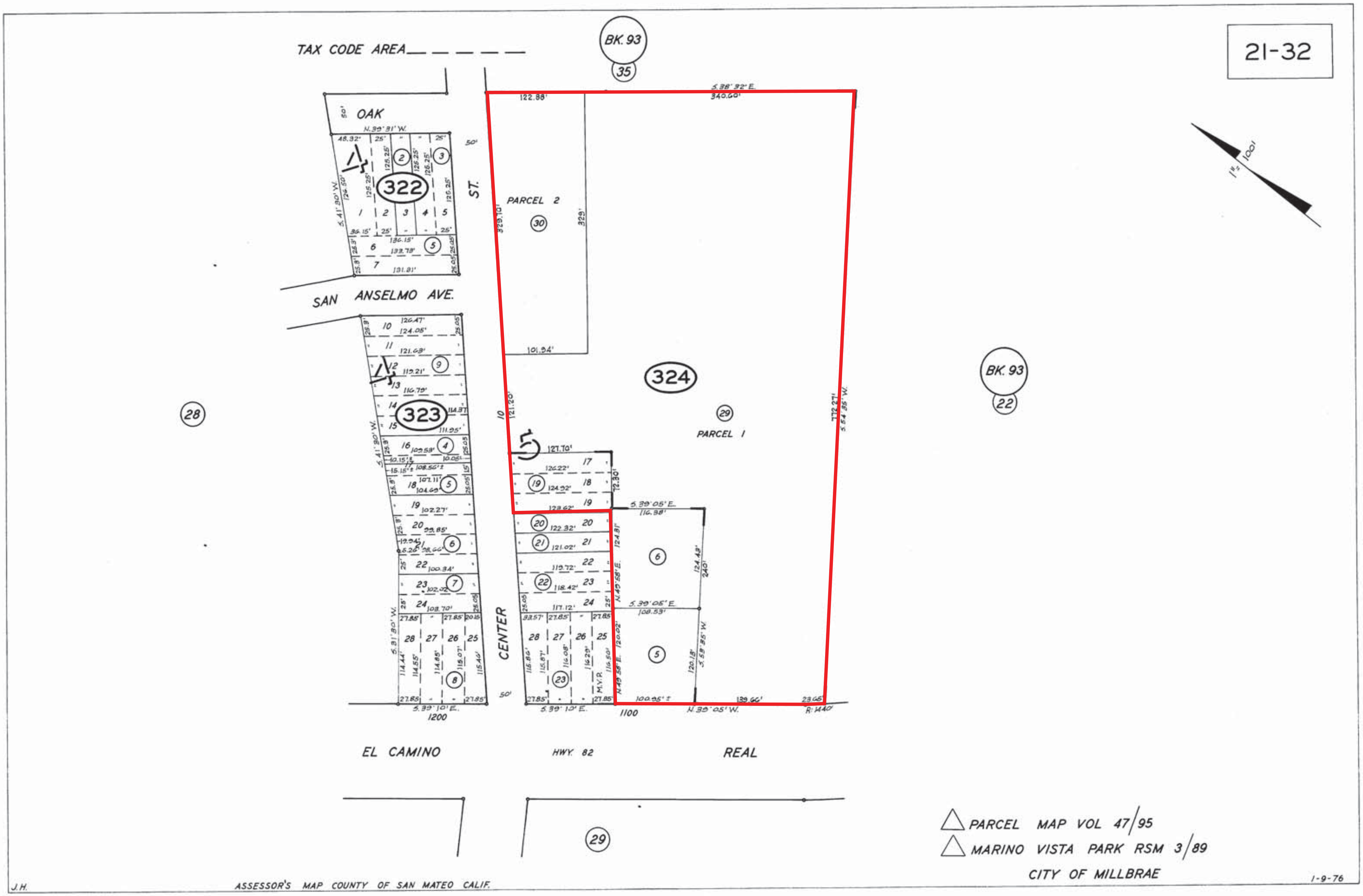
No Records Found

Non California Manifest Total Tonnage

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 10/13/2016



21-32
TAX CODE AREA
BK. 93
35
OAK
ST.
322
323
324
PARCEL 2
PARCEL 1
SAN ANSELMO AVE.
CENTER
BK. 93
22
28
EL CAMINO
HWY. 82
REAL
29
PARCEL MAP VOL 47/95
MARINO VISTA PARK RSM 3/89
CITY OF MILLBRAE
J.H.
ASSESSOR'S MAP COUNTY OF SAN MATEO CALIF.
1-9-76

APPENDIX F

QUALIFICATIONS

Clinton Look – Project Manager, Due Diligence Services

B.A. – Environmental Studies and Economics, University of California at Santa Cruz
EPA Accredited Asbestos Building Inspector
CA Certified Lead Sampling Technician

Mr. Look has over three years of experience in the environmental field. He provides project management to ensure ASTM compliance and satisfaction of client requirements for Phase I Environmental Site Assessments, Environmental Transaction Screens, Regulatory Database Reviews, and Historical Records Reviews.

Project experience for Mr. Look includes:

- Phase I Environmental Site Assessments
- Environmental Transaction Screens
- Regulatory Database Review
- Historical Records Review

In addition, prior to joining the environmental service industry, Mr. Look spent four years studying a diverse range of environmental disciplines including: ecology, physical and chemical environment, national environmental policy, and energy politics.

Richard D. Fehler – National Client Manager

B.S. – Zoology, University of California, Davis

California Registered Environmental Assessor (REA I)

Mr. Fehler has over twenty-five years of environmental management experience gained as an environmental consultant; in the chemical manufacturing industry; in the hazardous waste management industry; and as an environmental regulator. He specializes in all aspects of environmental due diligence, regulatory compliance and negotiations, hazardous waste management, and auditing. Mr. Fehler has also received training in Greenhouse Gas and Sustainability Verification.

Mr. Fehler has served as project principal on hundreds of projects with wide-ranging scopes, including peer reviews and desktop reviews; due diligence on large portfolios (200 sites+), as well as single assets; investigation and management of lead, asbestos, mold, and *Legionella*; investigation, remediation and management of contamination in groundwater, soil and soil vapor; regulatory compliance and auditing; and representing clients with regulators to negotiate site closure/No Further Action and/or to develop effective remediation strategies and budgets.

Project experience for Mr. Fehler includes:

- Multiple Site Due Diligence - Managed and designed projects for many large portfolios (100-plus) of varied properties spread across various states. The scopes of work frequently include Indoor Air Quality/mold issues, lead-based paint, asbestos, and radon testing. The design of appropriate Phase II sampling is frequently required to resolve and close issues.

- Environmental Compliance Reviews – Designed and managed many environmental compliance audits for single or multiple assets. Project activities usually involve inspections, interviews, reviewing environmental permits, past environmental reports, standard operating procedures, material safety data sheets (MSDS), and other information related to regulatory compliance in the areas of hazardous materials, hazardous and non-hazardous waste management, workplace health & safety, air permitting and emission reporting, waste water permitting and monitoring, storm water management, underground storage tanks, and aboveground storage tanks.

- Regulatory Negotiation – Managed many Phase II investigations conducted in response to regulatory requirements or to resolve issues and/or to obtain case closure or No Further Action. Represented clients with regulators to negotiate appropriate scopes of work and move projects to successful completion.

Appendix I
Environmental Noise Assessment

Environmental Noise Assessment

Anton Millbrae Development

Millbrae, California

BAC Job # 2017-089

Prepared For:

Anton Development Co.

Attn: Mr. Garrett Borges
1676 N. California Blvd., Ste. 250
Walnut Creek, CA 94596

Prepared By:

Bollard Acoustical Consultants, Inc.

Paul Bollard

Paul Bollard, President

Revised July 30, 2020

BOLLARD
Acoustical Consultants

CEQA Checklist

NOISE AND VIBRATION – **Would the Project Result in:**	**NA – Not Applicable**	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			**X**		
b) Generation of excessive groundborne vibration or groundborne noise levels?				**X**	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			**X**		

Introduction

The proposed Anton Millbrae project is a multi-family residential, hotel and retail development located at 1100 El Camino Real in Millbrae, California. The project site is bounded to the west by El Camino Real, to the north by Center Street and to the east by railroad tracks used extensively for Caltrain operations. Figures 1 and 2 show the project area and project site plan, respectively.

Due to the proximity of the proposed multi-family residences and hotel to El Camino Real, Center Street and the existing railroad tracks to the immediate east, Bollard Acoustical Consultants, Inc. (BAC) was retained by the project applicant to prepare a noise and vibration assessment for this project. Specifically, the purposes of this assessment are to quantify noise and vibration levels associated with these sources, and to compare those noise and vibration levels against the applicable City of Millbrae noise and vibration standards for new residential developments. This report also addresses noise exposure at the project site due to operations at San Francisco International Airport (SFO).

This report represents a revision to the February 22, 2018 noise study prepared for this project by BAC. The revisions to that report were the result of comments on that noise study made by ICF International (Jason Volk).

Noise & Vibration Fundamentals and Terminology

Noise

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard, and thus are called sound. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. Appendix A contains definitions of Acoustical Terminology. Figure 3 shows common noise levels associated with various sources.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighing network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels in decibels.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq})

over a given time period (usually one hour). The L_{eq} is the foundation of the Day-Night Average Level noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The Day-Night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. L_{dn}-based noise standards are commonly used to assess noise impacts associated with traffic, railroad and aircraft noise sources.

A single noise event is an individual distinct loud activity, such as a train passage, or any other brief and discrete noise-generating activity. Because most noise policies applicable to transportation noise sources are typically specified in terms of 24-hour-averaged descriptors, such as L_{dn} or CNEL, the potential for annoyance or sleep disturbance associated with individual loud events can be masked by the averaging process.

Extensive studies have been conducted regarding the effects of single-event noise on sleep disturbance, with the Sound Exposure Level (SEL) metric being a common metric used for such assessments. SEL represents the entire sound energy of a given single-event normalized into a one-second period regardless of event duration. As a result, the single-number SEL metric contains information pertaining to both event duration and intensity. Another descriptor utilized to assess single-event noise is the maximum, or L_{max}, noise level associated with the event. A problem with utilizing L_{max} to assess singe events is that the duration of the event is not considered.

There is currently no national consensus regarding the appropriateness of SEL criteria as a supplement or replacement for cumulative noise level metrics such as L_{dn} and CNEL. Nonetheless, because SEL describes a receiver's total noise exposure from a single impulsive event, SEL is often used to characterize noise from individual brief loud events.

Due to the wide variation in test subjects' reactions to noises of various levels (some test subjects were awakened by indoor SEL values of 50 dB, whereas others slept through indoor SEL values exceeding 80 dB), no universal criterion has been developed for environmental noise assessments.

Legend

(red line)	Approximate Project Border
# (triangle)	Long-Term Noise Measurement Site
# (circle)	Long-Term Vibration Measurement Site

N

Scale (feet)

0 100 200

Figure 1

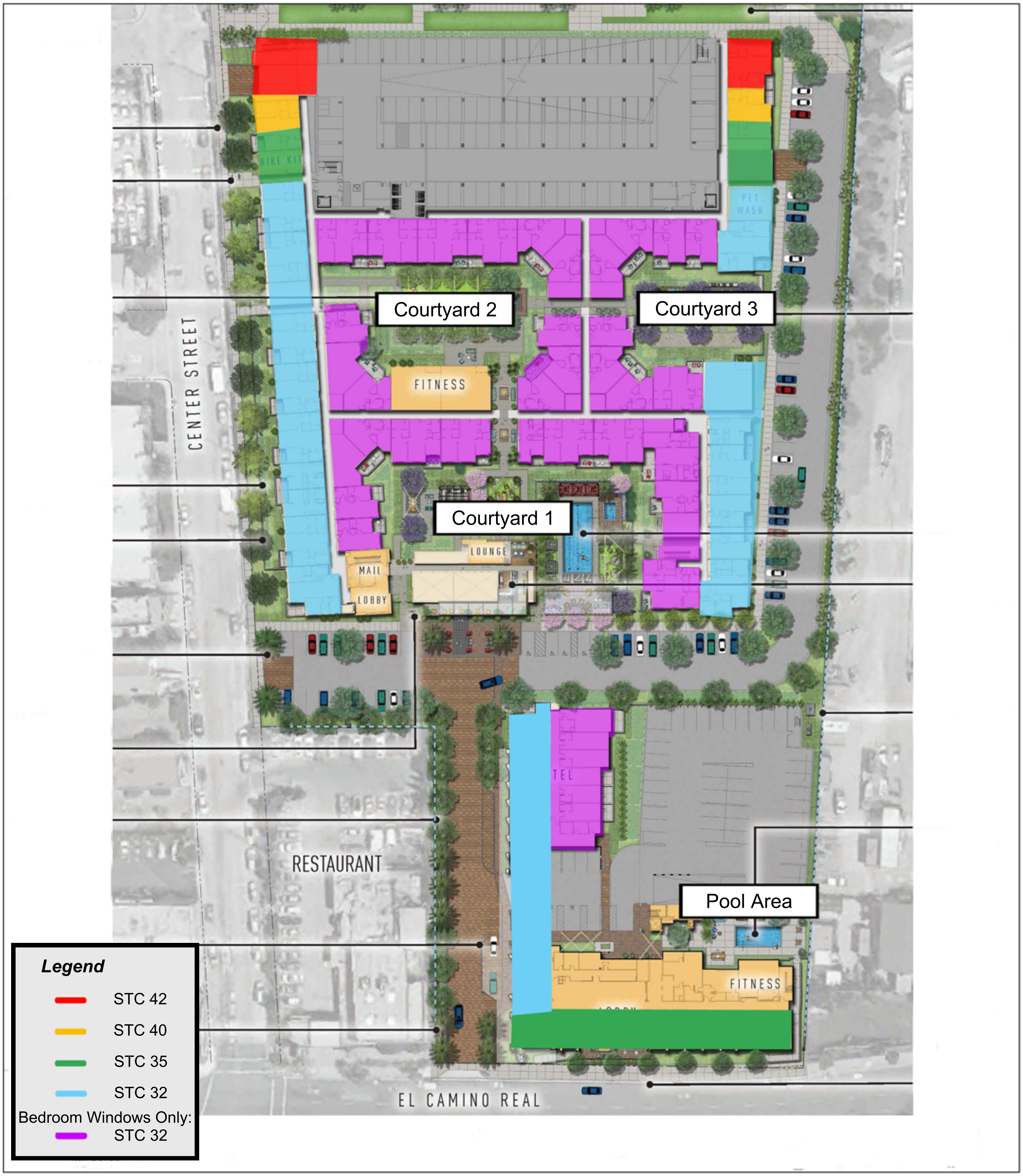
Project Area and Noise/Vibration Measurement Locations

Anton Millbrae - Millbrae, California

Figure 2A

Project Site Plan and Recommended Window Upgrades (All Floors)

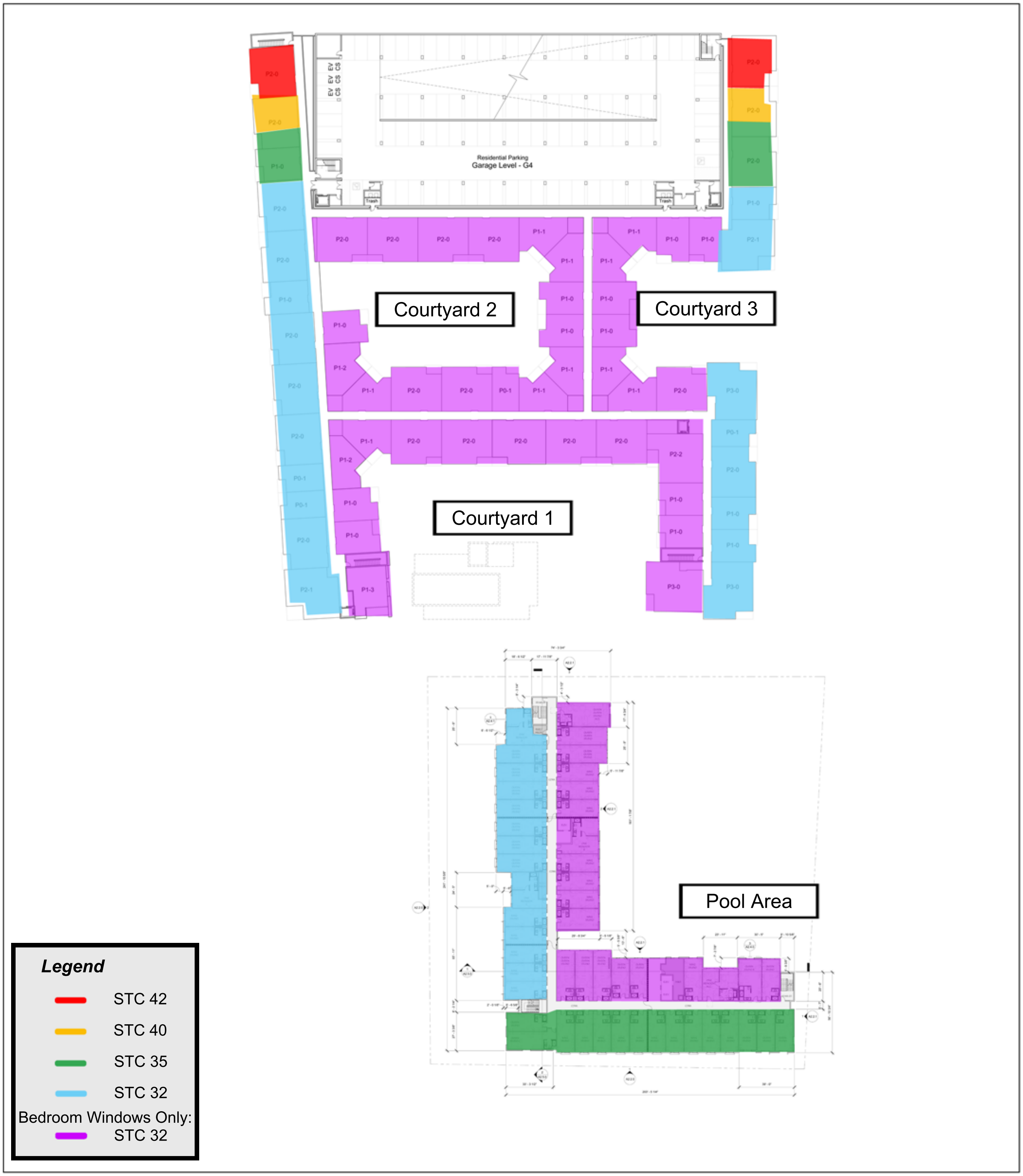
Anton Millbrae - Millbrae, California



BOLLARD Acoustical Consultants

Figure 2B

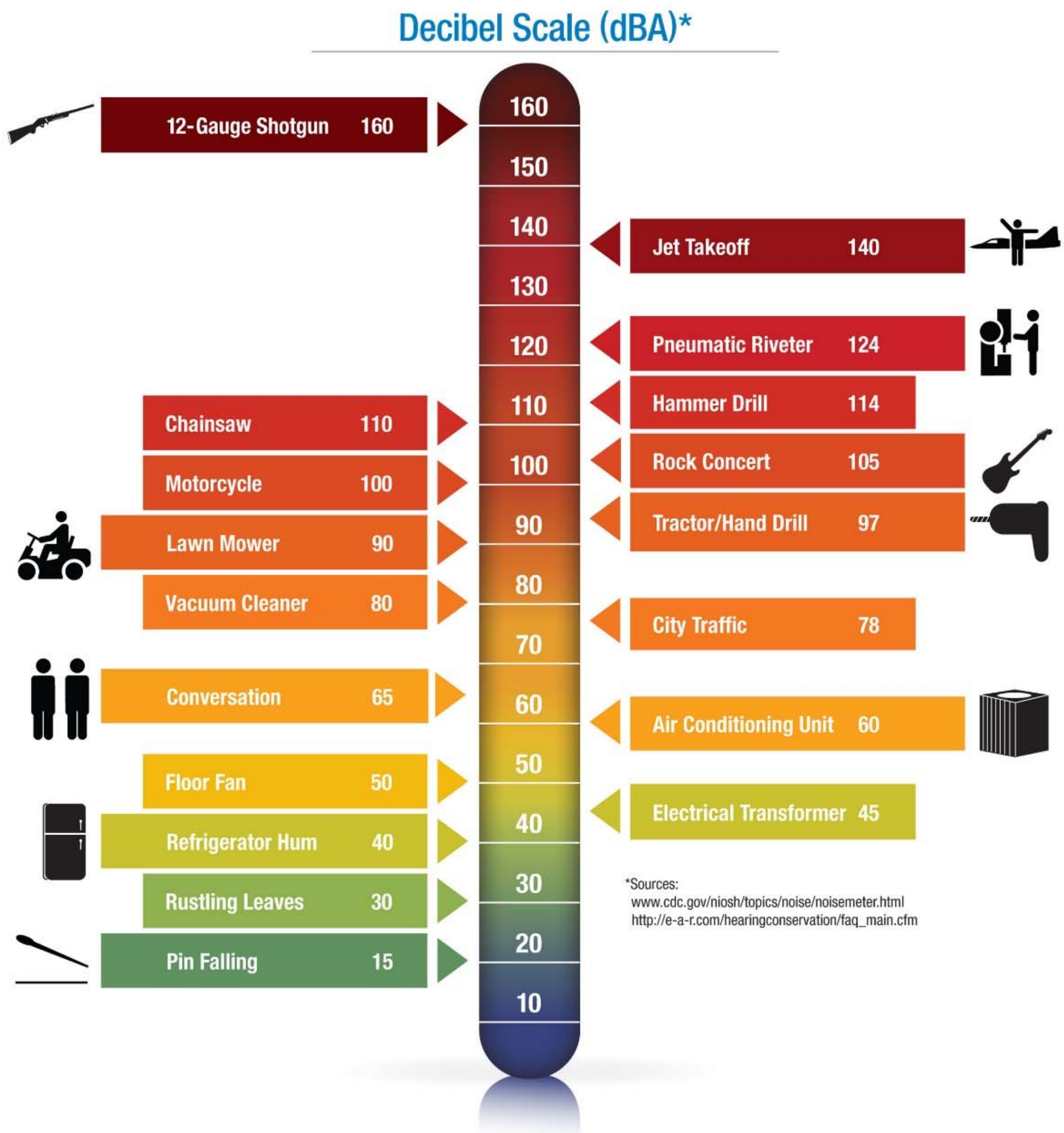
Project Site Plan and Recommended Window Upgrades (All Floors)
Anton Millbrae - Millbrae, California



BOLLARD
Acoustical Consultants

Scale (feet)
0 50 100

Figure 3
Noise Levels Associated with Common Noise Sources



Vibration

According to the Federal Transit Administration Noise and Vibration Impact Assessment Guidelines (FTA-VA-90-06), ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

Train wheels rolling on rails create vibration energy that is transmitted through the track support system into the ground, creating vibration waves that propagate through the various soil and rock strata to the foundations of nearby buildings. The vibration propagates from the foundation throughout the remainder of the building structure. The maximum vibration amplitudes of the floors and walls of a building often will be at the resonance frequencies of various components of the building.

Vibration can be described in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (inches/second) or RMS velocity in terms of VdB.

Criteria for Acceptable Noise and Vibration Exposure

City of Millbrae Noise Element

The City of Millbrae Noise Element (adopted November 24, 1998) contains noise policies for new development within the City. The policies applicable to this project are reproduced below.

NS2.1 **Land Use Compatibility Standards.** New development must meet acceptable exterior noise level standards. The normally acceptable noise standards for new land uses are established in the Noise and Land Use Compatibility Guidelines, as modified below:

(a) The goal for maximum outdoor noise levels in residential areas is an L_{dn} of 60 dB. This level is a requirement to guide the design and location of future development and a goal for the reduction of noise in existing development. However, 60 L_{dn} is a goal which cannot necessarily be reached in all residential areas within the realm of economic or aesthetic feasibility. This goal will be applied where outdoor use is a major consideration (e.g., backyards in single-family housing developments and recreation areas in multi-family housing projects). The outdoor standard will not normally be applied to the small decks associated with apartments and condominiums but these will be evaluated on a case-by-case basis. Where the city determines that providing an L_{dn} of 60 dB or lower outdoors is not feasible, the outdoor goal may be increased to an L_{dn} of 65 dB. If the noise source is a railroad, then the outdoor noise exposure criterion should be 70 L_{dn} for future development, recognizing that train noise is characterized by relatively few loud events.

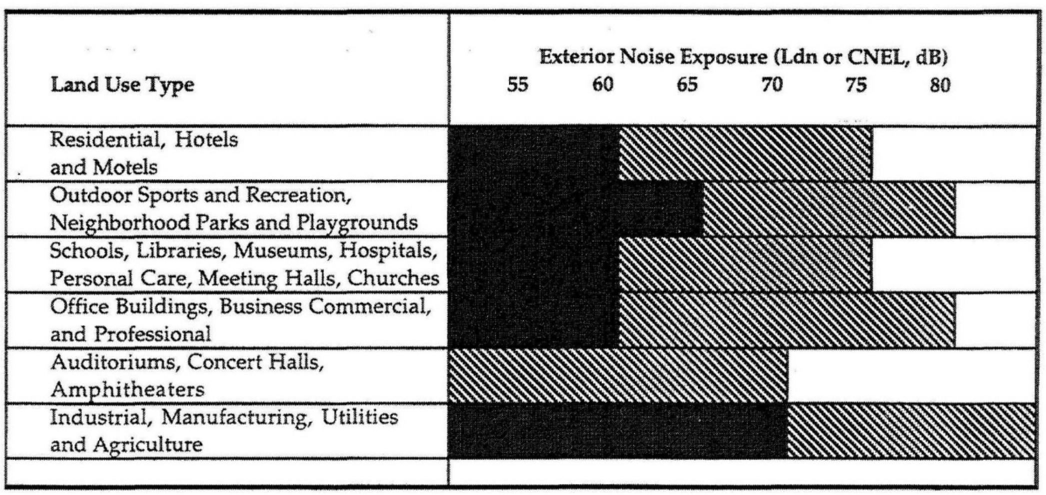
(b) The indoor noise level as required by the State of California Noise Insulation Standards must not exceed an L_{dn} of 45 dB in multi-family dwellings. This indoor criterion shall also be the maximum acceptable indoor noise level in new single-family homes.

(c) Interior noise levels in new single-family and multi-family residential units exposed to an L_{dn} of 60 dB or greater should be limited to a maximum instantaneous noise level in the bedrooms of 50 dBA. Maximum instantaneous noise levels in other rooms should not exceed 55 dB.

(d) Appropriate interior noise levels in commercial, industrial, and office buildings are a function of the use of space. For example, the noise level in private offices should generally be quieter than for data processing rooms. Interior noise levels in offices generally should be maintained at 45 L_{eq} (hourly average) or less.

(e) If an area currently is below the desired noise standard, an increase in noise up to the maximum should not necessarily be allowed. The impact of a proposed project on an existing land use should be evaluated in terms of the increase in existing noise levels and potential for adverse community impact, regardless of the compatibility guidelines.

Land Use Compatibility for Community Noise Environments



Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

Unacceptable
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with Noise Element policies.

NS2.7 **Compliance with State Noise Insulation Standards.** The adopted Noise Element will serve as a guideline for compliance with the State's noise insulation standards. Recognizing the need to provide acceptable habitation environments, State law requires noise insulation of new multi-family dwellings constructed within the 60 dB Ldn noise exposure contours. It is a function of the Noise Element to provide noise contour information around all major sources in support of the sound transmission control standards (Chapter 2-35, Part 2, Title 24, California Administrative Code).

For aircraft noise, Table 7-4 of the City of Millbrae General Plan identifies San Francisco International Airport noise levels of 65 dB CNEL or less as being satisfactory for multi-family residential uses, with little noise impact and requiring no special noise insulation requirements for new construction. For hotel and motel uses, Table 7-4 identifies 70 dB CNEL as being satisfactory relative to SFO noise.

Federal Transit Administration (FTA)

Although there are no local vibration standards, U.S. Department of Transportation's Federal Transit Authority (FTA) has adopted vibration impact assessment criteria. The FTA vibration impact criteria are based on maximum overall levels for a single event, and is applicable to residential projects within 150 feet of the centerline of rail lines. This vibration impact criteria, identified in Table 8-1 of the FTA's Transit Noise and Vibration Impact Assessment (May 2006), has been reproduced in Table 1.

Table 1
Groundborne Vibration Impact Criteria

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

Notes:
1 "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.
2 "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
3 "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
4 This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of HVAC systems and stiffened floors.
Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment (May 2006), Table 8-1

In addition to the FTA vibration thresholds which are best applied to ongoing rail activity, Caltrans has developed vibration thresholds for evaluating potential damage to structures and annoyance related to project construction and demolition. Those standards, which are provided in terms of Peak Particle Velocities (PPV), are provided in Tables 2 and 3.

Table 2
Guideline Vibration Damage Potential Threshold Criteria

	Maximum PPV (inches/second)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual (2013)
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
PPV = peak particle velocity.

Table 3
Guideline Vibration Annoyance Potential Criteria

	Maximum PPV (inches/second)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual (2013)
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
PPV = peak particle velocity.

Existing Ambient Noise and Vibration Environment

Existing Traffic and Railroad Noise Environment

The ambient noise environment in the immediate project vicinity is primarily defined by railroad activity to the northeast and traffic on El Camino Real and Center Street to the west and north, respectively. To quantify noise levels associated with these sources, BAC conducted long-term (48-hour) noise level measurements at three locations on the project site from May 24-25, 2017. The noise level measurement locations are shown on Figure 1.

Larson-Davis Laboratories (LDL) Model 831 and Model 820 precision integrating sound level meters were used to complete the noise level measurement surveys. The meters were calibrated before use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The sound level meter located along the railroad tracks (Site 3) was programmed to record statistical details and sound recordings of brief high-noise-level events for use in identification and analysis of train passbys. Detailed results of the long-term noise level survey are shown numerically and graphically in Appendices B and C, respectively, and summarized below in Table 4.

Table 4
Summary of Long-Term Ambient Noise Monitoring Results[1]
Anton Millbrae – Millbrae, California

			Average Measured Hourly Noise Levels (dB)			
			Daytime (7 a.m. to 10 p.m.)		Nighttime (10 p.m. to 7 a.m.)	
Site	Date	L_{dn}, dB	L_{eq}	L_{max}	L_{eq}	L_{max}
Site 1 – West side of project site, approximately 65’ from centerline of El Camino Real	5/24/17	69	66	85	61	79
	5/25/17	69	67	85	61	79
Site 2 – North side of project site, approximately 35’ from centerline of Center Street	5/24/17	65	60	80	59	79
	5/25/17	64	60	80	57	77
Site 3 – East side of project site, approximately 90’ from centerline of railroad tracks	5/24/17	72	68	94	65	83
	5/25/17	76	73	92	68	85

Notes:

1 Long-term ambient noise monitoring locations are identified on Figure 1 as sites 1-3.

Source: Bollard Acoustical Consultants, Inc. (2017)

The noise measurement results shown in Table 4 indicate that existing El Camino Real traffic noise, 65 feet from the roadway centerline, was 69 dB L_{dn} on both days. Existing Center Street traffic noise, 35 feet from the roadway centerline, were in close agreement with measured noise levels of 64 and 65 dB L_{dn}. At measurement Site 3, there was a difference of 4 dB between the two monitored days, from 72 dB L_{dn} on May 24 to 76 dB L_{dn} on May 25. Upon inspection of the audio recordings conducted at Site 3, it was determined that the increase in measured noise levels were attributable to wind in the tree canopy directly above the measurement site. The day-night noise level of the train passbys only, with wind in the tree canopy removed, was calculated using railroad single-event records to be 69 dB L_{dn}. As a result, the anomalous data resulting from the wind in the trees was omitted from this assessment.

Analysis of the individual train passby statistics at Site 3 indicate that the average Sound Energy Level (SEL) per passby was measured to be 95 dB, with a standard deviation of 4 dB. The average maximum noise level (L_{max}) per passby was measured to be 89 dB, with a standard deviation of 4 dB. The railroad single-event data is provided in Appendix F.

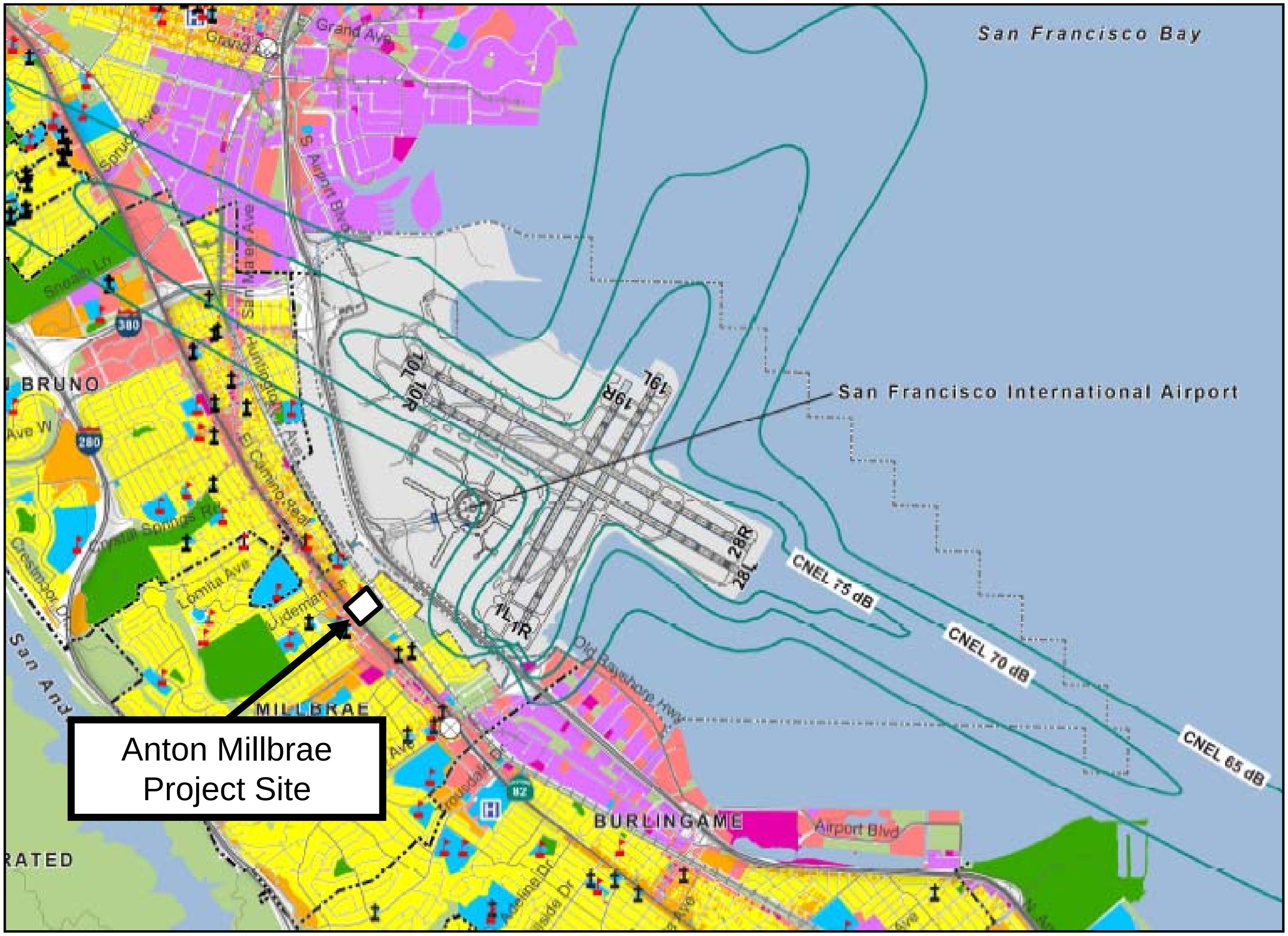
Existing Aircraft Noise Environment

The project site is located approximately 1,300 feet southwest of the San Francisco International Airport. Figure 4 shows the relationship of the project site to the airport. In addition, Figure 4 shows the 2019 noise contours for the airport. As indicated on Figure 4, the project site is located beyond the 65 dB CNEL noise contour for the airport.

Because the main arrival and departure runways for SFO are Runways 28L and 28R, the majority of the aircraft arrivals and departure flight paths are in excess of 6,000 feet from the project site. The noise level measurement results for Site 2 (see Figure 1 for monitoring site locations), which are presented in Appendices B-3 and B-4 and summarized in Table 4, indicate that measured maximum noise levels averaged 80 dB during daytime hours and 78 dB during nighttime hours. The majority of the measured maximum noise levels at this location were believed to have been caused by local traffic on Center Street, but some of the maximums may have been caused by aircraft departures at SFO. For a conservative estimate of noise exposure related to aircraft operations at SFO, this analysis assumes maximum noise levels of 80 dB L_{max} at the project site.

It should be noted that the data collected at Site 1 was influenced almost entirely by El Camino Real traffic whereas Site 3 was influences almost entirely by Caltrain operations. As a result, Measurement Site 2 is most appropriate for assessing potential worst-case aircraft noise levels at the project site.

Figure 4
Relationship of Project Site to San Francisco International Airport
Anton Millbrae Apartments and Hotel Project – Millbrae, California



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Existing Railroad Vibration Environment

The primary source of vibration in the project vicinity is railroad activity on the railroad tracks to the east of the site. To quantify existing railroad vibration levels associated with this source, BAC conducted long-term (continuous) vibration measurements at the location shown in Figure 1, approximately 90 feet from the centerline of the tracks.

A Larson-Davis Laboratories Model LxT precision integrating sound level meter equipped with a vibration transducer was used to complete the measurements. The results are presented graphically in Appendix D and are summarized below in Table 5.

Table 5
Railroad Vibration Monitoring Results Analysis
Anton Millbrae – Millbrae, California

Date	Daily Number of Passbys	Vibration Level Per Passby, VdB RMS (Average)
Wednesday, May 24, 2017	96	72
Thursday, May 25, 2017	86	72

Source: Bollard Acoustical Consultants, Inc. (2017)

The Table 5 data indicate that measured railroad passby vibration levels were on average 72 VdB RMS, with a standard deviation of 2 VdB RMS.

Evaluation of Future Noise & Vibration Levels at the Project Site

The long-term (continuous) ambient data conducted on May 24-25, 2017 is representative of combined noise exposure from traffic noise levels on El Camino Real and Center Street, and Caltrain passby noise levels. To predict future noise exposure at the noise-sensitive areas of the proposed development, it was conservatively assumed that future ambient conditions would be approximately 2 dB higher than existing ambient conditions at the project site. This assumption is believed to be conservative because it represents 60% increase in traffic volumes and Caltrain passbys over time.

According to the Peninsula Corridor Electrification Project EIR (December 2014), approximately 75 percent of the Caltrain locomotive and passenger car fleet for the San Francisco to San Jose service will be replaced with Electric Multiple Unit (EMU) technology by 2020. By 2040, 100 percent of the service would be with EMUs. The EIR indicated that although maximum train speeds would not change, there would be a greater number of total trains per day. The EMUs are reportedly quieter than corresponding diesel locomotives. However, horn usage for each train passby would remain the same since the location and number of roadway crossings and stations would not be changed as a result of the switch to EMUs. At the two studied Millbrae locations, the EIR concluded that there would be no change in train noise levels from existing conditions to proposed project conditions. For the Anton Millbrae study, the aforementioned +2 dB increase for future conditions relative to measured existing conditions would be considered conservative because it assumes increased operations with the current railroad locomotive fleet.

Predicted Future Noise Levels at Outdoor Activity Areas

As indicated in Figures 2A and 2B, the multi-family portion of the project proposes three large courtyard areas on the ground floor of the development. The hotel portion of the project proposes a pool area at the ground floor location. Given the size and amenities offered in these locations, these areas are considered to be the primary outdoor activity areas of this development where the City's 60 dB L_{dn} exterior noise level standard would be applicable.

As previously mentioned, BAC utilized the long-term (continuous) ambient noise level data conducted on May 24-25, 2017 to predict future railroad and traffic noise exposure at the project site. That data was projected to the primary outdoor activity areas and offsets for shielding caused by intervening structures were applied. The resulting noise levels at the primary outdoor activity areas of this development are summarized below in Table 6.

Table 6
Predicted Future Noise Levels at Exterior Areas
Anton Millbrae – Millbrae, California

Location[1]	Future Level before Consideration of Shielding	Shielding Offset[2] (dB)	Predicted Future Noise Level with Shielding (dB L_{dn})
Multi-family Courtyard #1	64	-14	50
Multi-family Courtyard #2	65	-17	48
Multi-family Courtyard #3	66	-20	46
Hotel Swimming pool area	66	-10	56
		City's Exterior Noise Standard:	60

Notes:
1 See Figures 2A and 2B for noise-sensitive locations.
2 Negative offsets due to proposed intervening buildings and elevation of outdoor activity areas (pool area).
Source: Bollard Acoustical Consultants, Inc. (2017)

According to Table 6, the predicted future noise levels from combined traffic and Caltrain operations would be below the City's 60 dB L_{dn} exterior noise level standard at the proposed primary outdoor activity areas of this development. Because these levels satisfy the City's General Plan 60 dB L_{dn} exterior noise level standard applied to residential land uses, consideration of additional exterior traffic or Caltrain noise mitigation measures would not be warranted for the exterior areas of this project.

Relative to SFO aircraft noise, the Figure 4 noise contours indicate that the project site is located outside the 65 dB CNEL noise contours which are considered acceptable for new multi-family residential development, and well beyond the 70 dB CNEL contours considered acceptable for new motel development. As a result, no aircraft noise mitigation measures would be warranted for the exterior areas of this development.

Predicted Future Interior Noise Levels within Multi-Family Rooms and Hotel Rooms

Compliance with the City's 45 dB L_{dn} Interior Noise Level Standard:

After adding 2 dB to the noise measurement results shown in Table 2 to account for future increases in traffic and railroad noise in the immediate project vicinity, the predicted future L_{dn} values at the ground-level facades located adjacent to El Camino Real, Center Street, and the railroad tracks would be approximately 69, 64 and 69 dB L_{dn}, respectively.

Table 7 shows the predicted building façade noise exposure, the degree of building façade noise reduction required to achieve 45 dB L_{dn} interior noise levels and the corresponding STC ratings required of the windows on these facades to achieve that degree of noise reduction. This table includes a +3 dB margin of safety.

Table 7
Predicted Future Exterior Building Façade Noise Levels, Noise Reduction Required to Achieve Interior Noise Levels of 45 dB L_{dn}, and Required Window STC ratings
Anton Millbrae – Millbrae, California

Facade	Predicted L_{dn} at Building Facade	Noise Reduction Required to Achieve 45 dB L_{dn}	Required Window STC Rating[1]
El Camino Real	72	27	32
Center Street	67	22	27
Railroad Tracks	72	27	32

Notes:
[1] These window STC requirements are to achieve satisfaction with the City's 45 dB Ldn interior noise level standard only.
Source: Bollard Acoustical Consultants, Inc. (2017)

The Table 7 data shows that window upgrades (windows above STC 27) would be required at the upper floor windows of the hotel rooms located adjacent to El Camino Real to reduce future traffic noise levels to 45 dB L_{dn} within those rooms. Although STC 32 windows would be suitable to reduce future traffic and railroad noise levels to 45 dB Ldn or less within the residences and hotel rooms proposed nearest to those tracks and El Camino Real, the City's 50 dB L_{max} requirement within bedrooms (55 dB within other rooms) is more restrictive than the City's 45 dB L_{dn} requirement. As a result, a greater degree of noise reduction would be required to achieve the City's L_{max} standards. That analysis is provided in the following section.

Compliance with the City's 50/55 dB L_{max} Interior Noise Level Standard:

As noted in the criteria section of this report, interior noise levels in new single-family and multi-family residential units exposed to an L_{dn} of 60 dB or greater should be limited to a maximum instantaneous noise level in the bedrooms of 50 dBA. Maximum instantaneous noise levels in other rooms should not exceed 55 dB.

As shown in Table 4, measured maximum noise levels varied depending on exposure to the project area noise sources. Table 8 shows the maximum building façade noise exposure at the ground and upper-floor locations of this development, as well as the degree of building façade noise reduction required to achieve 50 dB L_{max} interior noise levels within bedrooms and the corresponding STC ratings required of the windows on these facades to achieve that degree of noise reduction. The locations of the recommended window upgrades, where applicable, are shown on Figures 2A and 2B.

Table 8
Maximum Exterior Building Façade Noise Levels, Noise Reduction Required to Achieve Interior Noise Levels of 50 dB L_{max}, and Required Window STC ratings
Anton Millbrae – Millbrae, California

Facade	Predicted L_{max} at Building Facade	Noise Reduction Required to Achieve 50 dB L_{max}	Required Window STC Rating[1]
El Camino Real	85	35	35
Center Street	80	30	32
Railroad Tracks	93	43	42

Notes:
[1] These window STC requirements are to achieve satisfaction with the City's 50 dB Lmax interior noise level standard.
Source: Bollard Acoustical Consultants, Inc. (2017)

While sound transmission does occur through every part of structures, the majority of exterior-to-interior sound transmission occurs at the windows, which provide much less noise reduction than exterior walls. As a result, window upgrades are the most effective way to reduce interior noise levels in high-noise environments. To ensure compliance with the 50 dB L_{max} interior standard and reduce the potential for sleep disturbance, BAC recommends that the windows of the nearest residences to the railroad tracks and roadways be upgraded to higher Sound Transmission Class (STC) ratings as indicated in Table 8. In addition, BAC recommends that resilient channels and double layers of sheetrock be installed on all exterior walls of all units located along the railroad tracks. Finally, mechanical ventilation should be included in each unit to allow occupants to close doors and windows as desired for acoustical isolation.

The recommended construction improvements at the units adjacent to the roadways and railroad tracks would also provide additional protection against sleep disturbance related to SFO aircraft single-events occurring during nighttime hours. To ensure aircraft noise exposure does not exceed 50 dB L_{max} within the remaining bedrooms of this development, BAC recommends STC 32 windows for all bedrooms located within the interior of this development. Because maximum aircraft noise exposure is not expected to exceed 80 dB L_{max} at the project site, the measures cited above would be more than adequate to ensure that maximum aircraft noise levels within the proposed apartments and hotel spaces would be satisfactory relative to the City of Millbrae interior noise level standards.

Railroad Vibration

As described previously, long-term vibration monitoring was conducted at the project site, approximately 90 feet from the centerline of the railroad tracks. The multi-family building structure, however, will be located approximately 130 feet from the centerline of the railroad tracks. Analysis of the collected data indicated that average train passby vibration levels were 72 VdB per event on both days. A maximum of 96 train passbys per day were observed on May 24, 2017. According to the FTA vibration exposure criteria identified in Table 1, the numerical standard of 72 VdB for “frequent events” (>70 events per day) affecting residences and buildings where people normally sleep (Category 2) would be applicable to this project. The measured average rail passby vibration levels of 72 VdB (90 feet from railroad centerline) would satisfy the applicable 72 VdB FTA vibration standard. As noted previously, the proposed multi-family building will maintain an additional 40 foot setback from the vibration monitoring location. Given this additional setback, it is reasonable to conclude that vibration levels would be below the 72 VdB FTA vibration standard at the multi-family building structure. As a result, no further consideration of groundborne vibration mitigation measures would be warranted for the project.

Noise Impacts at Off-Site Receptors Due to the Project

In addition to evaluating potential noise impacts resulting from the local noise environment on the noise-sensitive components of the project (apartments and hotel), CEQA also requires that impacts resulting from the project which may affect off-site sensitive land uses be evaluated. The primary source of temporary noise and or vibration generation related to the project would be would be project demolition and construction. The primary source of permanent noise associated with the project would be increased off-site traffic resulting from the project. Other sources, such as on-site vehicle circulation and mechanical equipment, are expected to be negligible relative to the elevated existing noise environment. The following section evaluates potential noise impacts related to increases in off-site traffic resulting from the project, and project demolition and construction activities.

Noise Impacts Related to Increases in Off-Site Traffic Resulting from the Project

According to information provided by the project transportation consultant, the project would result in a total net new daily trips resulting from the project of 2,079. While deliveries to the site will occur, the majority of the anticipated project trip-generation would be automobiles. BAC utilized the FHWA Traffic Noise Prediction Model to quantify the noise generation of 2,079 additional daily vehicle trips on the local roadway network. The FHWA Model result, which are provided in Appendix E, indicate that the noise generation of the new project traffic would be 59 dB L_{dn} or less at existing receptors located adjacent to both Center Street and the El Camino Real.

As noted in Appendix B, the existing noise environment in the immediate project vicinity was measured to range from 64 dB L_{dn} along Center Street and 69 dB L_{dn} along El Camino Real. Relative to existing ambient noise levels, the increase in noise resulting from the additional project traffic would be approximately 1 dB or less. Because an increase of 1 dB or less is below the threshold of perception, off-site impacts related to increased traffic on the local roadway network resulting from the project are predicted to be less than significant.

Noise Impacts Related to Project Demolition and Construction

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in typical construction would generate maximum noise levels, as indicated in Table 9, ranging from 70 to 90 dB at a distance of 50 feet.

Table 9
Typical Construction Equipment Noise

Equipment Description	Maximum Noise Level at 50 feet, dBA
Backhoe	80
Bar bender	80
Boring jack power unit	80
Chain saw	85
Compactor (ground)	80
Compressor (air)	80
Concrete batch plant	83
Concrete mixer truck	85
Concrete pump truck	82
Concrete saw	90
Crane (mobile or stationary)	85
Dozer	85
Dump truck	84
Excavator	85
Flatbed truck	84
Front end loader	80
Generator (25 kilovolt-amperes [kVA] or less)	70
Generator (more than 25 kVA)	82
Grader	85
Jackhammer	85
Mounted impact hammer (hoe ram)	90
Paver	85
Pneumatic tools	85
Pumps	77
Rock drill	85
Scraper	85
Soil mix drill rig	80
Tractor	84
Vibratory concrete mixer	80

Source: Federal Highway Administration (2006)

When demolition, ground clearing, excavation, and foundation work are occurring on the project site, offsite noise levels could potentially occur within the 70 – 90 dB L_{max} range identified in Table 7. Review of the existing ambient noise measurement results shown in Appendices B and C indicate that existing maximum noise levels routinely ranged from 70 to 90 dB L_{max}. As a result, maximum noise levels resulting from project construction and demolition activities are predicted to be within the range of existing maximum noise levels currently experienced in the project vicinity. Nonetheless, because construction activities associated with the proposed project has the potential to result in temporary noise levels, the following construction noise mitigation measures are recommended to reduce the potential for adverse public reaction to project construction/demolition noise:

1. **Construction Hours/Scheduling:** To the maximum extent feasible, construction and demolition activities and deliveries to the project site should occur during the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday.

2. **Construction Equipment Mufflers and Maintenance:** All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

3. **Idling Prohibitions:** All equipment and vehicles shall be turned off when not in use. Unnecessary idling of internal combustion engines is prohibited.

4. **Equipment Location:** All stationary noise-generating construction equipment, such as air compressors, shall be located as far as practical from the adjacent homes.

5. **Staging and Equipment Storage:** The equipment storage location shall be sited as far as possible from nearby sensitive receptors.

Vibration Impacts Related to Project Demolition and Construction

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation is used to estimate the vibration level at a given distance for typical soil conditions (Federal Transit Administration 2006). PPV_{ref} is the reference PPV at 25 feet.

$$PPV = PPV_{ref} \times (25/Distance)^{1.5}$$

Using the equation provided above, Table 10 summarizes typical vibration levels generated by construction equipment (Federal Transit Administration 2006) at distances ranging from 50 to 175 feet from the proposed construction / demolition areas.

Table 10
Vibration Source Levels for Construction Equipment

Equipment	Maximum PPV (inches/second)			
	PPV at 50 feet	PPV at 75 feet	PPV at 100 feet	PPV at 175 feet
Pile driver (sonic/vibratory)	0.2595	0.1413	0.0918	0.0396
Vibratory roller	0.0742	0.0404	0.0263	0.0113
Large bulldozer	0.0315	0.0171	0.0111	0.0048
Caisson drilling	0.0315	0.0171	0.0111	0.0048
Loaded trucks	0.0269	0.0146	0.0095	0.0041
Jackhammer	0.0124	0.0067	0.0044	0.0019
Small bulldozer	0.0011	0.0006	0.0004	0.0002

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment (2006)
PPV = peak particle velocity.

The vibration data shown in Table 10 indicate that construction equipment-generated transient vibration levels would be below the Caltrans threshold for damage to old and historic structures of 0.5 in/sec PPV at locations 50 feet or more from the construction/demolition activities. Because no damage to structures are anticipated due to the project and because of the temporary nature of construction activities, no significant construction/demolition-related vibration impacts are identified for this project.

Conclusions

The Anton Millbrae project is predicted to comply with the exterior and interior noise level criteria of the City of Millbrae General Plan Noise Element provided the following specific noise mitigation measures are included in the project design:

1. Windows of the nearest proposed residences to the railroad tracks should be upgraded to higher Sound Transmission Class ratings as indicated on Figures 2A and 2B.

2. Resilient Channels (Dietrich RC-Deluxe) should be in installed between the exterior wall studs and interior sheetrock on each of the end units located directly adjacent to the railroad tracks.

3. Double layers of sheetrock should be installed over the resilient channels on all exterior walls of the units located adjacent to the railroad tracks.

4. Mechanical ventilation should be provided for all residences to allow occupants to close doors and windows as desired for acoustical isolation.

5. Project Construction and Demolition activities should adhere to the mitigation recommendations cited on page 21 of this report to the maximum extent feasible.

These conclusions are based on the noise and vibration data collected at the project site, on the assumptions cited herein, and on the project site plans shown on Figures 2A and 2B. Deviations from these data or plans could cause future noise levels to differ from those predicted in this analysis. Bollard Acoustical Consultants, Inc. is not responsible for such deviations or for degradation in acoustic performance of the residential construction due to poor construction practices, failure to comply with applicable building code requirements, or for failure to adhere to the minimum building practices cited in this report.

This concludes our environmental noise assessment for the proposed Anton Millbrae Development. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with comments or questions regarding this evaluation.

Appendix A
Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT_{60}	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.

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Appendix B-1
Anton Millbrae
Ambient Noise Monitoring Results - Site 1 - 65' from Centerline of El Camino Real
Wednesday, May 24, 2017

Hour	Leq	Lmax	L50	L90
0:00	63	90	54	47
1:00	58	81	48	41
2:00	55	74	44	40
3:00	55	76	44	39
4:00	58	75	51	43
5:00	62	78	57	48
6:00	64	80	60	53
7:00	66	78	63	55
8:00	67	79	64	56
9:00	67	88	64	56
10:00	66	89	63	56
11:00	66	79	63	57
12:00	66	82	64	57
13:00	67	89	64	56
14:00	66	82	64	56
15:00	67	87	64	56
16:00	68	91	65	57
17:00	67	89	65	57
18:00	67	85	65	57
19:00	66	77	63	55
20:00	65	82	63	56
21:00	65	89	62	54
22:00	64	83	60	52
23:00	62	76	58	49

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	68	65	66	64	55	61
Lmax (Maximum)	91	77	85	90	74	79
L50 (Median)	65	62	64	60	44	53
L90 (Background)	57	54	56	53	39	46

Computed Ldn, dB	69
% Daytime Energy	85%
% Nighttime Energy	15%

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Appendix B-2
Anton Millbrae
Ambient Noise Monitoring Results - Site 1 - 65' from Centerline of El Camino Real
Thursday, May 25, 2017

Hour	Leq	Lmax	L50	L90
0:00	60	75	53	42
1:00	58	76	49	41
2:00	56	77	45	41
3:00	56	74	46	41
4:00	61	82	51	45
5:00	62	86	57	51
6:00	64	79	61	55
7:00	66	80	63	56
8:00	66	82	64	57
9:00	67	89	63	56
10:00	66	81	64	57
11:00	66	78	64	57
12:00	67	84	65	57
13:00	68	94	65	57
14:00	67	87	65	56
15:00	66	81	64	57
16:00	67	79	65	57
17:00	68	87	66	59
18:00	68	90	66	59
19:00	67	85	65	57
20:00	69	95	64	57
21:00	65	79	63	56
22:00	64	84	61	54
23:00	63	81	59	51

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	69	65	67	64	56	61
Lmax (Maximum)	95	78	85	86	74	79
L50 (Median)	66	63	64	61	45	53
L90 (Background)	59	56	57	55	41	47

Computed Ldn, dB	69
% Daytime Energy	86%
% Nighttime Energy	14%

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Appendix B-3
Anton Millbrae
Ambient Noise Monitoring Results - Site 2 - 35' from Centerline of Center Street
Wednesday, May 24, 2017

Hour	Leq	Lmax	L50	L90
0:00	57	88	48	45
1:00	50	69	42	40
2:00	42	65	40	39
3:00	46	69	40	38
4:00	54	80	41	39
5:00	54	79	45	43
6:00	60	87	50	47
7:00	60	80	53	48
8:00	61	80	55	48
9:00	61	78	57	53
10:00	60	79	57	54
11:00	60	77	58	55
12:00	61	80	58	54
13:00	60	79	55	50
14:00	61	88	55	50
15:00	60	82	54	49
16:00	59	78	55	49
17:00	60	77	56	50
18:00	62	89	55	48
19:00	61	86	53	48
20:00	59	80	52	49
21:00	57	73	51	48
22:00	57	79	50	46
23:00	66	99	53	45

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	57	60	66	42	59
Lmax (Maximum)	89	73	80	99	65	79
L50 (Median)	58	51	55	53	40	45
L90 (Background)	55	48	50	47	38	43

Computed Ldn, dB	65
% Daytime Energy	71%
% Nighttime Energy	29%

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Appendix B-4
Anton Millbrae
Ambient Noise Monitoring Results - Site 2 - 35' from Centerline of Center Street
Thursday, May 25, 2017

Hour	Leq	Lmax	L50	L90
0:00	58	86	47	43
1:00	57	73	51	43
2:00	46	67	43	42
3:00	49	70	44	42
4:00	53	75	47	44
5:00	57	78	53	50
6:00	62	87	55	52
7:00	62	79	57	53
8:00	62	81	58	54
9:00	60	77	56	53
10:00	59	77	56	52
11:00	59	79	55	52
12:00	59	80	56	53
13:00	59	76	55	51
14:00	59	79	56	52
15:00	60	82	56	52
16:00	61	87	56	52
17:00	61	76	58	54
18:00	61	85	58	54
19:00	61	81	56	53
20:00	59	78	55	52
21:00	57	78	53	51
22:00	57	75	52	49
23:00	59	87	50	47

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	57	60	62	46	57
Lmax (Maximum)	87	76	80	87	67	77
L50 (Median)	58	53	56	55	43	49
L90 (Background)	54	51	52	52	42	46

Computed Ldn, dB	64
% Daytime Energy	77%
% Nighttime Energy	23%

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Appendix B-5
Anton Millbrae
Ambient Noise Monitoring Results - Site 3 - 90' from Railroad Tracks
Wednesday, May 24, 2017

Hour	Leq	Lmax	L50	L90
0:00	71	103	51	48
1:00	50	71	45	43
2:00	47	65	43	41
3:00	51	68	46	42
4:00	50	65	46	43
5:00	65	93	48	46
6:00	66	94	51	50
7:00	69	94	53	50
8:00	69	95	52	50
9:00	68	93	57	54
10:00	66	93	57	55
11:00	65	94	58	56
12:00	64	90	58	54
13:00	64	92	54	52
14:00	72	102	55	52
15:00	70	100	59	52
16:00	69	92	62	55
17:00	69	94	57	51
18:00	70	94	57	51
19:00	72	101	54	50
20:00	65	92	53	50
21:00	63	91	54	50
22:00	68	97	51	47
23:00	62	91	50	46

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	72	63	68	71	47	65
Lmax (Maximum)	102	90	94	103	65	83
L50 (Median)	62	52	56	51	43	48
L90 (Background)	56	50	52	50	41	45

Computed Ldn, dB	72
% Daytime Energy	78%
% Nighttime Energy	22%

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Appendix B-6
Anton Millbrae
Ambient Noise Monitoring Results - Site 3 - 90' from Railroad Tracks
Thursday, May 25, 2017

Hour	Leq	Lmax	L50	L90
0:00	71	102	46	44
1:00	48	62	45	43
2:00	49	69	44	42
3:00	52	74	46	44
4:00	53	76	49	46
5:00	65	92	55	52
6:00	70	98	56	53
7:00	70	94	56	53
8:00	70	94	57	55
9:00	68	92	56	54
10:00	73	92	67	57
11:00	71	90	65	54
12:00	71	92	65	55
13:00	67	87	60	52
14:00	69	97	61	54
15:00	70	89	62	53
16:00	72	94	64	55
17:00	77	92	72	60
18:00	78	94	74	65
19:00	77	94	72	62
20:00	71	88	66	58
21:00	70	87	64	56
22:00	68	92	61	53
23:00	74	104	56	50

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	78	67	73	74	48	68
Lmax (Maximum)	97	87	92	104	62	85
L50 (Median)	74	56	64	61	44	51
L90 (Background)	65	52	56	53	42	47

Computed Ldn, dB	76
% Daytime Energy	83%
% Nighttime Energy	17%

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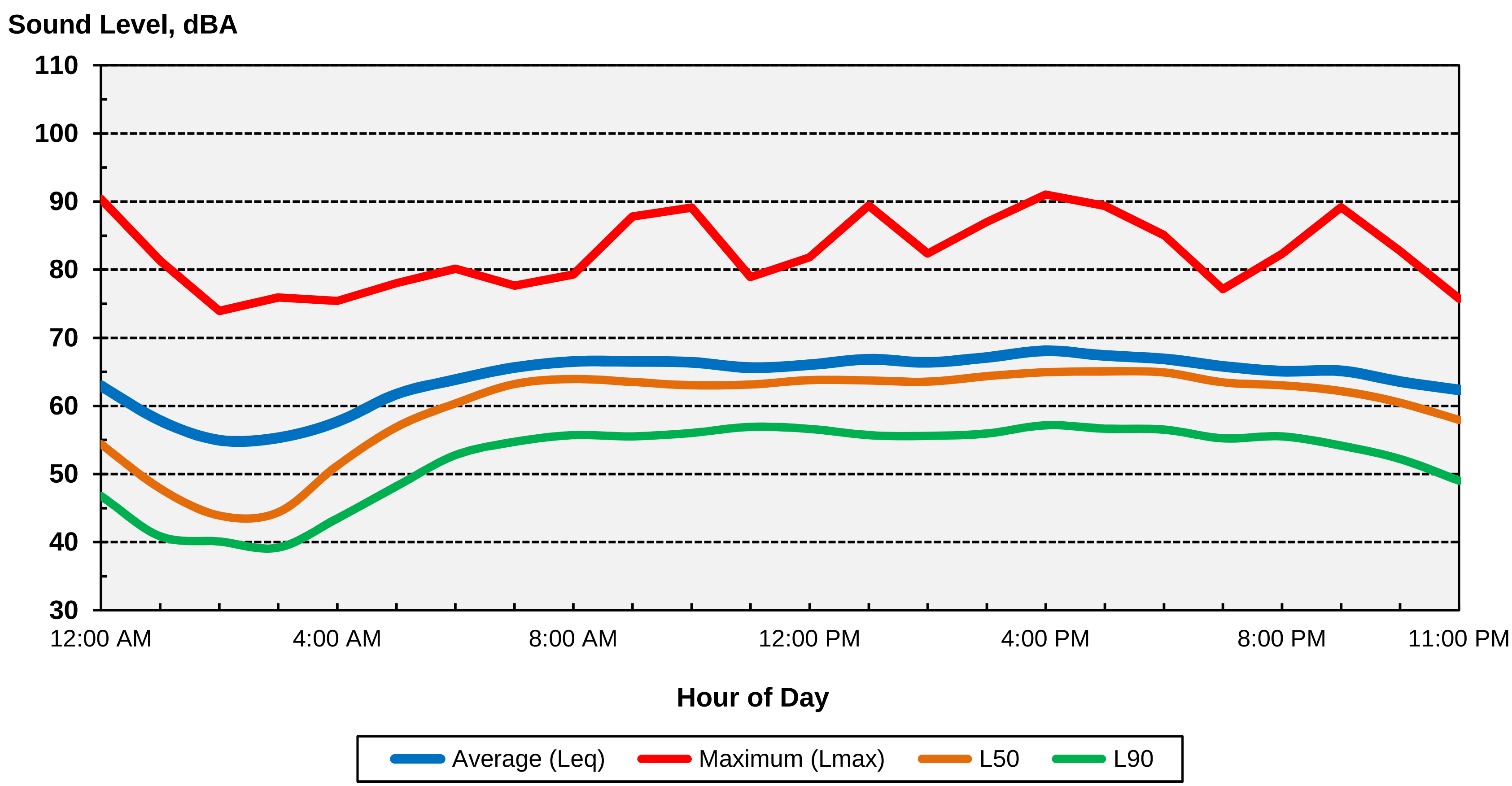
Appendix C-1
Anton Millbrae
Ambient Noise Monitoring Results - Site 1 - 65' from Centerline of El Camino Real
Wednesday, May 24, 2017



Ldn: 69 dB

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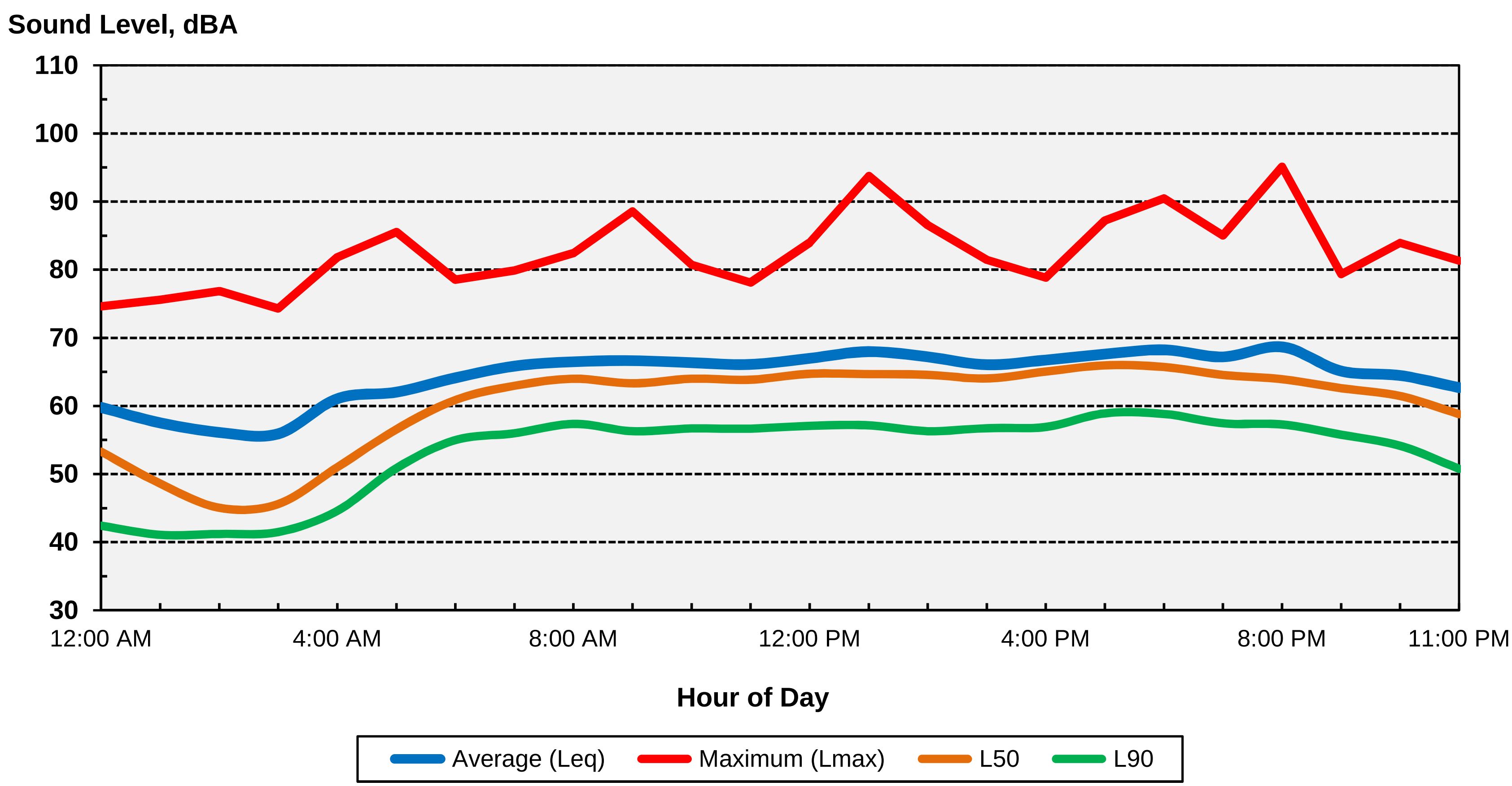
Appendix C-2
Anton Millbrae
Ambient Noise Monitoring Results - Site 1 - 65' from Centerline of El Camino Real
Thursday, May 25, 2017



Ldn: 69 dB

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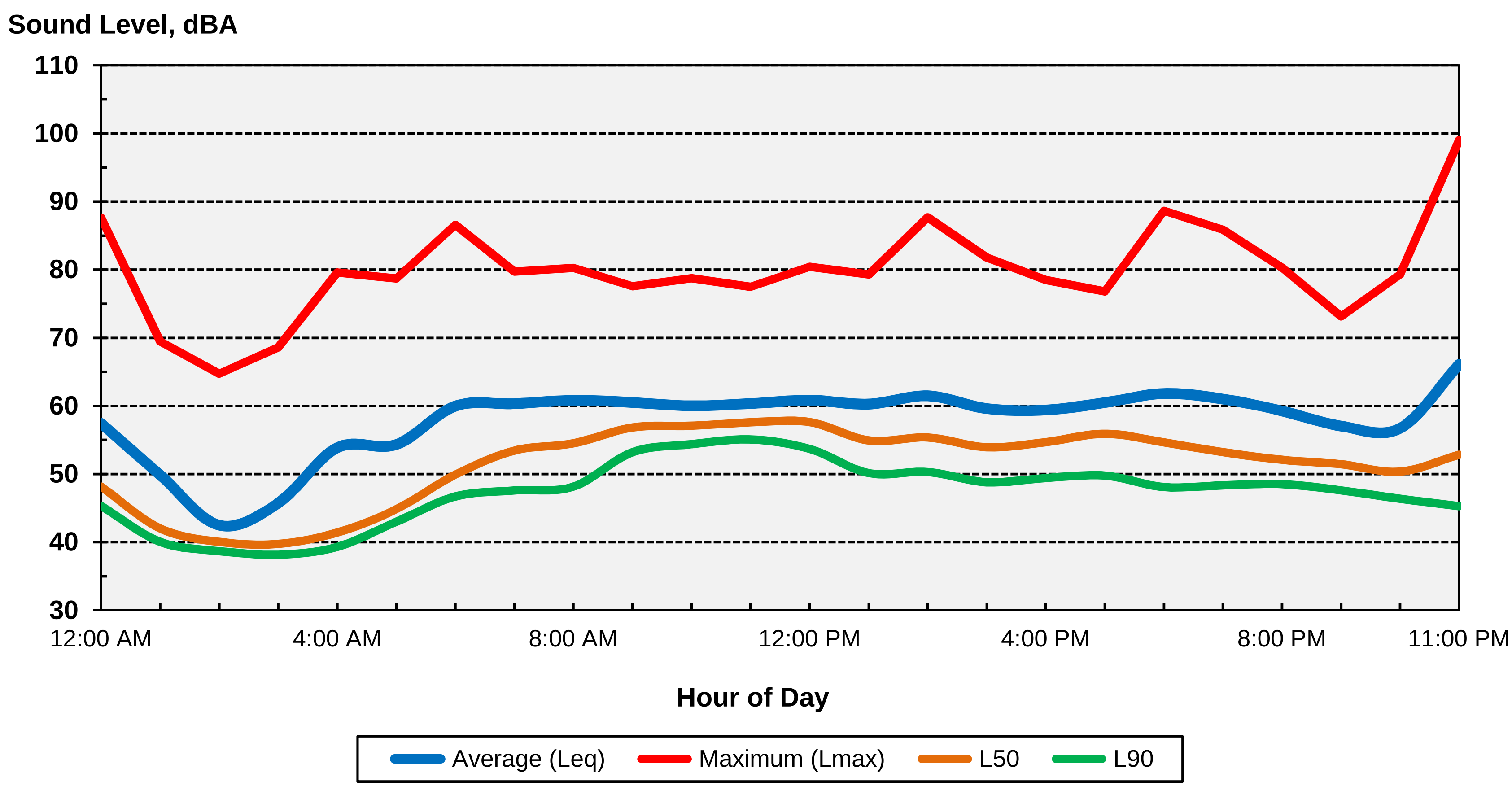
Appendix C-3
Anton Millbrae
Ambient Noise Monitoring Results - Site 2 - 35' from Centerline of Center Street
Wednesday, May 24, 2017



Ldn: 65 dB

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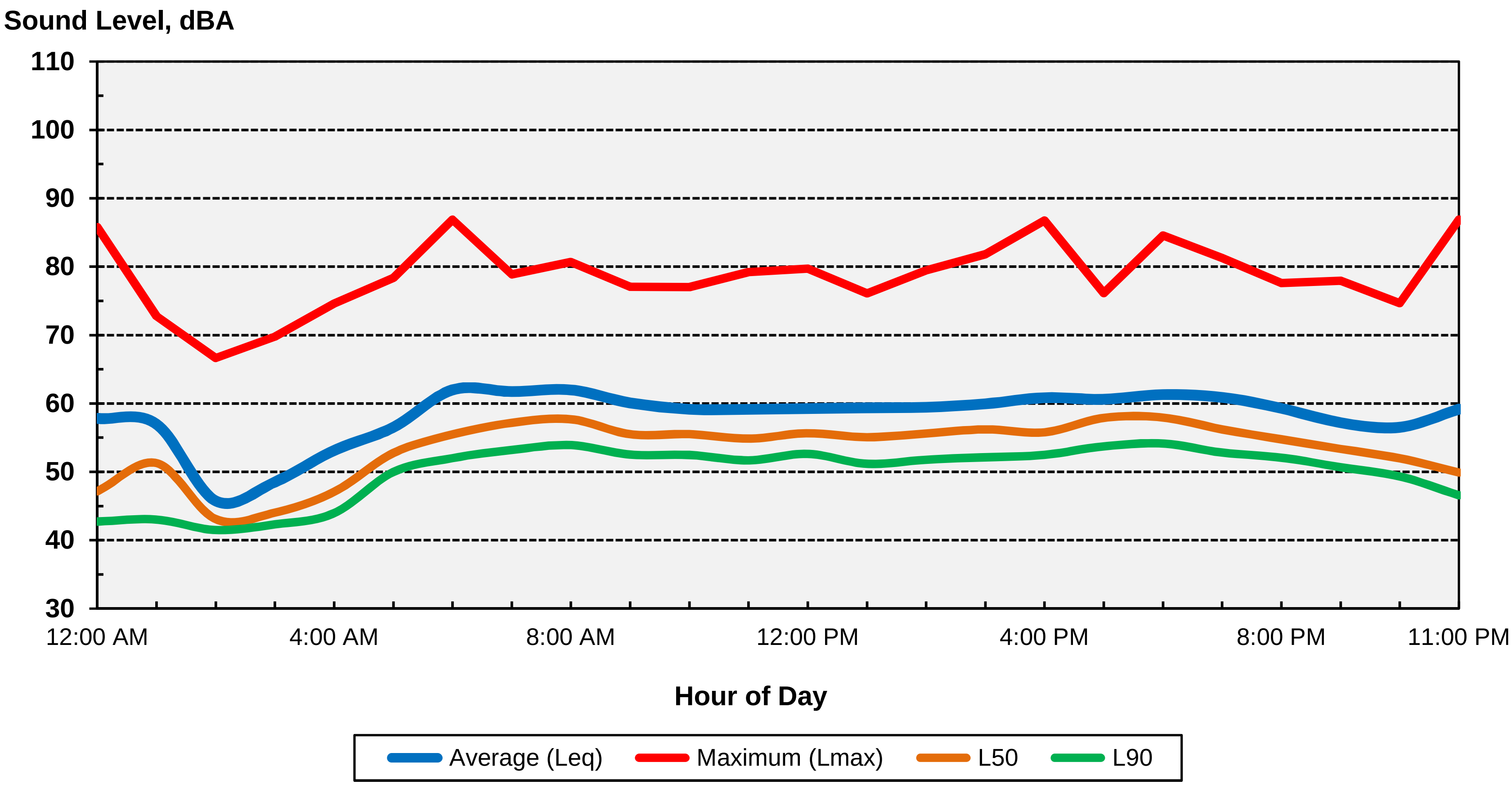
Appendix C-4
Anton Millbrae
Ambient Noise Monitoring Results - Site 2 - 35' from Centerline of Center Street
Thursday, May 25, 2017



Ldn: 64 dB

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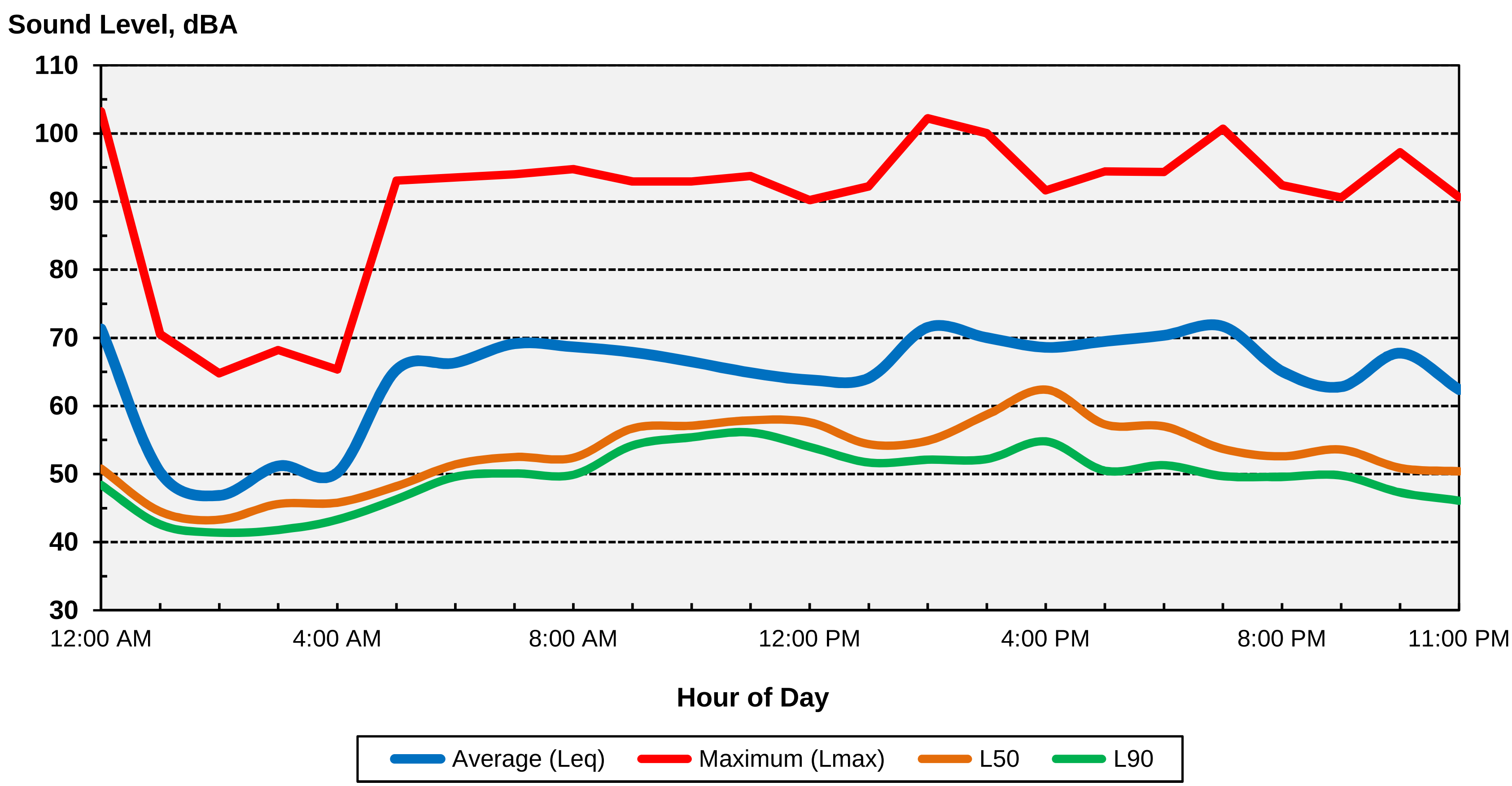
Appendix C-5
Anton Millbrae
Ambient Noise Monitoring Results - Site 3 - 90' from Railroad Tracks
Wednesday, May 24, 2017



Ldn: 72 dB

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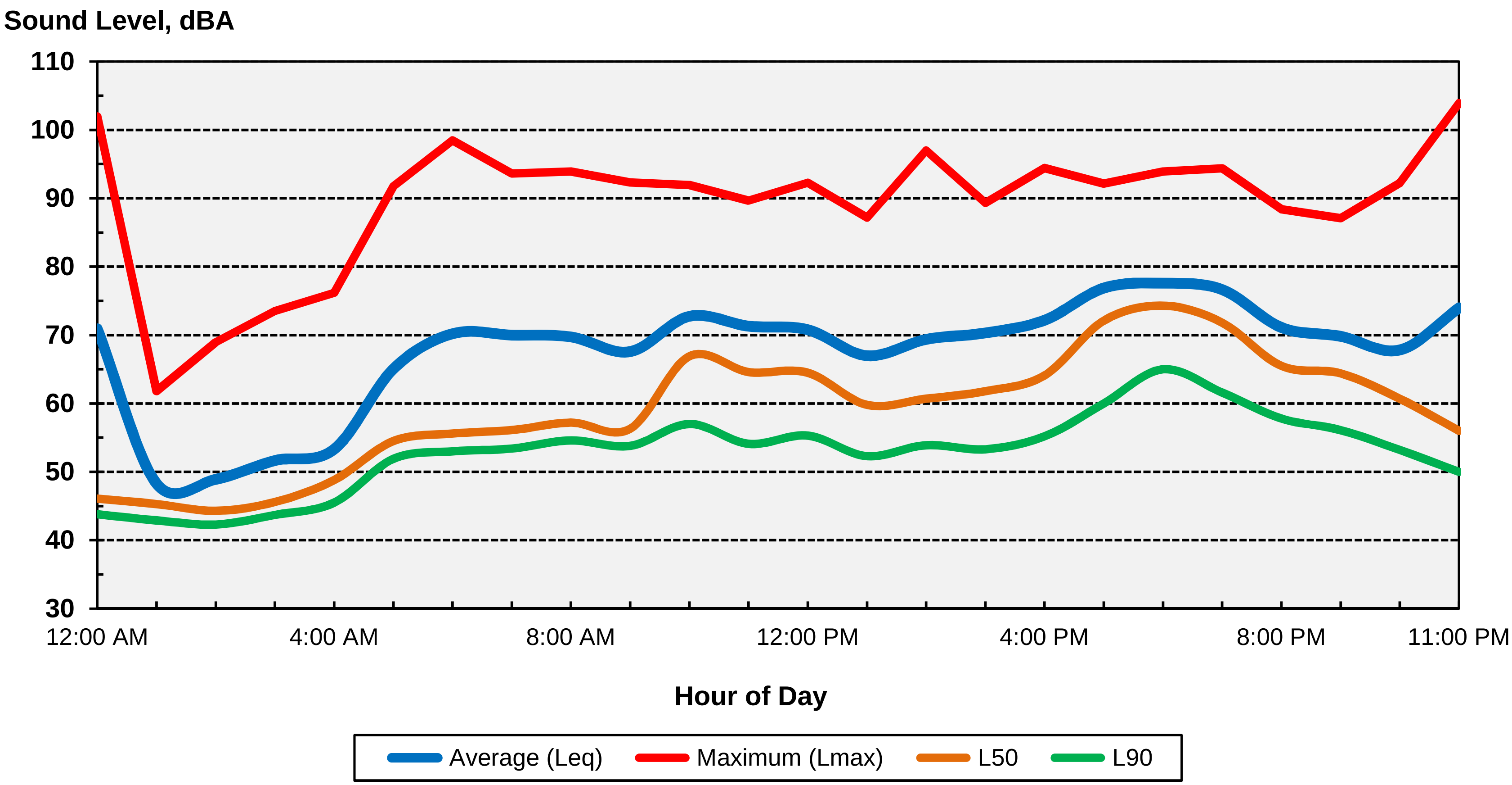
Appendix C-6
Anton Millbrae
Ambient Noise Monitoring Results - Site 3 - 90' from Railroad Tracks
Thursday, May 25, 2017



Ldn: 76 dB

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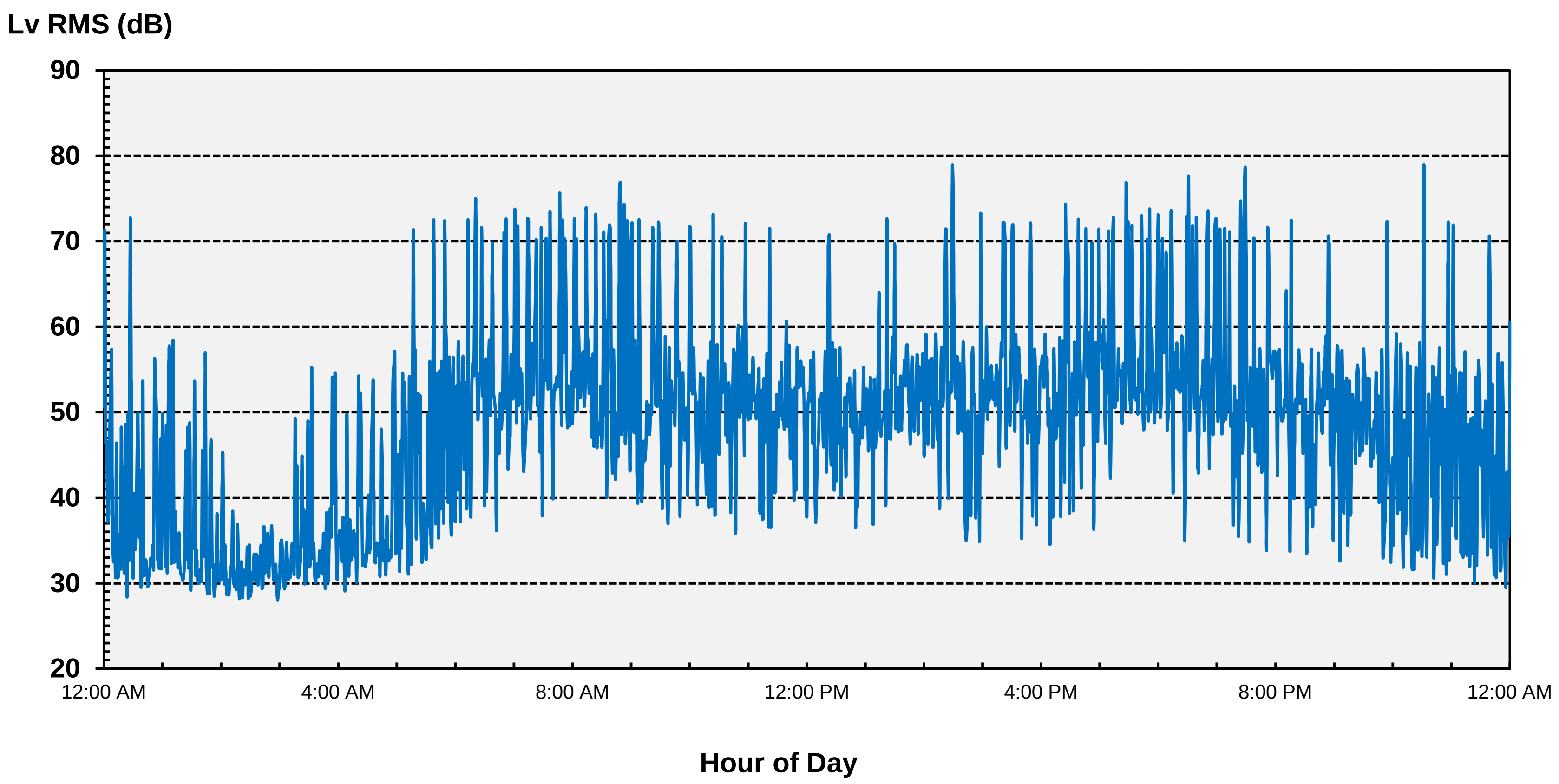
Appendix D-1
Anton Millbrae
Long-Term Vibration Measurement Results - 90' from Railroad Tracks
Wednesday, May 24, 2017



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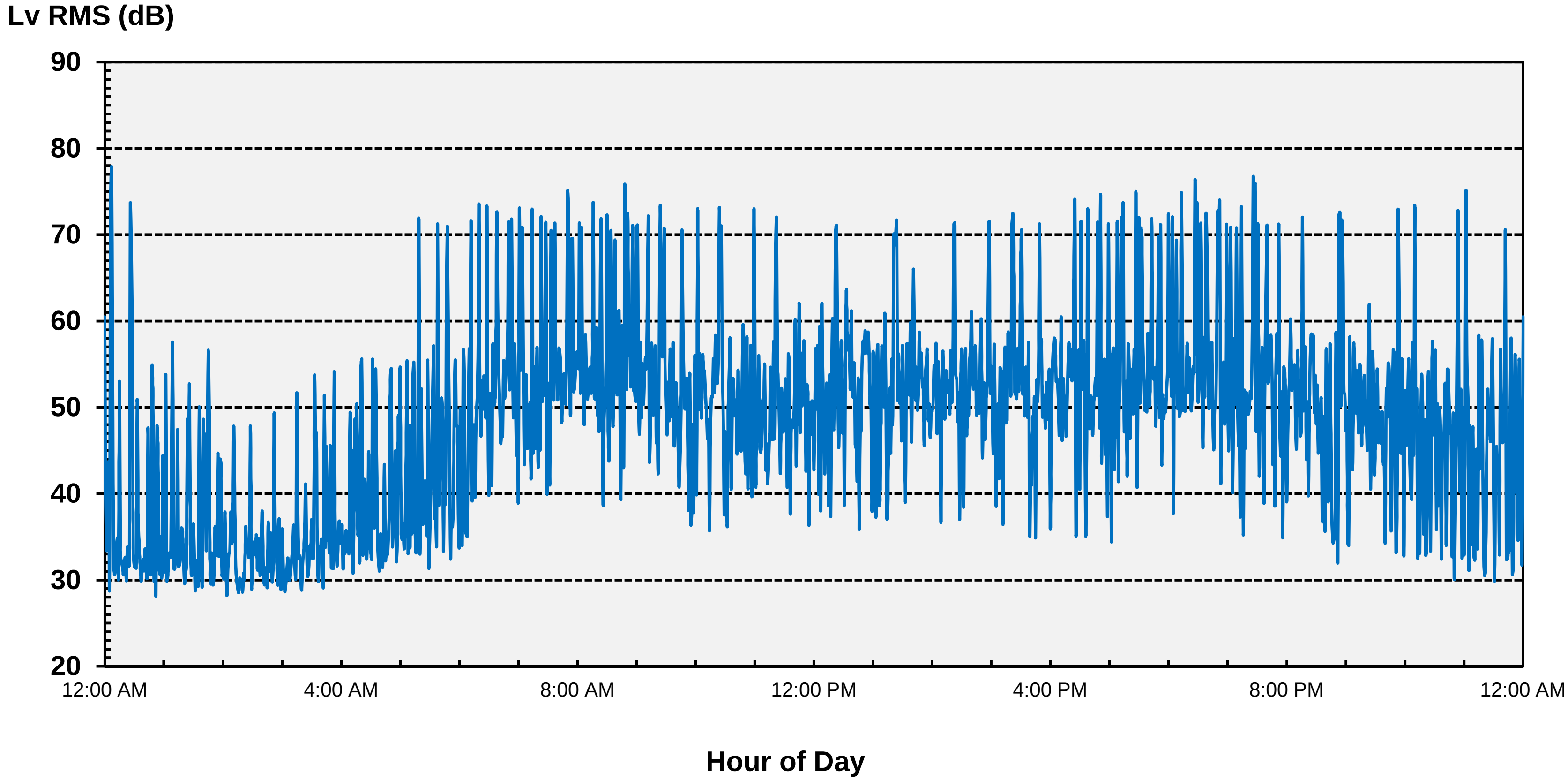
Appendix D-2
Anton Millbrae
Long-Term Vibration Measurement Results - 90' from Railroad Tracks
Thursday, May 25, 2017



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Appendix E

FHWA Traffic Noise Prediction Model (FHWA-RD-77-108)
Noise Prediction Worksheet

Project Information:

Job Number: 2017-089
Project Name: Anton Millbrae Hotel and Apartments
Roadway Name: El Camino Real or Center Street

Traffic Data:

Scenario:	New Project Trip Generation
Average Daily Traffic Volume:	2,079
Percent Daytime Traffic:	85
Percent Nighttime Traffic:	15
Percent Medium Trucks (2 axle):	0.5
Percent Heavy Trucks (3+ axle):	0.5
Assumed Vehicle Speed (mph):	30
Intervening Ground Type (hard/soft):	**Soft**

Traffic Noise Levels:

				----------------- L_{dn}, dB -----------------			
Location	**Description**	**Distance**	**Offset (dB)**	**Autos**	**Medium Trucks**	**Heavy Trucks**	**Total**
1	Nearest Residences on Center	30	0	58	45	52	59
2	Existing Uses Along El Camino	60	0	53	41	48	54

Traffic Noise Contours (No Calibration Offset):

L_{dn} Contour, dB	Distance from Centerline, (ft)
75	3
70	5
65	12
60	25

Notes: Based on a reported 2,079 new vehicle trips per day resulting from the proejct and BAC assumptions for vehicle speeds, day/night distribution and heavy truck usage.

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Appendix F
Railroad Single-Event Noise and Vibration Measurement Results
Anton Millbrae Project

Railroad Event #	Date	Time	Day/Night	Duration	Lmax	SEL	VdB RMS
1	2017/05/24	00:01:09	Night	00:00:15.1	103	107	71
2	2017/05/24	00:27:13	Night	00:00:13.0	91	94	72
3	2017/05/24	05:17:32	Night	00:00:16.6	92	97	71
4	2017/05/24	05:38:08	Night	00:00:16.2	93	97	72
5	2017/05/24	05:49:15	Night	00:00:12.5	85	91	72
6	2017/05/24	06:13:12	Night	00:00:16.0	94	97	73
7	2017/05/24	06:21:01	Night	00:00:09.1	82	88	75
8	2017/05/24	06:27:28	Night	00:00:15.5	87	92	72
9	2017/05/24	06:38:03	Night	00:00:13.9	93	96	70
10	2017/05/24	06:50:26	Night	00:00:13.2	83	90	71
11	2017/05/24	06:52:45	Night	00:00:17.2	86	93	73
12	2017/05/24	07:01:18	Day	00:00:13.3	90	94	74
13	2017/05/24	07:04:28	Day	00:00:16.9	89	94	72
14	2017/05/24	07:14:58	Day	00:00:10.4	83	90	73
15	2017/05/24	07:22:51	Day	00:00:20.0	91	96	70
16	2017/05/24	07:28:10	Day	00:00:14.1	94	98	72
17	2017/05/24	07:33:29	Day	00:00:20.6	91	96	70
18	2017/05/24	07:37:18	Day	00:00:12.2	90	93	74
19	2017/05/24	07:47:49	Day	00:00:09.8	85	91	76
20	2017/05/24	07:50:27	Day	00:00:15.2	90	94	72
21	2017/05/24	07:52:51	Day	00:00:16.9	89	93	70
22	2017/05/24	08:02:10	Day	00:00:11.7	87	92	73
23	2017/05/24	08:04:24	Day	00:00:16.8	82	91	70
24	2017/05/24	08:14:45	Day	00:00:17.2	88	94	74
25	2017/05/24	08:24:21	Day	00:00:15.9	89	95	73
26	2017/05/24	08:32:36	Day	00:00:17.4	88	94	71
27	2017/05/24	08:37:08	Day	00:00:17.2	86	94	70
28	2017/05/24	08:38:49	Day	00:00:16.7	80	88	72
29	2017/05/24	08:48:56	Day	00:00:12.6	83	89	77
30	2017/05/24	08:53:15	Day	00:00:09.6	90	95	74
31	2017/05/24	08:56:33	Day	00:00:14.2	95	99	72
32	2017/05/24	09:00:59	Day	00:00:10.6	91	94	72
33	2017/05/24	09:08:46	Day	00:00:19.7	93	97	72
34	2017/05/24	09:22:50	Day	00:00:11.8	87	92	71
35	2017/05/24	09:28:52	Day	00:00:15.3	93	98	72
36	2017/05/24	09:46:55	Day	00:00:19.3	91	97	70
37	2017/05/24	10:00:57	Day	00:00:10.9	85	91	72
38	2017/05/24	10:24:08	Day	00:00:09.8	93	96	73

39	2017/05/24	10:33:30	Day	00:00:19.3	92	97	71
40	2017/05/24	10:57:15	Day	00:00:17.2	88	95	72
41	2017/05/24	11:22:12	Day	00:00:19.6	94	99	72
42	2017/05/24	12:22:52	Day	00:00:21.8	90	98	71
43	2017/05/24	13:22:23	Day	00:00:10.0	89	93	73
44	2017/05/24	13:30:13	Day	00:00:15.6	92	97	70
45	2017/05/24	14:22:34	Day	00:00:11.4	95	98	72
46	2017/05/24	14:22:58	Day	00:00:14.3	87	93	71
47	2017/05/24	14:29:17	Day	00:01:01.7	102	106	78
48	2017/05/24	14:58:16	Day	00:00:10.6	90	95	73
49	2017/05/24	15:21:59	Day	00:00:09.4	83	89	72
50	2017/05/24	15:23:07	Day	00:00:19.0	91	95	70
51	2017/05/24	15:30:35	Day	00:00:15.4	88	92	72
52	2017/05/24	15:30:57	Day	00:00:11.4	100	102	72
53	2017/05/24	15:49:52	Day	00:00:10.9	92	95	72
54	2017/05/24	16:25:32	Day	00:00:11.5	85	91	74
55	2017/05/24	16:27:43	Day	00:00:24.9	85	92	70
56	2017/05/24	16:38:45	Day	00:00:11.8	88	93	73
57	2017/05/24	16:46:44	Day	00:00:16.9	89	94	72
58	2017/05/24	16:52:00	Day	00:00:13.3	88	92	70
59	2017/05/24	16:59:51	Day	00:00:10.3	92	95	71
60	2017/05/24	17:09:46	Day	00:00:13.6	92	96	71
61	2017/05/24	17:13:50	Day	00:00:15.6	84	90	70
62	2017/05/24	17:14:28	Day	00:00:11.1	94	98	73
63	2017/05/24	17:27:53	Day	00:00:17.6	84	91	77
64	2017/05/24	17:29:33	Day	00:00:09.6	91	95	72
65	2017/05/24	17:33:25	Day	00:00:16.7	93	97	72
66	2017/05/24	17:43:22	Day	00:00:11.3	85	91	73
67	2017/05/24	17:49:31	Day	00:00:16.4	90	95	70
68	2017/05/24	17:51:40	Day	00:00:10.5	86	91	74
69	2017/05/24	17:59:59	Day	00:00:11.1	86	91	73
70	2017/05/24	18:04:20	Day	00:00:13.9	93	97	70
71	2017/05/24	18:08:03	Day	00:00:12.8	85	91	69
72	2017/05/24	18:13:53	Day	00:00:12.6	91	96	73
73	2017/05/24	18:29:18	Day	00:00:10.0	87	92	73
74	2017/05/24	18:31:03	Day	00:00:11.6	91	95	78
75	2017/05/24	18:35:41	Day	00:00:13.2	86	92	72
76	2017/05/24	18:39:02	Day	00:00:14.4	90	95	73
77	2017/05/24	18:49:55	Day	00:00:19.0	92	97	71
78	2017/05/24	18:51:38	Day	00:00:10.1	94	97	73
79	2017/05/24	18:59:00	Day	00:00:10.3	87	93	73
80	2017/05/24	19:03:03	Day	00:00:15.4	89	94	71
81	2017/05/24	19:08:11	Day	00:00:11.7	85	91	72
82	2017/05/24	19:13:16	Day	00:00:12.3	88	94	71
83	2017/05/24	19:24:49	Day	00:00:13.5	101	104	74

84	2017/05/24	19:28:52	Day	00:00:13.1	89	94	75
85	2017/05/24	19:29:37	Day	00:00:24.8	95	100	79
86	2017/05/24	19:38:42	Day	00:00:16.7	91	95	70
87	2017/05/24	19:52:50	Day	00:00:14.0	88	93	71
88	2017/05/24	20:16:27	Day	00:00:22.2	92	99	72
89	2017/05/24	20:54:24	Day	00:00:16.1	86	92	71
90	2017/05/24	20:55:09	Day	00:00:09.7	83	90	69
91	2017/05/24	21:54:08	Day	00:00:16.2	88	94	72
92	2017/05/24	21:54:52	Day	00:00:09.2	91	94	72
93	2017/05/24	22:32:38	Night	00:00:20.6	97	102	79
94	2017/05/24	22:56:58	Night	00:00:17.3	93	97	72
95	2017/05/24	23:02:11	Night	00:00:11.1	86	90	72
96	2017/05/24	23:39:45	Night	00:00:20.7	91	96	71
97	2017/05/25	00:06:55	Night	00:00:25.8	102	106	78
98	2017/05/25	00:26:51	Night	00:00:12.1	90	95	73
99	2017/05/25	05:19:12	Night	00:00:10.9	87	92	72
100	2017/05/25	05:38:16	Night	00:00:18.7	92	97	71
101	2017/05/25	05:47:57	Night	00:00:14.6	89	94	71
102	2017/05/25	06:12:35	Night	00:00:17.6	98	102	72
103	2017/05/25	06:20:37	Night	00:00:08.9	80	86	74
104	2017/05/25	06:28:04	Night	00:00:20.0	94	99	73
105	2017/05/25	06:38:51	Night	00:00:10.9	85	90	73
106	2017/05/25	06:50:47	Night	00:00:09.8	83	89	72
107	2017/05/25	06:52:57	Night	00:00:21.7	96	100	72
108	2017/05/25	07:01:20	Day	00:00:13.0	91	95	73
109	2017/05/25	07:04:20	Day	00:00:17.5	87	94	71
110	2017/05/25	07:14:20	Day	00:00:11.2	84	91	73
111	2017/05/25	07:23:28	Day	00:00:12.1	90	95	72
112	2017/05/25	07:27:58	Day	00:00:15.0	94	98	71
113	2017/05/25	07:33:33	Day	00:00:21.1	91	98	70
114	2017/05/25	07:37:35	Day	00:00:11.1	93	96	71
115	2017/05/25	07:50:16	Day	00:00:10.9	85	90	75
116	2017/05/25	07:51:05	Day	00:00:10.4	87	93	71
117	2017/05/25	07:54:48	Day	00:00:16.6	91	95	70
118	2017/05/25	08:02:11	Day	00:00:11.3	91	95	71
119	2017/05/25	08:04:34	Day	00:00:14.3	89	94	71
120	2017/05/25	08:16:25	Day	00:00:11.5	88	94	74
121	2017/05/25	08:23:58	Day	00:00:11.3	94	97	72
122	2017/05/25	08:30:32	Day	00:00:14.6	85	92	72
123	2017/05/25	08:34:28	Day	00:00:16.8	92	97	71
124	2017/05/25	08:38:33	Day	00:00:11.7	80	87	69
125	2017/05/25	08:48:08	Day	00:00:12.5	89	95	76
126	2017/05/25	08:51:08	Day	00:00:10.9	88	94	73
127	2017/05/25	08:56:01	Day	00:00:15.8	88	95	71
128	2017/05/25	09:00:55	Day	00:00:09.6	82	88	71

129	2017/05/25	09:11:58	Day	00:00:15.2	91	95	71
130	2017/05/25	09:24:06	Day	00:00:27.8	92	96	73
131	2017/05/25	09:28:30	Day	00:00:18.1	92	96	71
132	2017/05/25	09:46:43	Day	00:00:16.7	85	93	70
133	2017/05/25	10:02:17	Day	00:00:09.3	84	89	73
134	2017/05/25	10:24:15	Day	00:00:09.3	90	94	73
135	2017/05/25	10:25:57	Day	00:00:18.1	92	96	71
136	2017/05/25	10:59:01	Day	00:01:15.2	91	100	72
137	2017/05/25	11:21:57	Day	00:00:14.0	88	93	68
138	2017/05/25	11:22:25	Day	00:00:12.2	90	94	72
139	2017/05/25	12:22:57	Day	00:00:28.9	92	99	71
140	2017/05/25	13:21:35	Day	00:00:41.8	86	93	70
141	2017/05/25	13:23:52	Day	00:00:18.8	87	93	70
142	2017/05/25	14:22:17	Day	00:00:10.9	88	92	71
143	2017/05/25	14:23:33	Day	00:00:14.5	93	97	71
144	2017/05/25	14:58:34	Day	00:00:10.5	97	99	71
145	2017/05/25	15:21:59	Day	00:00:16.9	85	91	73
146	2017/05/25	15:23:16	Day	00:00:18.0	88	93	70
147	2017/05/25	15:30:52	Day	00:00:28.4	89	96	70
148	2017/05/25	15:49:23	Day	00:00:10.7	86	91	71
149	2017/05/25	16:24:58	Day	00:00:16.0	90	95	74
150	2017/05/25	16:31:11	Day	00:00:16.4	87	94	71
151	2017/05/25	16:38:27	Day	00:00:11.7	85	92	73
152	2017/05/25	16:47:53	Day	00:00:28.5	92	97	71
153	2017/05/25	16:51:31	Day	00:00:10.2	92	95	75
154	2017/05/25	16:59:06	Day	00:00:11.0	94	97	71
155	2017/05/25	17:08:24	Day	00:00:18.0	92	97	72
156	2017/05/25	17:12:31	Day	00:00:18.1	85	91	72
157	2017/05/25	17:13:51	Day	00:00:22.5	85	92	74
158	2017/05/25	17:27:25	Day	00:00:11.5	85	91	75
159	2017/05/25	17:30:04	Day	00:00:30.6	91	96	72
160	2017/05/25	17:43:20	Day	00:00:25.8	86	95	72
161	2017/05/25	17:49:45	Day	00:01:05.7	92	98	70
162	2017/05/25	18:00:14	Day	00:01:17.0	86	97	72
163	2017/05/25	18:08:21	Day	00:00:50.6	89	96	69
164	2017/05/25	18:29:20	Day	00:00:28.3	85	94	74
165	2017/05/25	18:32:53	Day	00:00:17.8	94	98	71
166	2017/05/25	18:38:53	Day	00:00:12.2	91	96	72
167	2017/05/25	18:49:57	Day	00:01:16.3	88	98	73
168	2017/05/25	18:51:58	Day	00:02:07.1	89	101	73
169	2017/05/25	18:59:44	Day	00:00:09.8	89	93	71
170	2017/05/25	19:02:21	Day	00:01:06.4	88	96	71
171	2017/05/25	19:09:20	Day	00:00:36.7	87	94	71
172	2017/05/25	19:14:07	Day	00:00:59.0	90	100	73
173	2017/05/25	19:24:51	Day	00:03:33.5	88	104	77

174	2017/05/25	19:30:42	Day	00:00:32.0	94	98	70
175	2017/05/25	19:39:46	Day	00:00:28.9	87	95	71
176	2017/05/25	19:52:22	Day	00:00:11.2	85	91	71
177	2017/05/25	20:16:20	Day	00:01:34.4	87	100	72
178	2017/05/25	20:53:52	Day	00:00:12.6	86	91	73
179	2017/05/25	20:56:44	Day	00:00:21.7	88	95	71
180	2017/05/25	22:54:25	Night	00:00:14.0	92	97	73
181	2017/05/25	23:02:25	Night	00:00:30.3	104	109	75
182	2017/05/25	23:42:03	Night	00:00:20.3	92	96	70

Appendix J
Noise and Vibration Assessment

1100 El Camino Real

Millbrae, CA

Sustainable Communities Environmental Noise and Vibration Assessment

4 February 2020

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INTRODUCTION

This report presents the results of the environmental noise and vibration impact assessment conducted for the 1100 El Camino Real project in the City of Millbrae. The project site is bounded by El Camino Real to the southwest, Center Street to the northwest, existing commercial development to the southeast, and the Caltrain/UPRR railroad right of way to the northeast.

The project consists of a five story wood-framed structure with 384 residential units totaling approximately 400,000 square feet. A total of approximately 8,000 square feet of amenity space will also be incorporated. The building surrounds a five and a half story concrete parking structure with 548 stalls.

A six to seven story hotel with approximately 200 guestrooms will also be a part of the project on the southwest portion of the site along El Camino Real and is evaluated separately from the residential portion of the project.

This assessment summarizes the policies and standards applicable to the project and evaluates the significance of potential impacts resulting from the project as well as consistency with the Plan Bay Area 2040 EIR.

Those readers not familiar with the fundamental concepts of environmental noise and vibration may refer to **Appendix A**, and Figure A1.

ACOUSTICAL CRITERIA

The City of Millbrae General Plan establish guidelines, regulations, and policies designed to limit noise exposure at noise-sensitive land uses. The State of California also limits indoor noise levels in residential units. In addition, State CEQA guidelines set forth criteria that are used to determine whether a project will have a significant impact on the existing environment. The applicable criteria are as follows:

State CEQA Guidelines and Impact Criteria

The California Environmental Quality Act (CEQA) contains guidelines to evaluate the significance of noise attributable to a proposed project. This would include (but is not limited to) added traffic noise, mechanical equipment noise, and construction noise. CEQA asks the following applicable questions. Would the project result in:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

2. Generation of excessive groundborne vibration or groundborne noise levels?

3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, would the project expose people residing or working in the project area to excessive noise levels?

CEQA does not define the noise level increase that is considered substantial. Typically, the local general plan would establish limits with respect to allowable noise and vibration increases as discussed later in this report.

State of California – California Building Code (CBC)

The California Building Code regulates exterior noise insulation for residential uses. Section 1206 of the 2019 California Building Code requires that the indoor noise level in residential units of multi-family dwellings not exceed DNL 45 dB where the exterior noise level is greater than DNL 60 dB.

City of Millbrae – Noise Element of the General Plan

The City of Millbrae establishes the following noise goals and policies that are applicable to the project. These are also referred to as mitigation measures in the City of Millbrae General Plan EIR.

> Policy NS1.2: Protection of Residential Areas. Protect the noise environment in existing residential areas, requiring the evaluation of mitigation measures for projects under the following circumstances:
>
> a. The project would cause the Ldn to increase 3 dB(A) or more.
>
> b. Any increase would result in an Ldn greater than 60 dB(A).
>
> c. The Ldn already exceeds 60 dB(A).
>
> d. The project has the potential to generate significant adverse community response.

Chapter 7 of the City of Millbrae General Plan sets forth noise and land use compatibility standards for proposed land uses. Goal NS2.1 contains the following.

Policy NS2.1: Land Use Compatibility Standards. New development must meet acceptable exterior noise level standards. The "normally acceptable" noise standards for new land uses are established in the Noise and Land Use Compatibility Guidelines, as modified below:

a. The goal for maximum outdoor noise levels in residential areas is an Ldn of 60 dB. This level is a requirement to guide the design and location of future development and a goal for the reduction of noise in existing development. However, 60 Ldn is a goal which cannot necessarily be reached in all residential areas within the realm of economic or aesthetic feasibility. This goal will be applied where outdoor use is a major consideration (e.g., backyards in single-family housing developments and recreation areas in multi-family housing projects). The outdoor standard will not normally be applied to the small decks associated with apartments and condominiums but these will be evaluated on a case-by-case basis. Where the city determines that providing an Ldn of 60 dB or lower outdoors is not feasible, the outdoor goal may be increased to an Ldn of 65 dB. If the noise source is a railroad, then the outdoor noise exposure criterion should be 70 Ldn for future development, recognizing that train noise is characterized by relatively few loud events.

b. The indoor noise level as required by the State of California Noise Insulation Standards must not exceed an Ldn of 45 dB in multi-family dwellings. This indoor criterion shall also be the maximum acceptable indoor noise level in new single-family homes.

c. Interior noise levels in new single-family and multi-family residential units exposed to an Ldn of 60 dB or greater should be limited to a maximum instantaneous noise level in the bedrooms of 50 dBA. Maximum instantaneous noise levels in other rooms should not exceed 55 dB.

d. Appropriate interior noise levels in commercial, industrial, and office buildings are a function of the use of space. For example, the noise level in private offices should generally be quieter than for data processing rooms. Interior noise levels in offices generally should be maintained at 45 Leq (hourly average) or less.

e. If an area currently is below the desired noise standard, an increase in noise up to the maximum should not necessarily be allowed. The impact of a proposed project on an existing land use should be evaluated in terms of the increase in existing noise levels and potential for adverse community impact, regardless of the compatibility guidelines.

LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Land Use Type	Exterior Noise Exposure (L_{dn} or CNEL, dB)					
	55	60	65	70	75	80
Residential, hotels, and motels						
Outdoor sports and recreation, neighborhood parks and playgrounds						
Schools, libraries, museums, hospitals, personal care, meeting halls, churches						
Office buildings, business commercial and professional						
Auditoriums, concert halls, amphitheaters						
Industrial, manufacturing, utilities, and agriculture						

Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

Unacceptable
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with Noise Element policies.

- Policy NS2.4: Residential and Other Noise Sensitive Uses in Commercial or Industrial Areas. New residential or other noise sensitive development or activities will not be allowed where the noise level due to commercial or industrial noise sources will exceed the noise level standards set forth in the table titled Land Use Compatibility for Community Noise Environments, with the following modifications:

  a. In the event the measured ambient noise level exceeds the applicable noise level standard in any category expressed in the table, the applicable standard will be adjusted so as to equal the ambient noise level to establish a noise standard capable of being enforced through the City's Noise Ordinance.

  b. Each of the noise level standards specified in the table above will be reduced by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises due to the greater annoyance factor associated with these types of noise.

MAXIMUM ALLOWABLE NOISE EXPOSURE FOR STATIONARY NOISE SOURCES (1)

	Daytime (5) (7 AM to 10 PM)	Nighttime (2,5) (10 PM to 7 AM)
Hourly Leq, dB (3)	55	45
Maximum Level, dB (3)	70	65
Maximum Level, dB - Impulsive Noise (4)	65	60

(1) As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
(2) Applies only where the receiving land use operates or is occupied during nighttime hours.
(3) Sound level measurements shall be made with "slow" meter response.
(4) Sound level measurements shall be made with "fast" meter response.
(5) Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly Leq is at least 10 dB lower than the allowable level.

- Policy NS2.7: Compliance with State Noise Insulation Standards. The adopted Noise Element will serve as a guideline for compliance with the State's noise insulation standards. Recognizing the need to provide acceptable habitation environments, State law requires noise insulation of new multi-family dwellings constructed within the 60 dB Ldn noise exposure contours. It is a function of the Noise Element to provide noise contour information around all major sources in support of the sound transmission control standards (Chapter 2-35, Part 2, Title 24, California Administrative Code).

For construction noise, the General Plan EIR also includes the following mitigation measure. However, this does not appear to be included in the City's General Plan document.

a) Prohibit construction between the hours of 7:30 PM and 7:00 AM, consistent with City of Millbrae policy;

b) Equip all internal combustion engine-driven equipment with mufflers which are in good condition and appropriate for the equipment;

c) Locate stationary equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area;

d) Route construction traffic to and from project sites using main roadways including U.S. Highway 101, Millbrae Avenue, and El Camino Real. Prohibit construction truck traffic on residential streets, including Broadway.

California Department of Transportation Construction Vibration Criteria

The California Department of Transportation[1] (DOT) provides vibration design criteria for two scenarios: human perception and construction damage. These tables are included below as guidelines for the project vibration levels. Transient vibrations are classified as short impulsive events that are short in duration (e.g., debris falling). Continuous vibrations are more sustained vibration events over longer periods of time (e.g., jackhammering, drilling).

Table 6 of the DOT document describes the human response to different levels of ground-borne vibration for transient events, which would be representative of vibration caused by most construction equipment.

PPV (in/sec)	Human Response
2.0	Severe
0.9	Strongly perceptible
0.24	Distinctly perceptible
0.035	Barely perceptible

Table 5 of the DOT document describes the human response to different levels of ground-borne vibration for continuous events, which would be representative of vibration caused by machines or traffic.

PPV (in/sec)	Human Response
0.4 -0.6	Unpleasant
0.2	Annoying
0.1	Begins to annoy
0.08	Readily perceptible
0.006–0.019	Threshold of perception

Table 12 of the DOT document provides a summary of the building effects when exposed to continuous vibration. Thresholds for continuous vibrations are lower than those for transient vibrations and are therefore more conservative. These are standard significance thresholds used in the industry to determine impacts of groundbourne vibrations on structures.

PPV (in/sec)	Effect on Buildings
0.4 to 0.6	Architectural damage and possible minor structural damage
0.2	Threshold at which there is a risk of architectural damage to normal dwelling houses (houses with plastered walls and ceilings)
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006 to 0.019	Vibration unlikely to cause damage of any type

1 See Transportation and Construction Vibration Guidance Manual, September 2013

Finally, a number of studies have identified maximum vibrations levels for preventing damage to historic or sensitive buildings. These are found in Tables 10, 11, 14, and 15 of the DOT document and are presented below.

Description of Structure	**Limiting PPV (in/sec)**		**Study**
	Transient (single event)	**Continuous (steady state)**	
Class IV: construction very sensitive to vibration; objects of historic interest	0.3	0.12	Swiss Association of Standardization Vibration Damage Criteria
Historic and Sensitive Buildings	0.25–0.5	0.12–0.25	Konan Vibration Criteria
Historic and some old buildings	0.5		Dowding Building Structure Vibration Criteria
Historic sites or other critical locations	0.1		AASHTO Maximum Vibration Levels for Preventing Damage
Residential buildings, plastered walls	0.2–0.3		AASHTO Maximum Vibration Levels for Preventing Damage

Federal Transit Administration – Transit Vibration Impact Criteria

The Federal Transit Administration (FTA)[2] discusses methods for evaluating ground-borne vibration (GBV) levels generated by rail transit (e.g., freight, light rail) with respect to various land-uses. For this project we are using the FTA methodology to evaluate potential impacts with regards to vibration from existing rail operations (freight and commuter) northeast of the project. This document outlines two methods, a "general assessment" based on frequency of events, and a "detailed assessment", which takes into account the 1/3-octave band frequency characteristics of each vibration event and compares it to a daytime and nighttime criterion. Since the City of Santa Clara Noise Element does not indicate which method to use, we have included analysis for both.

As identified in the FTA document the general and detailed assessment criteria provide a threshold for predicting annoyance from ground-borne vibration as a result of rail operations, which would be considered a significant impact.

General Assessment Criteria

Table 1, below, includes the FTA criteria for ground-borne vibration when using the general assessment.

2 Federal Transit Administration, "Transit Noise and Vibration Impact Assessment", May 2006.

FTA Criteria – General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/sec)		
	Frequent Events	Occasional Events	Infrequent Events
Category 2: Residences and buildings where people normally sleep.	72	75	80
Category 3: Institutional land uses with primarily daytime use	75	78	83

Frequent events are defined as more than 70 vibration events of the same source per day. Occasional events are defined as between 30 and 70 vibration events of the same source per day and infrequent events are fewer than 30 vibration events of the same source per day. It should also be noted that the levels above the criteria are in terms of overall linear-weighted vibration levels.

Detailed Assessment Criteria

The daytime and nighttime detailed assessment vibration criteria for residential uses are shown below in Table 2.

FTA Criteria – Detailed Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/sec)	
	Daytime	Nighttime
Residential	78	72
Commercial	84	n/a

The above criterion applies to each third octave-band frequency between 8 and 80 Hz.

Plan Bay Area 2040 EIR

As part of the sustainable communities environmental assessment, we also reviewed Plan Bay Area 2040 EIR impacts and mitigation measures. Mitigation measures from this document shown below have been applied to the project where applicable to reduce potential impacts to a less than significant level.

Project Specific Impacts and Mitigation Measures (Plan Bay Area 2040 EIR)

Impact 2.6-1: Implementation of the proposed project could result in exposure of persons to or generation of temporary construction noise levels and/or ground vibration levels in excess of standards established by local jurisdictions or other applicable regulatory agencies.

2.6-1(a) To reduce construction noise levels, implementing agencies and/or project sponsors shall:

- comply with local construction-related noise standards, including restricting construction activities to permitted hours as defined under local jurisdiction regulations (e.g.; Alameda County Code restricts construction noise to between 7:00 am and 7:00 pm on weekdays and between 8:00 am and 5:00 pm on weekend);
- properly maintain construction equipment and outfit construction equipment with the best available noise suppression devices (e.g. mufflers, silencers, wraps);
- prohibit idling of construction equipment for extended periods of time in the vicinity of sensitive receptors;
- locate stationary equipment such as generators, compressors, rock crushers, and cement mixers a minimum of 50 feet from sensitive receptors, but further if possible;
- erect temporary construction-noise barriers around the construction site when adjacent occupied sensitive land uses are present within 75 feet;
- use noise control blankets on building structures as buildings are erected to reduce noise emission from the site; and
- use cushion blocks to dampen impact noise from pile driving.

2.6-1(b) To reduce construction vibration levels, implementing agencies and/or project sponsors shall comply with the following:

- to minimize disturbance of receptors within 550 feet of pile-driving activities, implement "quiet" pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; and
- to reduce structural damage, where pile driving is proposed within 50 feet of an older or historic building, engage a qualified geotechnical engineer and qualified historic preservation professional (for designated historic buildings only) and/or structural engineer to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of nearby (i.e., within 50 feet) historic structures that would be exposed to pile-driving activity. If recommended by the pre-construction assessment, for structures or facilities within 50 feet of pile-driving activities, the project sponsors shall require ground vibration monitoring of nearby historic structures. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the pre-construction surveying of potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary. The pre-construction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities and identify corrective measures to be taken should monitored vibration levels indicate the potential for building damage. In the event of unacceptable ground movement with the potential to cause structural damage, all impact work shall cease and corrective measures shall be implemented to minimize the risk to the subject, or adjacent, historic structure.

Impact 2.6-2: Implementation of the proposed project could result in long-term permanent increases in traffic-noise levels that exceed applicable thresholds.

2.6-2 For all new development that could be located within the 70 dBA CNEL noise contour of a roadway (within 270 feet of the roadway's centerline based on freeways with the greatest volumes in the region), a site-specific noise study shall be conducted by a qualified acoustical engineer or noise specialist, to evaluate noise exposure at new receptors and recommend appropriate measures to reduce noise exposure. To reduce exposure from traffic-noise, lead agencies and/or project sponsors shall consider mitigation measures including, but not limited to those identified below:

- design adjustments to proposed roadway or transit alignments to reduce noise levels in noise sensitive areas (e.g., below-grade roadway alignments can effectively reduce noise levels in nearby areas);
- use techniques such as landscaped berms, dense plantings, reduced-noise paving materials, and traffic calming measures in the design of their transportation improvements;
- contribute to the insulation of buildings or construction of noise barriers around sensitive receptor properties adjacent to the transportation improvement;
- use land use planning measures, such as zoning, restrictions on development, site design, and buffers to ensure that future development is noise compatible with adjacent transportation facilities and land uses;
- construct roadways so that they are depressed below-grade of the existing sensitive land uses to create an effective barrier between new roadway lanes, roadways, rail lines, transit centers, park- n-ride lots, and other new noise generating facilities; and
- maximize the distance between noise-sensitive land uses and new noise-generating facilities and transportation systems.

Impact 2.6-3: Implementation of the project could result in long-term permanent increases in rail transit noise levels that exceed applicable thresholds.

2.6-3(a) When finalizing development project site plans, noise-sensitive outdoor use areas shall be sited as far away from adjacent noise sources as possible and site plans shall be designed to shield noise-sensitive spaces with buildings or noise barriers whenever possible.

2.6-3(b) When finalizing development project site plans or transportation project design, sufficient setback between occupied structures and the railroad tracks shall be provided to minimize noise exposure to the extent feasible.

2.6-3(c) Prior to project approval, the implementing agency for a transportation project shall ensure that the transportation project sponsor applies the following mitigation measures (or other technologically feasible measures) to achieve a site-specific exterior noise level of 70 dBA CNEL (or other applicable local noise standard) and interior noise level of 45 dBA CNEL at sensitive land uses, as applicable for transit projects:

- use of sound reduction barriers such as landscaped berms and dense plantings,
- locate rail extension below grade as feasible,
- use of damped wheels on railway cars,
- use of vehicle skirts,
- use under car acoustically absorptive material, and
- install sound insulation treatments for impacted structures.

Impact 2.6-4: Implementation of the proposed project could result in long-term permanent increase in transit-vibration levels that exceed applicable thresholds.

2.6-4(a) When finalizing site plans for a development or transportation project, implementing agencies shall conduct a project-level noise and vibration assessments for new residential or other sensitive land uses to be located within 200 feet of an existing rail line. These studies shall be conducted by a qualified acoustical engineer or noise specialist to determine vibration levels at these projects and recommend feasible mitigation measures (e.g., insulated windows and walls, sound walls or barriers, distance setbacks, or other construction or design measures) that would reduce vibration-noise to an acceptable level.

2.6-4(b) Prior to project approval, the implementing agencies shall ensure that project sponsors apply the following mitigation measures to achieve FTA recommended vibration levels of 72 VdB at residential land uses, or other applicable standard, for rail extension projects:

- use of high resilience (soft) direct fixation fasteners for embedded track;
- install ballast mat, or other approved technology for the purpose of reducing vibration, for ballast and tie track; and
- conduct regular rail maintenance including rail grinding, wheel truing to re-contour wheels, providing smooth running surfaces.

Impact 2.6-5: Implementation of the proposed project could result in general increases in ambient noise and associated exposure of sensitive receptors to new or additional stationary noise sources in excess of the standards established in the local general plan or noise ordinance or applicable standards of other agencies.

2.6-5 To reduce exposure to new and existing sensitive receptors from non-transportation noise associated with projected development, implementing agencies and/or project sponsors shall implement measures, where feasible and necessary based on project- and site-specific considerations that include, but are not limited to:

- Local agencies approving land use projects shall require that routine testing and preventive maintenance of emergency electrical generators be conducted during the less sensitive daytime hours (per the applicable local municipal code). Electrical generators or other mechanical equipment shall be equipped with noise control (e.g., muffler) devices in accordance with manufacturers' specifications.
- Local agencies approving land use projects shall require that external mechanical equipment, including HVAC units, associated with buildings incorporate features designed to reduce noise to below 70 dBA CNEL or the local applicable noise standard. These features may include, but are not limited to, locating equipment within equipment rooms or enclosures that incorporate noise reduction features, such as acoustical louvers, and exhaust and intake silencers. Equipment enclosures shall be oriented so that major openings (i.e., intake louvers, exhaust) are directed away from nearby noise-sensitive receptors.

Impact 2.6-6: Implementation of the proposed project could result in exposure to people residing or working in the planning area to excessive noise levels where an airport land use plan is adopted or, where such a plan has not been adopted, within two miles of a public airport, public use airport, or private airstrip.

2.6-6 Local lead agencies for all new development proposed to be located within an existing airport influence zone, as defined by the locally adopted airport land use compatibility plan or local general plan, shall require a site-specific noise compatibility. The study shall consider and evaluate existing aircraft noise, based on specific aircraft activity data for the airport in question, and shall include recommendations for site design and building construction to ensure compliance with interior noise levels of 45 dBA CNEL, such that the potential for sleep disturbance is minimized.

SECTION 3.0 – EXISTING NOISE AND VIBRATION ENVIRONMENT

The 30 July 2020 Environmental Noise Assessment prepared by Bollard Acoustical Consultants includes information on existing noise and vibration levels at the site. On-site measured noise levels and measurements locations are shown in the figure and table below from the Bollard report. Maximum noise levels are controlled by trains pass-bys at Site 3 and aircraft as well as traffic along El Camino Real at Site 1.

Summary of Long-Term Ambient Noise Monitoring Results[1]
Anton Millbrae – Millbrae, California

Site	Date	L_{dn}, dB	Average Measured Hourly Noise Levels (dB) Daytime (7 a.m. to 10 p.m.) L_{eq}	Daytime L_{max}	Nighttime (10 p.m. to 7 a.m.) L_{eq}	Nighttime L_{max}
Site 1 – West side of project site, approximately 65' from centerline of El Camino Real	5/24/17	69	66	85	61	79
	5/25/17	69	67	85	61	79
Site 2 – North side of project site, approximately 35' from centerline of Center Street	5/24/17	65	60	80	59	79
	5/25/17	64	60	80	57	77
Site 3 – East side of project site, approximately 90' from centerline of railroad tracks	5/24/17	72	68	94	65	83
	5/25/17	76	73	92	68	85

Notes:
[1] Long-term ambient noise monitoring locations are identified on Figure 1 as sites 1-3.
Source: Bollard Acoustical Consultants, Inc. (2017)

Vibration measurements were also performed at monitoring site 1 with results included below from the Bollard report.

Railroad Vibration Monitoring Results Analysis
Anton Millbrae – Millbrae, California

Date	Daily Number of Passbys	Vibration Level Per Passby, VdB RMS (Average)
Wednesday, May 24, 2017	96	72
Thursday, May 25, 2017	86	72

Source: Bollard Acoustical Consultants, Inc. (2017)

RESIDENTIAL IMPACT DISCUSSION

This analysis evaluates the potential noise impacts of the project with relation to the criteria included above.

Impact 1: Implementation of the proposed project could result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction activities would include use of heavy equipment for grading and other activities through completion of buildings and landscaping. Heavy trucks would travel to, from, and within the development areas to move soil, equipment, and building materials. Smaller equipment, such as jack hammers, pneumatic tools, and saws could also be used throughout each of the construction phases in various areas. The noise and vibration associated with these activities would be generated within the entire project area and at off-site locations near any infrastructure improvements.

Existing residences and commercial buildings located adjacent to the project site with direct line-of-sight to construction activities may be affected. This includes existing residential receptors across Center and Monterey Streets to the northwest and northeast that are 50-ft and 260-ft away, respectively, The San Francisco Water Department offices to the southeast (directly abutting the project), and commercial retail use across El Camino Real to the southwest, that are approximately 300-ft away. Potential construction noise impacts would vary with distance and shielding provided by existing buildings.

Construction Noise

The following construction equipment and phasing provided to us by Anton Development Company is shown in Table 1 for the residential portion of the project.

Table 1 – Construction Phasing, Schedule, and Equipment List

Construction Phase	Schedule	Equipment
Demolition	April to May 2021	Concrete/Industrial saws Excavators Rubber-tired dozers
Site Preparation	April to October 2021	Tractors Loaders Backhoes
Grading/Excavation	June to October 2021	Excavators Graders Rubber-tired dozers
Trenching and Foundation	June 2021 to February 2022	Tractors Loaders Concrete trucks/pump Backhoe
Building Structure	February 2022 to February 2024	Forklift Generator Tractors Loaders Backhoes Welder
Building Interior and Architectural Coating	March 2023 to April 2024	Air compressor Air tools
Paving	February to April 2024	Pavers Rollers Tractors Loaders Backhoes

Based on the construction phases and equipment list, estimated construction noise levels generated are expected to be as shown in Table 2. For the purposes of this analysis, we have analyzed noise levels along the southeast property line to the façade of the San Francisco Water District office building, 280-ft away.

Table 2 – Estimated Construction Noise Levels

Phase	Estimated Maximum Instantaneous L_{max} Noise Level (dBA at 50-feet)	Estimated Maximum Hourly L_{eq} Noise Level (dBA at 50 feet)[3]	Estimated Maximum Hourly L_{eq} Noise Level (dBA at 260 feet)
Demolition	90	83	73
Site Preparation	84	80	70
Grading/Excavation	85	81	71
Trenching and Foundation	84	80	70

3 Construction noise levels are calculated using the equipment noise levels and acoustical usage factors from Section 9 of the Federal Highway Administration Highway Traffic Noise Construction Noise Handbook.

Phase	Estimated Maximum Instantaneous L_{max} Noise Level (dBA at 50-feet)	Estimated Maximum Hourly L_{eq} Noise Level (dBA at 50 feet)[3]	Estimated Maximum Hourly L_{eq} Noise Level (dBA at 260 feet)
Building – Exterior	84	80	70
Building – Interior	78	74	64
Paving	84	80	70

The City of Millbrae does not have specific noise limits for construction in the General Plan. Furthermore, the municipal code does not have specific noise limits, and instead sets allowable construction hours (see sections 9.05.040 and 9.10.050). Therefore, based on the Plan Bay Area 2040 EIR, it is assumed that construction noise limits promulgated by Caltrans and the FTA would apply as follows.

- Caltrans' 86 dB L_{max} at a distance of 50-feet
- FTA: Construction Noise Criteria, not to exceed ambient levels plus 10 dB

Based on the estimated equipment noise levels above and our on-site data, nearby noise-sensitive locations would likely experience construction noise that is louder than the ambient traffic noise by more than 10 dB at residences along Center Street. Furthermore, only concrete saws are expected to generate noise levels exceeding 86 dB at 50-feet. However, based on the implementation of Plan Bay Area 2040 mitigation measure 2.6-1(a) as well as following the construction hours and noise reduction techniques from the City of Millbrae General Plan EIR, including erecting temporary construction noise barriers around areas where concrete sawing is expected to take place, it would be mitigated to a less than significant impact.

Project Mechanical Equipment Noise

It is anticipated that the residential building will be fully air-conditioned and that heating, ventilating, and air-conditioning units could be located in areas exposed to adjacent property lines. The following type of equipment may be included for the residential portion of the development. Specific equipment will be confirmed during the design phase.

- Outdoor condensing units similar to Rheem RP1518BJ for residential units and amenity spaces
- Corridor exhaust and rooftop scavenger fans similar to Cook 165 ACRU-B
- Generator (if required)
- Parking structure is expected to be open air with no mechanical ventilation

Assuming exterior mechanical equipment or exhaust air openings will be largely confined to the roof of the building, they could be as close as 80 feet from the nearest residential property line (across Center Street). At this distance, if we assume equipment is located at the edge of the building with line-of-sight to adjacent residences, equipment near the residences along Center Street would need to be selected with noise levels no louder than 70 dB at a distance of 5 feet if it is to operate during nighttime hours, or 80 dB if operating during daytime hours only. The Rheem condensing unit has a sound power rating of 75 dBA, which corresponds to a noise level of approximately 62 dBA at 5 feet. An exhaust fan similar to the Cook model indicated above would typically generate approximately 61 dBA at 5 feet. Therefore, the individual pieces of equipment would be expected to meet the City of Millbrae Noise Ordinance. Depending on the final placement in relation to other equipment (which may increase noise levels due to combined noise), as well as parapet/barrier heights and shielding (which would reduce noise levels), noise levels may vary. An acoustical engineer should review the design as it is developed to confirm noise levels and determine if additional mitigation is required, such as barriers and relocating equipment to more shielded locations farther from sensitive receivers. With implementation of mitigation measure 2.6-5 from the Plan Bay Area 2040 EIR, and Policy NS2.4, this would be considered a less than significant impact.

Project Outdoor-Use Space

A centralized outdoor-use space, which includes a pool is located in the south courtyard surrounded by the project building on all sides, with a partial opening to the southwest. Only a small portion of this courtyard would have line-of-sight to existing adjacent residential properties across Center Street more than 250-ft away. Average daytime noise levels along Center Street in this area are approximately 60 dBA, with maximum instantaneous noise levels around 80 dBA. Given the location and distance from nearby sensitive receivers, noise generated by residents at the pool is not expected to result in a significant increase in noise levels. The fitness lawn located in the north courtyard is completely surrounded by the project building with no line-of-sight to existing adjacent receivers.

Traffic Noise

The relatively high traffic volumes on nearby El Camino Real is the primary source of environmental vehicle-related noise in the area. We received traffic volume information from the project traffic engineer for 16 study area intersections around the project site. The traffic volume information included projected volumes for the "Existing" and "Background" conditions. Traffic volumes for these scenarios at all intersections were compared to calculate the relative increase in traffic noise attributable to the proposed project. Since existing L_{dn} noise levels on adjacent roadways are above 60 dBA, an increase in noise levels would be considered significant at noise-sensitive land uses if the project would result in an L_{dn} noise level increase of 3 dBA or more.

Calculated noise levels indicate that the project would not substantially increase traffic noise levels at noise-sensitive receptors in the vicinity. All intersections outside of the project site are calculated to have an increase of no more than 2 dBA between "no project" and "with project" conditions, which would be considered a less-than-significant impact.

Finally, pursuant to Mitigation Measure 2.6-2, a project-specific acoustical analysis will be prepared by a qualified acoustical consultant prior to obtaining a building permit as the design is refined to determine specific mitigation measures such that the proposed project would not be exposed to exterior noise levels greater than those considered compatible per the City of Millbrae General Plan, the State Building Code, and CALGreen. With the implementation of mitigation measure 2.6-2 from the Plan Bay Area 2040 EIR and Policies NS 1.2 and 2.1 from the City of Millbrae General Plan EIR, this would be considered a less than significant impact. It is noted that this analysis is provided for informational purposes and to demonstrate compliance with General Plan, Plan Bay Area, and code requirements – CEQA does not require analysis or mitigation of the impacts *the environment has on a project*, but rather *a project has on the environment*.

Rail Transit Noise

The project site is located along the Caltrain, UPRR, and BART (underground) railroad right of way on the northeast side of the project site. No analysis has been performed related to the project's effect on existing or future rail transit projects, however, the project itself may be exposed to noise levels in excess of the City's General Plan and City requirements. The 22 February 2018 Environmental Noise Assessment outlines preliminary mitigation measures (e.g., exterior façade STC ratings) consistent with the Plan Bay Area 2040 EIR to reduce exterior and interior noise levels to meet the applicable City of Millbrae and State standards. Furthermore, the following statement was made regarding future rail transit noise levels.

> *According to the Peninsula Corridor Electrification Project EIR (December 2014), approximately 75 percent of the Caltrain locomotive and passenger car fleet for the San Francisco to San Jose service will be replaced with Electric Multiple Unit (EMU) technology by 2020. By 2040, 100 percent of the service would be with EMUs. The EIR indicated that although maximum train speeds would not*

change, there would be a greater number of total trains per day. The EMUs are reportedly quieter than corresponding diesel locomotives. However, horn usage for each train passby would remain the same since the location and number of roadway crossings and stations would not be changed as a result of the switch to EMUs. At the two studied Millbrae locations, the EIR concluded that there would be no change in train noise levels from existing conditions to proposed project conditions. For the Anton Millbrae study, the aforementioned +2 dB increase for future conditions relative to measured existing conditions would be considered conservative.

Therefore, rail transit noise would be considered a less than significant impact with implementation of mitigation measures 2.6-3(a) through (c) from the Plan Bay Area 2040 EIR, Policy NS2.1 from the City of Millbrae General Plan EIR, and items identified in the 22 February 2018 Environmental Noise Assessment. (it is noted that this analysis is provided for informational purposes and to demonstrate compliance with General Plan, Plan Bay Area and code requirements – CEQA does not otherwise require analysis or mitigation of the impacts the *environment* has on a *project*, but rather a *project* has on the *environment*).

Impact 2: Implementation of the proposed project could result in the generation of excessive groundborne vibration or groundborne noise levels.

Temporary construction and vibration generated by nearby rail transit sources are the primary sources of vibration affecting the project and nearby receivers. Operation of the project itself is not expected to generate significant vibration and associated groundborne noise levels.

Construction Vibration

Primary vibration producing construction activities are likely to occur during demolition and site preparation with the use of Dozers and possibly hydraulic breakers to clear the site and prepare the foundation of the building. Pile driving is not expected. As indicated in the criteria section above, the risk of damage to "normal dwelling houses" may begin to occur at a limit of 0.2 in/sec PPV for transient vibration events. For continuous vibration, human annoyance may begin to occur at a limit of 0.1 in/sec PPV. The nearest structures are located approximately 50-feet from the project site across Center Street. At this distance the vibration levels could be up to the following for various pieces of equipment as shown in Table 3.

Table 3 – Estimated Construction Vibration Levels

Equipment	Reference Vibration Level at 25-ft (in/sec PPV)	Vibration Level at 50-ft (in/sec PPV)
Large Bulldozer	0.089	0.03
Loaded Trucks	0.076	0.03
Hydraulic Breaker	.089 to 0.24	.03 to .08
Jackhammer	0.035	0.01

As indicated in Table 3, vibration levels are not expected to exceed the 0.1 in/sec PPV threshold for human annoyance, or the 0.2 in/sec PPV threshold for damage to "normal dwelling houses". At receptors further setback, vibration levels would be expected to be even lower and construction vibration and associated groundborne noise would be considered a less than significant impact with no mitigation required.

Rail Vibration

The project site is located along the Caltrain, UPRR, and BART (underground) railroad right of way on the northeast side of the project site. No analysis has been performed related to the project's effect on existing or future rail transit projects, however, the project itself may be exposed to vibration levels in excess of the Federal Transit Administration guidelines. The 22 February 2018 Environmental Noise Assessment measured vibration at a setback of approximately 90-ft from the centerline of the tracks and found that the average vibration velocity level was approximately 72 VdB. The proposed project setback is approximately 120-ft and it is expected that vibration would be even lower at this setback and would not exceed the 72 VdB FTA criteria.

Therefore, rail transit vibration and associated groundborne noise would be considered a less than significant impact and no mitigation is required. (it is noted that this analysis is provided for informational purposes and to demonstrate compliance with General Plan, Plan Bay Area and code requirements – CEQA does not otherwise require analysis or mitigation of the impacts the *environment* has on a *project*, but rather a *project* has on the *environment*).

Impact 3: Implementation of the proposed project could expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport.

The project site is located near San Francisco International Airport, approximately 3,500 feet from the southern edge of runway 1L. The main departure and arrival runways are 28L and 28R, which are over 6,000 feet away. The project is also located outside of the CNEL 65 dB contour line, which is considered satisfactory for residential uses in the City's General Plan. Furthermore, the 22 February 2018 Environmental Noise Assessment has analyzed single event maximum noise levels from aircraft flyovers and has found them to be approximately 80 dBA. The assessment concludes that interior noise levels can be reduced to a less than significant impact and meet the City's General Plan requirements and State standards with the incorporation of mitigation at the exterior façade. With incorporation of mitigation measure 2.6-6 from the Plan Bay Area 2040 EIR, Policy NS 2.1 and 2.7 from the City of Millbrae General Plan EIR, and items identified in the 22 February 2018 Environmental Noise Assessment, this would be considered a less than significant impact.

HOTEL IMPACT DISCUSSION

This analysis evaluates the potential noise impacts of the project with relation to the criteria included above.

Impact 1: Implementation of the proposed project could result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction activities would include the use of heavy equipment for grading and other activities through completion of buildings and landscaping. Heavy trucks would travel to, from, and within the development areas to move soil, equipment, and building materials. Smaller equipment, such as jack hammers, pneumatic tools, and saws could also be used throughout each of the construction phases in various areas. The noise and vibration associated with these activities would be generated within the entire project area and at off-site locations near any infrastructure improvements.

Existing residences and commercial buildings located adjacent to the project site with direct line-of-sight to construction activities may be affected. This includes existing residential receptors across Center Street to the northwest that are 215-ft away. The San Francisco Water Department offices to the southeast (directly abutting the project), and commercial retail use across El Camino Real to the southwest, that are approximately 120-ft away. Potential construction noise impacts would vary with distance and shielding provided by existing buildings.

Construction Noise

The following construction equipment and phasing information provide to us by Anton Development shown in Table 4 is expected for the residential portion of the project.

Table 4 – Construction Phasing, Schedule, and Equipment List

Construction Phase	Schedule	Equipment
Demolition	October to November 2022	Concrete/Industrial saws Excavators Rubber-tired dozers
Site Preparation	October 2022 to April 2023	Tractors Loaders Backhoes
Grading/Excavation	December 2022 to April 2023	Excavators Graders Rubber-tired dozers
Trenching and Foundation	December 2022 to August 2023	Tractors Loaders Concrete trucks/pump Backhoe
Building Structure	August 2023 to August 2025	Forklift Generator Tractors Loaders Backhoes Welder
Building Interior and Architectural Coating	September 2024 to October 2025	Air compressor Air tools
Paving	August 2025 to October 2025	Pavers Rollers Tractors Loaders Backhoes

Based on the construction phases and equipment list, estimated construction noise levels generated are expected to be as shown in Table 5. For the purposes of this analysis, we have analyzed noise levels along the southeast property line to the façade of the San Francisco Water District office building, 280-ft away.

Table 5 – Estimated Construction Noise Levels

Phase	Estimated Maximum Instantaneous L_{max} Noise Level (dBA at 120-feet)	Estimated Maximum Hourly L_{eq} Noise Level (dBA at 120 feet)[4]	Estimated Maximum Hourly L_{eq} Noise Level (dBA at 215 feet)
Demolition	82	75	70
Site Preparation	76	72	67
Grading/Excavation	77	73	68
Trenching and Foundation	76	72	67
Building – Exterior	76	72	67
Building – Interior	70	66	61
Paving	76	72	67

The City of Millbrae does not have specific noise limits for construction in the General Plan. Therefore, based on the Plan Bay Area 2040 EIR it is assumed that construction noise limits promulgated by Caltrans and the FTA would apply as follows.

- Caltrans' 86 dB L_{max} at a distance of 50-feet
- FTA: Construction Noise Criteria, not to exceed ambient levels plus 10 dB

Based on the estimated equipment noise levels above, and our on-site data, nearby noise-sensitive locations could experience construction noise that is louder than the ambient traffic noise by more than 10 dB at residences along Center Street. Furthermore, only concrete saws are expected to generate noise levels exceeding 86 dB at 50-feet. However, based on the implementation of Plan Bay Area 2040 mitigation measure 2.6-1(a), as well as following the construction hours and noise reduction techniques from the City of Millbrae General Plan EIR, including erecting temporary construction noise barriers around areas where concrete sawing is expected to take place, it would be mitigated to a less than significant impact.

Project Mechanical Equipment Noise

It is anticipated that the hotel will be fully air-conditioned and that heating, ventilating, and air-conditioning units could be located in areas exposed to adjacent property lines. The following type of equipment may be included for the hotel portion of the development. Specific equipment will be confirmed during the design phase.

- Outdoor heat pump for guestroom fan coils and some amenity spaces (similar to Samsung AC048JXADCH)
- Rooftop dedicated outside air units (similar to AAON)
- Rooftop packaged heat pumps (similar to Landmark KD/KHB)
- Various exhaust and supply fans
- Generator (if required)
- Parking structure is expected to be open air with no mechanical ventilation

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[4] Construction noise levels are calculated using the equipment noise levels and acoustical usage factors from Section 9 of the Federal Highway Administration Highway Traffic Noise Construction Noise Handbook

Assuming exterior mechanical equipment or exhaust air openings will be largely confined to the roof of the building, they could be as close as 215 feet from the nearest residential property line (across Center Street). At this distance, if we assume equipment is located at the edge of the building with line-of-sight to adjacent residences, equipment near the residences along Center Street would need to be selected with noise levels no louder than 78 dB at a distance of 5 feet if it is to operate during nighttime hours, or 88 dB if operating during daytime hours only. The Samsung heat pump unit has a sound pressure level rating of 55 dBA, presumably at around 5 feet. The RTU and rooftop heat pump units are rated at a sound power level of approximately 93 and 88 dBA, respectively, and corresponds a sound pressure level of 76 to 81 dBA at 5 feet. Exhaust/supply fans would vary in size and typically generate lower noise levels than the rooftop units. Therefore, the individual pieces of equipment would be expected to meet the City of Millbrae Noise Ordinance. Depending on the final placement in relation to other equipment (which may increase noise levels due to combined noise) as well as parapet/barrier heights and shielding (which would reduce noise levels), noise levels may vary. An acoustical engineer should review the design as it is developed to confirm noise levels and determine if additional mitigation is required such as barriers and relocating equipment to more shielded locations farther from sensitive receivers. With implementation of mitigation measure 2.6-5 from the Plan Bay Area 2040 EIR, and Policy NS2.4, this would be considered a less than significant impact.

Traffic Noise

The relatively high traffic volumes on nearby El Camino Real is the primary source of environmental vehicle-related noise in the area. We received traffic volume information from the project traffic engineer for 16 study area intersections around the project site. The traffic volume information included projected volumes for the "Existing", and "Background" conditions. Traffic volumes for these scenarios at all intersections were compared to calculate the relative increase in traffic noise attributable to the proposed project. Since existing L_{dn} noise levels on adjacent roadways are above 60 dBA, an increase in noise levels would be considered significant at noise-sensitive land uses if the project would result in an L_{dn} noise level increase of 3 dBA or more.

Calculated noise levels indicate that the project would not substantially increase traffic noise levels at noise-sensitive receptors in the vicinity. All intersections outside of the project site are calculated to have an increase of no more than 2 dBA between "no project" and "with project" conditions, which would be considered a less-than-significant impact.

Finally, pursuant to mitigation measures 2.6-2, a project-specific acoustical analysis will be prepared by a qualified acoustical consultant as the design is refined to determine specific mitigation measures such that the proposed project would not be exposed to exterior noise levels greater than those considered compatible per the City of Millbrae General Plan, the State Building Code, and CALGreen. With the implementation of mitigation measure 2.6-2 from the Plan Bay Area 2040 EIR and Policies NS 1.2 and 2.1 from the City of Millbrae General Plan EIR, this would be considered a less than significant impact. (it is noted that this analysis is provided for informational purposes and to demonstrate compliance with General Plan, Plan Bay Area and code requirements – CEQA does not otherwise require analysis or mitigation of the impacts the *environment* has on a *project*, but rather a *project* has on the *environment*).

Rail Transit Noise

The project site is located along the Caltrain, UPRR, and BART (underground) railroad right of way on the northeast side of the project site. No analysis has been performed related to the project's effect on existing or future rail transit projects, however, the project itself may be exposed to noise levels in excess of the City's General Plan and City requirements. The 22 February 2018 Environmental Noise Assessment outlines preliminary mitigation measures (e.g., exterior façade STC ratings) consistent with the Plan Bay Area 2040 EIR to reduce exterior and interior noise levels to meet the applicable City and State standards. Furthermore, the following statement was made regarding future rail transit noise levels.

> *According to the Peninsula Corridor Electrification Project EIR (December 2014), approximately 75 percent of the Caltrain locomotive and passenger car fleet for the San Francisco to San Jose service will be replaced with Electric Multiple Unit (EMU) technology by 2020. By 2040, 100 percent of the service would be with EMUs. The EIR indicated that although maximum train speeds would not change, there would be a greater number of total trains per day. The EMUs are reportedly quieter than corresponding diesel locomotives. However, horn usage for each train passby would remain the same since the location and number of roadway crossings and stations would not be changed as a result of the switch to EMUs. At the two studied Millbrae locations, the EIR concluded that there would be no change in train noise levels from existing conditions to proposed project conditions. For the Anton Millbrae study, the aforementioned +2 dB increase for future conditions relative to measured existing conditions would be considered conservative.*

Therefore, rail transit noise would be considered a less than significant impact with implementation of mitigation measures 2.6-3(a) through (c) from the Plan Bay Area 2040 EIR, Policy NS2.1 from the City of Millbrae General Plan EIR, and items identified in the 22 February 2018 Environmental Noise Assessment. (it is noted that this analysis is provided for informational purposes and to demonstrate compliance with General Plan, Plan Bay Area and code requirements – CEQA does not otherwise require analysis or mitigation of the impacts the *environment* has on a *project*, but rather a *project* has on the *environment*).

Impact 2: Implementation of the proposed project could result in the generation of excessive groundborne vibration or groundborne noise levels.

Temporary construction and vibration generated by nearby rail transit sources are the primary sources of vibration affecting the project and nearby receivers. Operation of the project itself is not expected to generate significant vibration and associated groundborne noise levels.

Construction Vibration

Primary vibration producing construction activities are likely to occur during demolition and site preparation with the use of Dozers and possibly hydraulic breakers to clear the site and prepare the foundation of the building. As indicated in the criteria section above, the risk of damage to "normal dwelling houses" may begin to occur at a limit of 0.2 in/sec PPV for transient vibration events. For continuous vibration, human annoyance may begin to occur at a limit of 0.1 in/sec PPV. The nearest structures are located approximately 200-feet from the project site across El Camino Real and Center Street. At this distance the vibration levels could be up to the following for various pieces of equipment as shown in Table 6.

Table 6 – Estimated Construction Vibration Levels

Equipment	Reference Vibration Level at 25-ft (in/sec PPV)	Vibration Level at 200-ft (in/sec PPV)
Large Bulldozer	0.089	0.004
Loaded Trucks	0.076	0.003
Hydraulic Breaker	.089 to 0.24	.004 to .01
Jackhammer	0.035	0.002

As indicated in Table 6, vibration levels are not expected to exceed the 0.1 in/sec PPV threshold for human annoyance or the 0.2 in/sec PPV threshold for damage to "normal dwelling houses". At receptors further setback, vibration levels would be expected to be even lower and construction vibration and associated groundborne noise would be considered a less than significant impact with no mitigation required.

Rail Vibration

The project site is located along the Caltrain, UPRR, and BART (underground) railroad right of way on the northeast side of the project site. No analysis has been performed related to the project's effect on existing or future rail transit projects, however, the project itself may be exposed to vibration levels in excess of the Federal Transit Administration guidelines. The 22 February 2018 Environmental Noise Assessment measured vibration at a setback of approximately 90-ft from the centerline of the tracks and found that the average vibration velocity level was approximately 72 VdB. The proposed project setback is approximately 675-ft and it would be expected that vibration would be even lower at this setback and would not exceed the 72 VdB FTA criteria.

Therefore, rail transit vibration and associated groundborne noise would be considered a less than significant impact and no mitigation is required. (it is noted that this analysis is provided for informational purposes and to demonstrate compliance with General Plan, Plan Bay Area and code requirements – CEQA does not otherwise require analysis or mitigation of the impacts the *environment* has on a *project*, but rather a *project* has on the *environment*).

Impact 3: Implementation of the proposed project could expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport.

The project site is located near San Francisco International Airport, approximately 4,000 feet from the southern edge of runway 1L. The main departure and arrival runways are 28L and 28R, which are over 6,500 feet away. The project is also located outside of the CNEL 65 dB contour line, which is considered satisfactory for residential uses in the City's General Plan. Furthermore, the 22 February 2018 Environmental Noise Assessment has analyzed single event maximum noise levels from aircraft flyovers and has found them to be approximately 80 dBA. The assessment concludes that interior noise levels can be reduced to a less than significant impact and meet the City's General Plan requirements and State standards with the incorporation of mitigation at the exterior façade. With incorporation of mitigation measure 2.6-6 from the Plan Bay Area 2040 EIR, Policy NS 2.1 and 2.7 from the City of Millbrae General Plan EIR, and items identified in the 22 February 2018 Environmental Noise Assessment, this would be considered a less than significant impact.

APPENDIX A – FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are as follows:

1. a) The intensity or level of the sound;
2. b) The frequency spectrum of the sound; and
3. c) The time-varying character of the sound.

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing.

The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or hertz (Hz). Most of the sounds which we hear in the environment do not consist of a single frequency, but of a broad band of frequencies, differing in level. The name of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Surprisingly, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively de-emphasizes the importance of frequency components below 1000 Hz and above 5000 Hz. This frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and at extreme high frequencies relative to the mid-range.

The weighting system described above is called "A"-weighting, and the level so measured is called the "A-weighted sound level" or "A-weighted noise level." The unit of A-weighted sound level is sometimes abbreviated "dBA." In practice, the sound level is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting characteristic. All U.S. and international standard sound level meters include such a filter. Typical sound levels found in the environment and in industry are shown in Figure A-1.

Although a single sound level value may adequately describe environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise is a conglomeration of distant noise sources which results in a relatively steady background noise having no identifiable source. These distant sources may include traffic, wind in trees, industrial activities, etc. and are relatively constant from moment to moment. As natural forces change or as human activity follows its daily cycle, the sound level may vary slowly from hour to hour. Superimposed on this slowly varying background is a succession of identifiable noisy events of brief duration. These may include nearby activities such as single vehicle passbys, aircraft flyovers, etc. which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, statistical noise descriptors were developed. "L10" is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L10 is considered a good measure of the maximum sound levels caused by discrete noise events. "L50" is the A-weighted sound level that is equaled or exceeded 50 percent of a stated time period; it represents the median sound level. The "L90" is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period and is used to describe the background noise.

As it is often cumbersome to quantify the noise environment with a set of statistical descriptors, a single number called the average sound level or "Leq" is now widely used. The term "Leq" originated from the concept of a so-called equivalent sound level which contains the same acoustical energy as a varying sound level during the same time period. In simple but accurate technical language, the Leq is the average A-weighted sound level in a stated time period. The Leq is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the different response of people to daytime and nighttime noise. During the nighttime, exterior background noise levels are generally lower than in the daytime; however, most household noise also decreases at night, thus exterior noise intrusions again become noticeable. Further, most people trying to sleep at night are more sensitive to noise.

To account for human sensitivity to nighttime noise levels, a special descriptor was developed. The descriptor is called the L_{dn} (Day/Night Average Sound Level) which represents the 24-hour average sound level with a penalty for noise occurring at night.

The L_{dn} computation divides the 24-hour day into two periods: daytime (7:00 am to 10:00 pm); and nighttime (10:00 pm to 7:00 am). The nighttime sound levels are assigned a 10 dB penalty prior to averaging with daytime hourly sound levels. For highway noise environments, the average noise level during the peak hour traffic volume is approximately equal to the L_{dn}.

The effects of noise on people can be listed in three general categories:

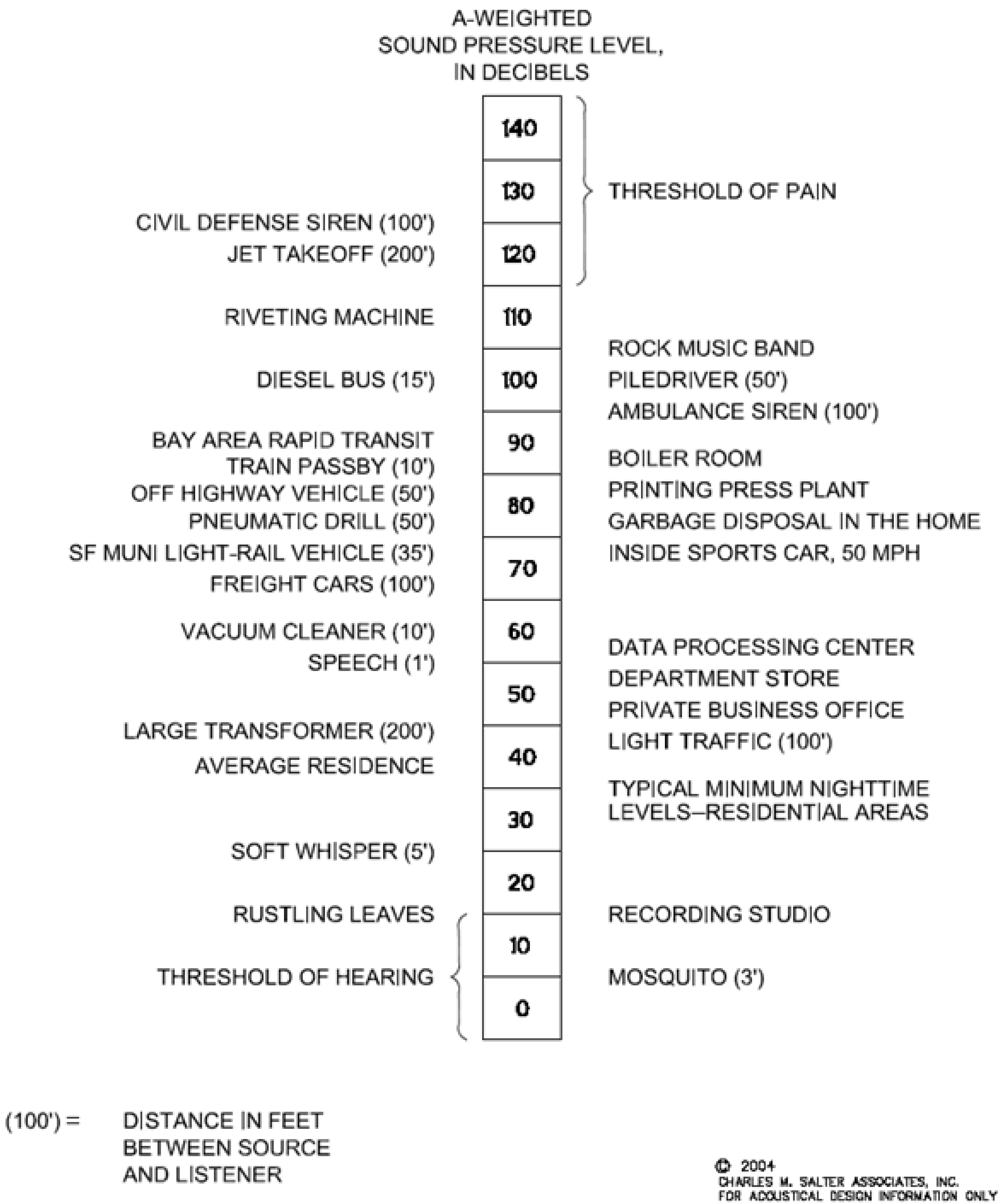
1. Subjective effects of annoyance, nuisance, dissatisfaction;
2. Interference with activities such as speech, sleep, and learning; and
3. Physiological effects such as startle, hearing loss.

The sound levels associated with environmental noise usually produce effects only in the first two categories. Unfortunately, there has never been a completely predictable measure for the subjective effects of noise nor of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over time.

Thus, an important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable the new noise will be judged.

With regard to increases in noise level, knowledge of the following relationships will be helpful in understanding the quantitative sections of this report:

4. Except in carefully controlled laboratory experiments, a change of only 1 dB in sound level cannot be perceived.
5. Outside of the laboratory, a 3 dB change is considered a just-noticeable difference.
6. A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
7. A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse community response.



TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

FIGURE A1

1107

Appendix K
Transportation Demand Management Plan

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Transportation Demand Management (TDM) Plan

Residential Development at 1100 El Camino Real in Millbrae, CA

Prepared for:

ANTON DevCo, Inc.

October 14, 2020

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1.
Introduction and Project Description

Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems. The purpose of TDM is to reduce the number of vehicle trips generated by new development; promote more efficient utilization of existing transportation facilities and ensure that new developments are designed to maximize the potential for sustainable transportation usage. This TDM Plan has been prepared for the proposed residential development at 1100 El Camino Real in Millbrae, California, in order to propose effective and appropriate TDM measures, based on the project's size, location, and land use.

Based on the site plan dated December 1, 2019, the proposed project will construct a five-story 384-unit apartment building with a five and a half level parking garage and surface parking. A potential hotel development that may be proposed on the same site is in the preliminary planning stages. A separate TDM plan will be prepared for the hotel if and when this project moves forward. The project site is currently occupied by a 220-room hotel and restaurant and a surface parking lot. These uses would be demolished by the proposed project. The project site location and the surrounding study area are shown on Figure 1. The site plan is shown on Figure 2. The project site would be served by four driveways as shown in Figure 2. One driveway is located on El Camino Real and three driveways are located on Center Street.

Project Trip Generation

Through empirical research, data has been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The trip estimates for the proposed apartment project are based on trip rates published in the ITE *Trip Generation Manual, 10th Edition*. The rates published for Mid-Rise Multifamily Housing (221) were used to estimate the trips generated by the proposed apartment project. The proposed apartment project is estimated to generate a gross 128 trips during the AM peak hour (33 in and 95 out), and 161 trips during the PM peak hour (98 in and 63 out).

The trips generated by the existing buildings on the site were obtained from driveway counts completed on Thursday, May 25th, 2017. Based on the driveway counts, the existing buildings generate 63 trips during the AM peak hour (28 in and 35 out), and 54 trips during the PM peak hour (33 in and 21 out). After crediting the existing trip generation, the proposed apartment project is estimated to generate a net of 65 trips during the AM peak hour (5 in and 60 out), and 107 trips during the PM peak hour (65 in and 42 out).

Table 1
Project Trip Generation

			Daily		AM Peak Hour				PM Peak Hour			
	ITE		Trip	Daily	Pk-Hr	Trips			Pk-Hr	Trips		
Land Use	Code	Size	Rates	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project												
Apartments[1]	221	384 units	5.45	2,091	0.33	33	95	128	0.42	98	63	161
		Gross Trips:		2,091		33	95	128		98	63	161
Existing Use												
Hotel/Restaurant[2]		220 rooms	4.47	(983)	0.29	(28)	(35)	(63)	0.25	(33)	(21)	(54)
Net New Project Trips:				**1,108**		**5**	**60**	**65**		**65**	**42**	**107**

Notes:

[1] Trips for apartments were estimated using regression equation from ITE *Trip Generation Manual, 10th Edition* , 2017.

[2] Peak-hour trips from driveway counts conducted on Thursday, May 25th, 2017. Daily trips were estimated based on the ratio of daily trips to AM and PM peak hour trips published in the ITE *Trip Generation Manaul, 10th Edition* , 2017.

Parking Analysis

The proposed apartment project would consist of 384 residential units (40 studios, 198 one-bedroom, and 137 two-bedroom apartments). Since the project would provide five percent (19 units) of Very Low-Income Units, it is eligible for a density bonus. Per the State Density Bonus Law, the project would be required to provide 521 parking spaces. The project is proposing to provide a total of 560 partially unbundled parking spaces for residents and visitors, which would exceed the State requirement by 39 parking spaces. While the proposed project is not requesting a reduction in on-site parking, the TDM Plan is expected to encourage the use of alternative travel modes and reduce vehicle ownership, thereby reducing the project's parking demand.

Report Organization

The remainder of this report is divided into three chapters. Chapter 2 describes the transportation facilities and services in the vicinity of the project site. Chapter 3 presents the TDM measures that will be implemented for the proposed project. Chapter 4 describes the implementation and monitoring of the TDM Plan.

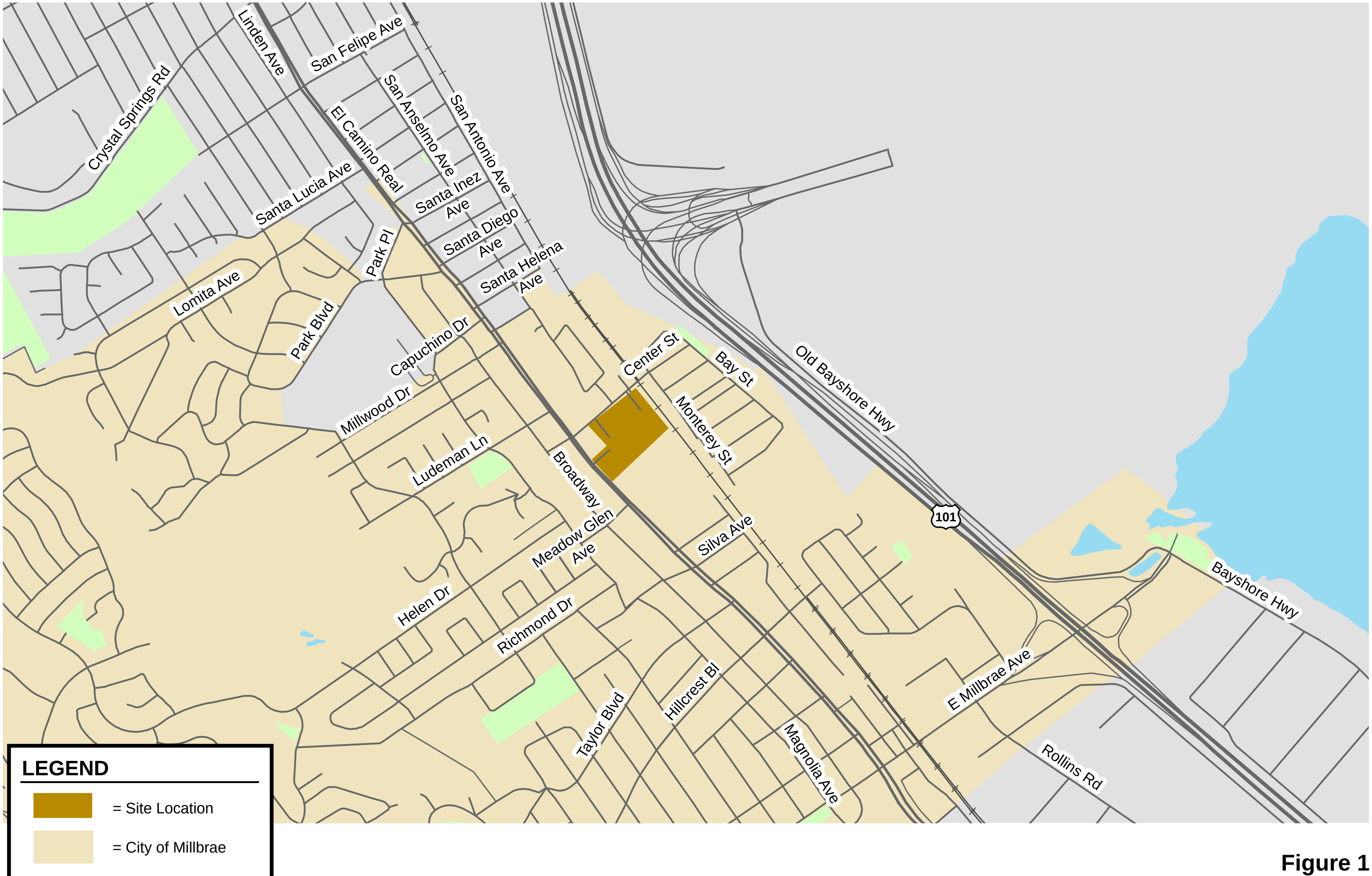

Figure 1
Site Location

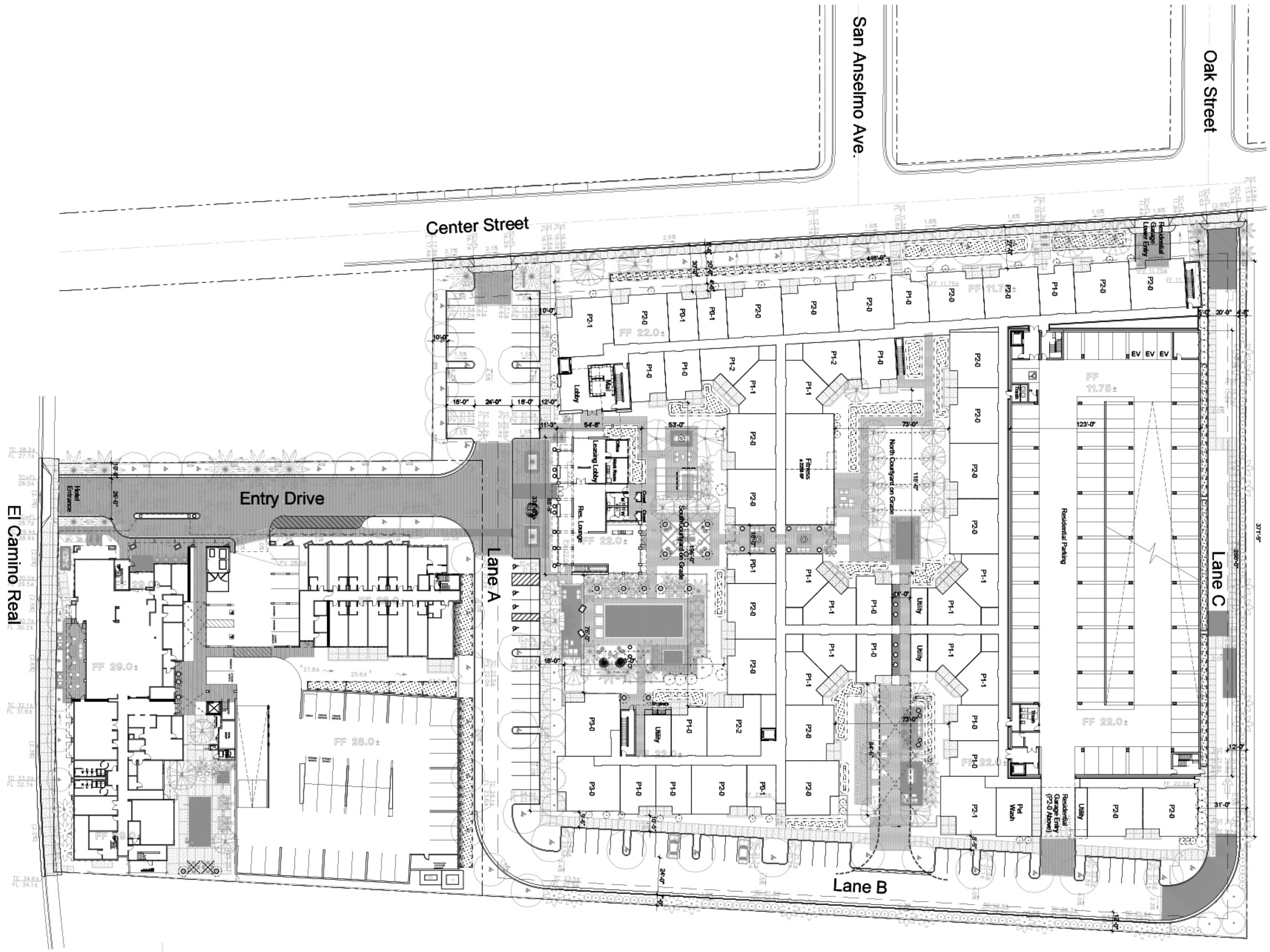

Figure 2
Site Plan

2. Transportation Setting

Transportation facilities and services that support sustainable modes of transportation include SamTrans bus routes, BART, Caltrain, shuttles, pedestrian and bicycle facilities. This chapter describes the existing facilities and services near the 1100 El Camino Real site. Information on the nearby roadway network is also included in order to provide a more comprehensive description of the nearby transportation network.

Roadway Network

Regional access to the project site is provided via SR-82, US-101, I-280, and I-380.

US-101 is a north/south freeway that extends from San Francisco through San Mateo and Santa Clara Counties. Near Millbrae, US-101 is mostly eight lanes wide. Access to US-101 is provided via northbound and southbound ramps at its interchange with Millbrae Avenue.

I-280 is a north/south freeway that extends from San Francisco through San Mateo and Santa Clara Counties. In Millbrae, I-280 is eight lanes wide. Regional access to the project site is provided via an interchange with Hillcrest Boulevard.

***I**-380* is a six-lane east/west freeway that connects I-280 and US-101 within San Bruno. El Camino Real provides access to I-380 via an interchange.

SR-82/El Camino Real is a six-lane north-south arterial with a raised center median within the project area. El Camino Real extends northward to San Francisco where it changes designation to Mission Street and San Jose Avenue, and southward through San Jose. El Camino Real provides direct access to the project site.

Local access to the site is provided Millbrae Avenue, Hillcrest Boulevard and Center Street. These roadways are described below.

Millbrae Avenue is a major east-west arterial that extends from Bayshore Highway to El Camino Real. West of El Camino Real, Millbrae Avenue continues until its terminus at Skyline Boulevard near I-280. Millbrae Avenue connects residential areas to the west with El Camino Real and US 101. Millbrae Avenue varies in width from two- to six-lanes, with six lanes and a median that provides left-turn pockets at the major intersections. Millbrae Avenue provides access to the project site via El Camino Real.

Hillcrest Boulevard is a local east-west collector street that extends from Aviador Avenue to I-280, providing regional connections to I-280 and El Camino Real for the residential areas of west Millbrae. Near the project vicinity, Hillcrest Boulevard has two (2) lanes and on-street parking. Hillcrest Boulevard provides access to the project site via El Camino Real.

Center Street is an east-west local street that extends from Monterey Street to Broadway, providing residential areas with connections to Broadway and El Camino Real. Center Street near the project has two lanes and on-street parking on both sides. Center Street provides direct access to the project site via two driveways.

Transit Service

Existing transit service in the study area is provided by San Mateo County Transit District (SamTrans), BART, and Caltrain. The transit routes that serve the project area are described below and shown on Figure 3.

Millbrae Transit Center

Millbrae Intermodal Terminal is a regional multi-modal transit hub served by SamTrans, Bay Area Rapid Transit (BART), Caltrain and shuttle buses. The station has two shuttle bus bays, a kiss-and-ride/taxi lot, bike racks, bike lockers, a park-and-ride lot and a multilevel parking garage. The Millbrae Transit center is located approximately one mile south of the project.

SamTrans Bus Service

The project is served by ECR SamTrans bus route with bus stops located near the intersection of El Camino Real and Center Street. These bus stops are within a very short walking distance (about 600 feet) from the proposed project.

Route ECR provides service along El Camino Real between the Palo Alto Transit Center and the Daly City Bart Station with 15-minute headways during weekdays and 20-minute headways during weekends. This route provides frequent service to the Millbrae Intermodal Terminal.

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. Trains that stop at the Millbrae Station operate at approximately 25-minute headways in both directions during the commute hours, with somewhat less frequent service midday. Service operates between about 5:35 AM and 11:45 PM in the northbound direction and between 5:15 AM and 12:30 AM in the southbound direction. The Millbrae station is served by local, limited, and Baby Bullet trains.

Bicycles are permitted on Caltrain. There are bicycle racks and bicycle lockers available at the Millbrae Station. The project site is not within the walking distance to the Millbrae Caltrain station, but project residents could easily ride their bike the one-mile distance or take transit to the station. As part of the Caltrain Modernization Program, the rail service will be electrified. The electrified Caltrain system will provide increased service and improved travel times in an environmentally friendly and reliable way.

Electrification is also expected to help accommodate increase system ridership through much improved system operations.

BART Service

Bay Area Rapid Transit (BART) operates regional rail service in the Bay Area. The Millbrae Station is the southern terminus of the Richmond-Millbrae Line on weekdays before 9:00 PM, Antioch-Millbrae Line on weekdays after 9:00 PM, and the SFO Airport-Millbrae Line before 9:00 PM on weekdays and at all times on Sundays. The Millbrae BART Station provides a direct intermodal connection to the Caltrain commuter rail system and provides fast and frequent service to many parts of the Bay Area, including downtown San Francisco, downtown Oakland, and the San Francisco International Airport. BART provides service from 4:00 AM to 12:00 AM on weekdays with typical headways of 15 minutes on the Richmond-Millbrae Line serving the station during peak and mid-day hours. BART provides 20-minute headways on the Antioch-Millbrae Line in the evening after 9:00 PM on weekdays and between 6:00 AM (8:00 AM on Sundays) to 12:00 AM on weekends.

Bicycle Facilities

There are currently minimal bicycle facilities in the project area (see Figure 3) and no designated bike lanes along the surrounding streets. There are some cyclist-suggested routes, which are compiled by cyclists as preferred routes shown on the 2009 San Mateo County Bicycle Map.

- Park Place between Magnolia Avenue and El Camino Real
- Santa Inez between El Camino Real and San Antonio Avenue
- San Anselmo Avenue south of Santa Inez Avenue
- Center Street west of San Anselmo Avenue
- Broadway between Center Street and Meadow Glen Avenue
- Meadow Glen Avenue
- Magnolia Avenue north of Millbrae Avenue
- Helen Drive east of Larkspur Drive
- Hillcrest Boulevard between Magnolia Avenue and Skyline Boulevard
- Lomita Avenue west of Magnolia Avenue
- Crystal Springs Avenue west of El Camino Real
- Laurel Avenue

Bicyclists can use the above-mentioned bike routes to access the project site.

The *San Mateo County Comprehensive Bicycle and Pedestrian Plan,* adopted on September 8, 2011, has identified the following proposed improvements to the bike network within the project vicinity:

- San Antonio Avenue and Monterey Street are proposed for Class I bicycle path.
- Larkspur Drive and Rollins Road are proposed to provide Class II bicycle lanes.
- San Anselmo Avenue, Magnolia Avenue, Richmond Drive and Hillcrest Boulevard are proposed for Class III signed bicycle routes.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks along all of the surrounding streets except for a 275-foot segment on the south side of the Center Street near the project, between El Camino Real and the existing driveway. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. At the three intersections listed below, the City has installed hybrid beacon signal heads allowing pedestrians to safely cross El Camino Real.

El Camino Real / Park Boulevard / San Diego Avenue,
El Camino Real / Santa Helena Avenue, and
El Camino Real / Ludeman Lane.

These pedestrian hybrid beacon signals (also known as the High intensity Activated crossWalK or HAWK) are pedestrian-activated warning devices located on mast arms over pedestrian crossings. The beacon head consists of two red lenses above a single yellow lens. The beacon head is "dark" until a pedestrian wants to cross the street. The pedestrian pushes a button to activate the beacon. After displaying brief flashing and steady yellow intervals, the device displays a steady red light for drivers on El Camino Real and a "WALK" sign to pedestrians, allowing them to cross while traffic is stopped. After the pedestrian phase ends, the "WALK" sign changes to a flashing orange hand to notify pedestrians that their clearance time is ending. The hybrid beacon displays alternating flashing red lights to drivers while pedestrians finish their crossings before once again going dark at the conclusion of the cycle. Without a pedestrian call, these beacon signals heads are dark, and the intersections operate under stop control. Therefore, these intersections are analyzed as side-street stop controlled.

Overall, the existing pedestrian and bicycle facilities provide adequate connectivity between the site and the surrounding land uses in the area. The project site has a Walk Score of 84 and a Bike Score of 71, which is considered very walkable and bikeable and most errands can be completed on foot or on a bicycle.

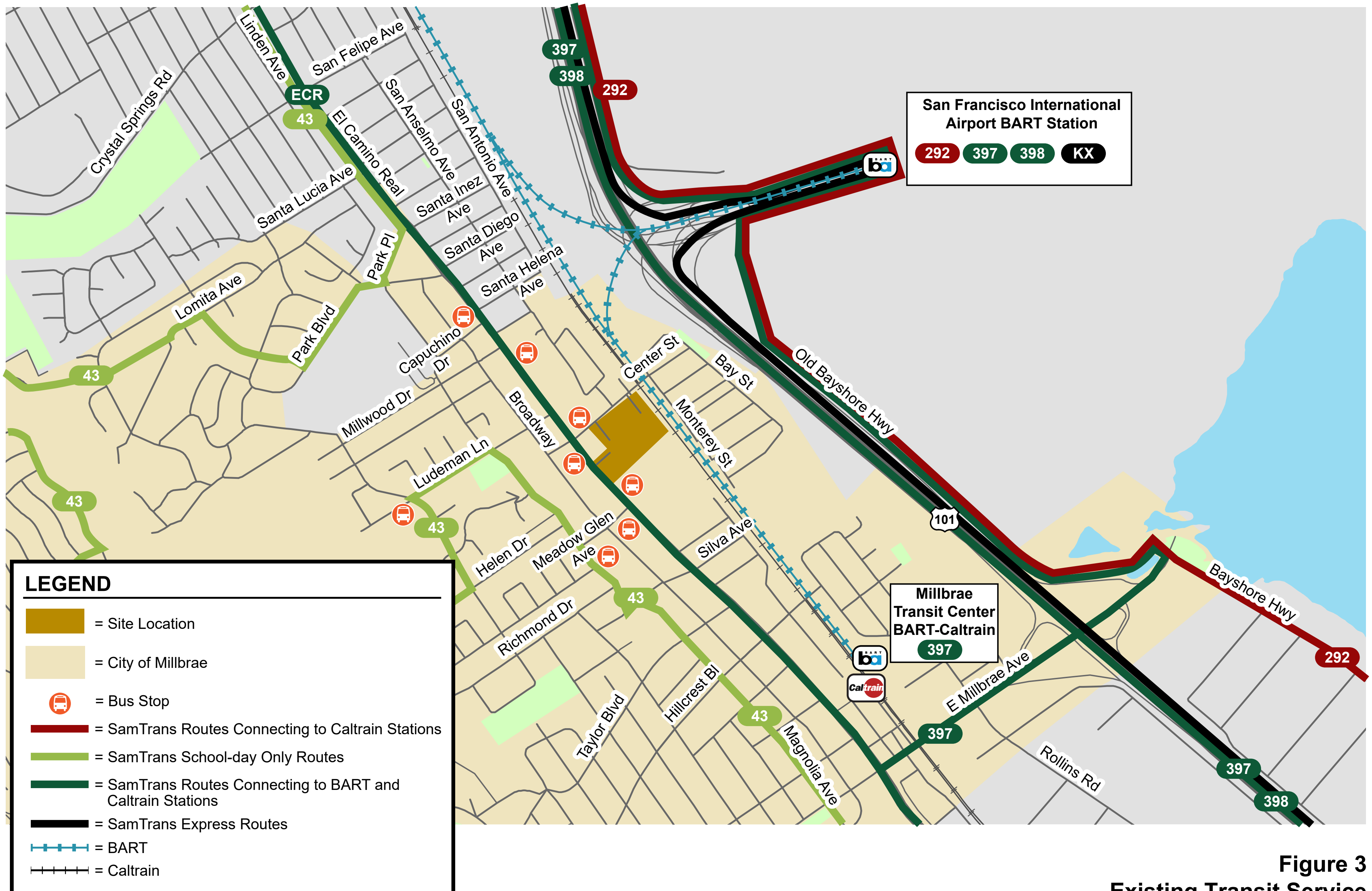

Figure 3
Existing Transit Service

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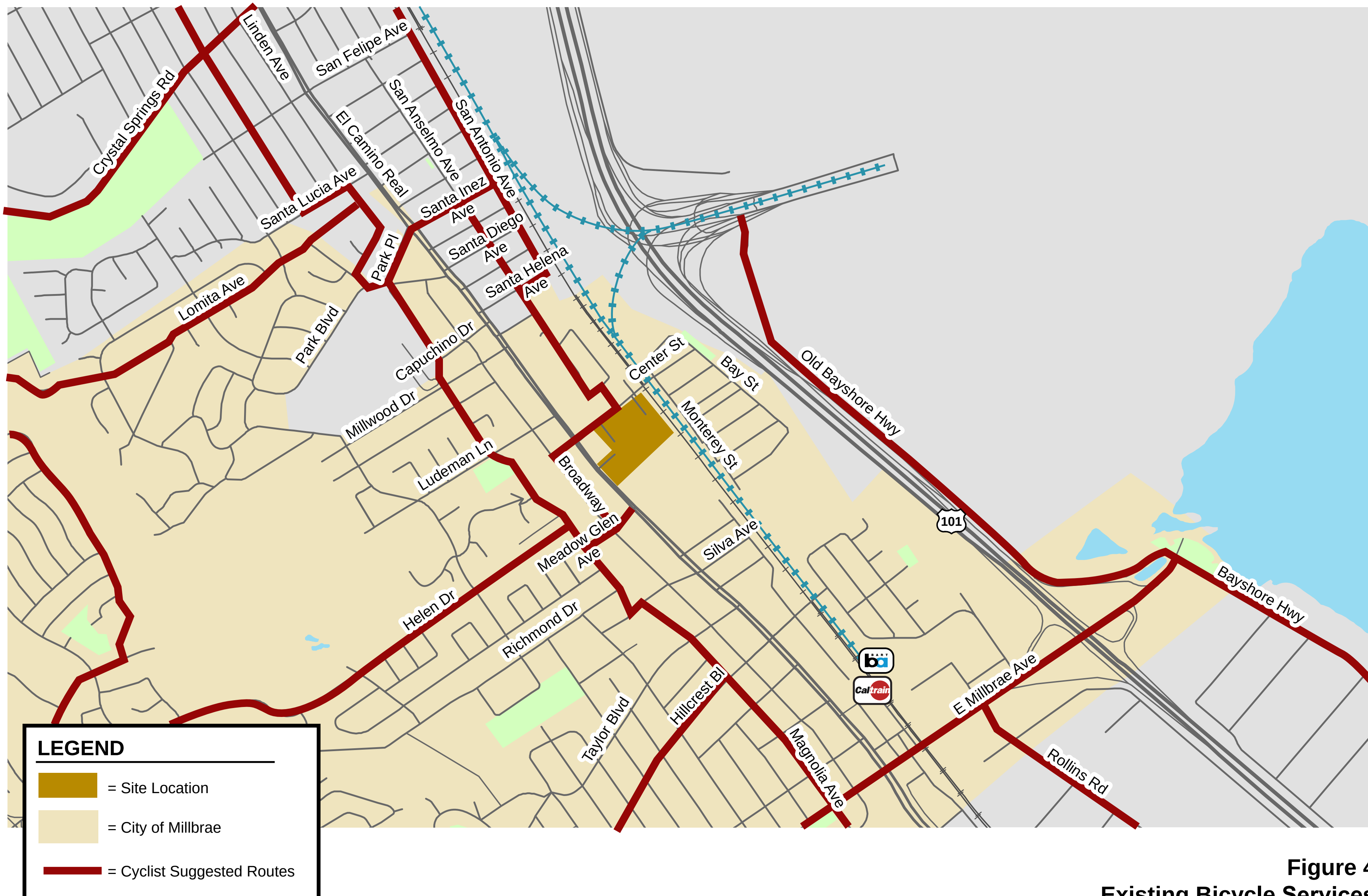

Figure 4
Existing Bicycle Services

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3.
Proposed TDM Measures

This chapter describes Transportation Demand Management (TDM) measures that will be implemented by the proposed project. The project's TDM measures include design features, programs, and services that promote sustainable modes of transportation. The goal of this TDM Plan is to reduce the number of single-occupant vehicle trips generated by the project.

The City/County Association of Governments of San Mateo County (C/CAG) requires new development projects that generate more than 100 peak hour trips limit their impact on regional roadway facilities. To accomplish this, C/CAG provides a list of potential TDM measures that developments may use to reduce their net peak hour trip generation. Each measure has an associated peak hour trip reduction, which is also known as a trip credit. Each new development must demonstrate that it will implement TDM measures to achieve a number of credits equal to its peak-hour trip generation.

Project Location

The project is an infill development and its location adjacent to restaurant, retail, and commercial uses located along El Camino Real promotes pedestrian and bicycle travel in a high-density area of complementary land uses. The project's residential use mixes well with the retail and commercial uses located along El Camino Real. The project location effectively renders it part of a pedestrian-friendly environment with a significant share of non-vehicle trips.

Proximity to Transit

The project is located approximately 1 mile from the Millbrae Intermodal Terminal, where residents could access Caltrain, BART and numerous SamTrans routes. This is considered beyond walking distance but is within easy biking distance. Future residents could take a bus to the Transit Center and transfer to Caltrain, BART, or other bus routes. Furthermore, the project site is immediately adjacent to a high-quality transit corridor on El Camino Real, which offers bus service every 15-minutes on weekdays. The site's proximity to transit encourages the use of public transit services by residents.

TDM Administration and Promotion

Transportation Coordinator

Experience with other TDM programs indicates that having a Transportation Coordinator who focuses on transportation issues and is responsible for implementing the TDM program is key to its success.

The property manager will be the Transportation Coordinator or TDM contact person, and that person's name and contact information will be provided to the City.

The Transportation Coordinator will be a point of contact for residents when TDM-related questions arise and will be responsible for ensuring that residents are aware of all transportation options and how to fully utilize the TDM Plan. The Transportation Coordinator will provide the following services and functions to ensure the TDM Plan runs smoothly:

- Provide transportation information packets to all new residents.
- Set up and maintain an online kiosk with information about alternatives to driving alone to work (single-occupant vehicles).
- Provide trip planning assistance and/or ride-matching assistance to residents who are considering an alternative mode.
- Manage annual surveys and submit annual TDM monitoring reports to the City. The results will be used to determine whether the implemented TDM measures are effective and whether new TDM measures should be implemented.
- The Transportation Coordinator should maintain a supply of up-to-date transit schedules and route maps for SamTrans, BART, and Caltrain and be knowledgeable enough to answer employees' TDM program related questions.

Promotional Programs

The Transportation Coordinator will undertake additional marketing activities to encourage residents to try an alternative mode to get to work. Although some marketing, such as the online kiosk and distributing information welcome packets to new residents, will be conducted immediately, additional promotional activities might include email blasts of flyers, brochures or host/arrange workshops on commute alternatives, ridesharing incentive programs, and transit benefits. Samtrans.com and 511.org can help provide some useful marketing materials.

Bicycle and Pedestrian Facilities

The existing sidewalks and pedestrian paths provide adequate connectivity and would provide pedestrians with safe routes to nearby bus stops and all of the surrounding land uses in the area, including the shops and restaurants along El Camino Real and Broadway. The project will replace the sidewalks on El Camino Real and Center Street, eliminate overhead power lines and add new lighting on Center Street, which will improve the usability and safety of the sidewalk on Center Street.

Bicycle Parking and Repair Facilites

Providing secure bicycle parking encourages bicycle commuting and reduces daily vehicle trips. The City of Millbrae parking requirements state that the number of bicycle parking spaces should be at least 10% of auto parking provided. Based on the City of Millbrae bicycle parking requirements, the proposed apartments should provide 56 bicycle parking spaces for residential use. According to the site plan dated December 1, 2019, the project is proposing a total of 72 bicycle parking spaces for residential use, including 60 long-term and 12 short-term bicycle parking spaces, which exceeds the City's requirement.

In order to promote the transportation mode share for bicycle, it is recommended that electric bicycle charging stations be provided for at least 25 percent (18 spaces) of the proposed bicycle parking spaces onsite.

In addition to bicycle parking, it is recommended that the project include a bike hub facility. A bike hub provides equipment for minor repairs and maintenance of bicycles, from changing a flat tire to adjusting brakes and derailleurs. Bike repair stations provide a singular point where bicyclists can share information on routes, commuting, and maintenance practices to help generate a stronger community that is more engaged in bicycling as a mode of transportation.

Shared-Use Bicycles

The developer will provide 10 shared-use bicycles for use by residents. When not in use, the shared-use bicycles will be stored in the secure bicycle room. The Transportation Coordinator will be responsible for tracking the bicycles. This measure will encourage residents to use active transportation for short trips such as to nearby shops and restaurants, as well as for first and last-mile connections between the project site and the Millbrae Intermodal Terminal.

Bicycle Resources

As part of the information available in the “online kiosk” discussed in more detail below, resources useful to cyclists will be included. For example, the local bikeways map will be posted for easy reference. A map showing the safe routes to the public elementary school, middle school, and high school that would serve the site’s families would also be posted.

The following resources are available to bicycle commuters through 511.org. These resources will be noted on the project’s online information center, in order to make tenants aware of them.

- Free Bike Buddy matching
- Bicycle maps
- Bicycle safety tips
- Information about taking bikes on public transit
- Location and use of bike parking at transit stations
- Information on Bike to Work Day
- Tips on selecting a bike, commute gear, and clothing
- Links to bicycle organizations

Internet and Telecommuting

In an effort to decrease the number of trips residents have to make to and from work each week, the developer will provide a Wi-Fi lounge on-site for residents who work from home. The resident lounge will include free Wi-Fi and desks for use by telecommuters. This space is meant to encourage telecommuting, whereby residents of the development who typically report to a central office location, will be able to work at home one or more days per week. Successful implementation of a telecommuting program relies both on the access to internet and facilities in the resident’s dwelling unit or residential community, and the option to telecommute as determined by their job description and/or employer.

Parking Facilities

Unbundled Parking

To further encourage non-auto transportation methods and to reduce costs for residents, on-site residential parking will be partially unbundled from each living unit. Each apartment unit will include one parking space as part of the lease and additional parking spaces may be purchased if needed. Unbundled parking means separating the cost of parking from residential leases and allowing residents to choose whether to lease a parking space. This would allow residents without cars to lease a unit without having to pay for a parking spot. Parking spaces will be rented only to residents who desire parking. This program has the benefit of communicating the cost of constructing and maintaining parking to residents, and it may help reduce car ownership and increase use of other travel modes. Unbundling of parking encourages residents to forego a second car or to have no car at all.

Electric Vehicle Parking

The project proposes to provide one charging station per two parking stalls. While EV parking spaces would not directly reduce any peak-hour trips, the designated Clean Air Vehicle spaces provide a prominent visual message that the project values a reduction in air pollution.

Carpool and Vanpool Programs

511 Ride Matching Assistance

The 511 RideMatch service provides an interactive, on-demand system that helps commuters find carpools, vanpools or bicycle partners. This program will be promoted through the online information center and in New Resident Information packets.

This free car and vanpool ride-matching service helps commuters find others with similar routes and travel patterns with whom they may share a ride. Registered users are provided with a list of other commuters near their employment or residential zip code along with the closest cross street, email, phone number, and hours they are available to commute to and from work. Participants are then able to select and contact others with whom they wish to commute.

The service also provides a list of existing carpools and vanpools in their residential area that may have vacancies. Ride-matching assistance is also available through several peer-to-peer matching programs, such as Zimride and TwoGo, which utilize social networks to match commuters. These ride matching services will augment the on-site ride matching service provided by the Transportation Coordinator.

Carpool/Vanpool Incentives for New Users

The 511 Regional Rideshare Program offers a number of incentive programs to encourage people to try carpooling and vanpooling. Most of these programs are designed to reward someone for forming or trying a carpool or vanpool and provide an award or subsidy after the first three or six months of use.

- **Vanpool Formation Incentive**: The 511 Regional Rideshare Program provides up to $500 in gas cards to new vanpools that meet certain eligibility requirements and complete three to six consecutive months of operation. The gas cards are awarded on a first-come, first-served basis, until funds are exhausted.
- **Vanpool Seat Subsidy**: The 511 Regional Rideshare Program also offers a vanpool seat subsidy in the form of gas cards. The seat subsidy will provide $100 per month, with a limit of three months per van during the program year, to help cover the fare of a lost participant. The gas cards will be offered to eligible vans on a first-come, first-served basis until the funds are exhausted.

- **Discounted Tolls**: The 511 Regional Rideshare Program offers free toll passage on seven of the Bay Area's bridges for vanpools with 11-15 people who register with 511. Additionally, the program also offers toll discounts to carpools with three or more people (two people in a two-seat vehicle) on eight of the Bay Area's bridges during peak commute hours. The discounts vary per bridge, but typically are half of the standard toll price. For example, the San Mateo – Hayward Bridge has a standard toll of $5, but for a carpool of three people (two people in a two-seat vehicle) the toll is only $2.50 Monday through Friday between 5-10 AM and 3-7 PM.

Marketing Program for Alternative Travel Modes

"Online Kiosk": An Online Information Center

Most TDM plans have traditionally included a requirement for a kiosk or bulletin board to be created for posting information related to alternative travel modes. Experience often shows, however, that few residents look at these kiosks after an initial period of interest. This TDM Plan proposes to establish an "online kiosk" with similar information that a resident could access from their home, their workplace, or anywhere else.

A key element of this TDM plan is to set up an attractive, up-to-date "online kiosk" with all of the site-specific information about the transportation resources available to residents. We envision a website which will include information about all the measures, services, and facilities discussed in this plan, including:

- A summary of SamTrans, BART and Caltrain services and links to further information about their routes and schedules.
- A local bikeways map, information about the bike lockers/secure bike storage areas on site and those nearby, and information about the on-site bike share program.
- Information about the ride matching service for project residents other public ride matching services (e.g., 511.org, Zimride, and TwoGo) and the incentive programs available to carpools and vanpools.
- A link to the many other resources available in the Bay Area, such as Dadnab, the 511 Carpool Calculator, the 511 Transit Trip Planner, real-time traffic conditions, etc.

The Transportation Coordinator will have responsibility for contracting with someone to initially create the website so that it is up and running as soon as residents move in. More specific information can be added later to reflect any programs specific to certain groups of residents. The Transportation Coordinator will add new information to the website (or providing it to the website designer) so that the "online kiosk" remains current and informative.

Information Packet for Residents

In addition to the online information center, the Transportation Coordinator will provide "hard copy" information packets to all residents when they first move into the building. Because all information will be available online, this packet need not be a comprehensive stack of paper about all services available, which residents tend to disregard anyway. Instead, the Welcome Packet will provide a quick easy-to-read announcement of the most important features of the TDM program for residents to know about immediately.

In addition, the packets will include a message to residents that their building manager and/or owner values alternative modes of transportation and takes their commitment to supporting alternative transportation options seriously. For example, it would include a flyer announcing the “online kiosk”, information on the project’s bike-share program, a ride-matching application etc.

Commute Assistance Center

In addition to the online kiosk, the developer will provide a commute assistance center, which will have the following features:

- Transit information brochure rack
- Computer kiosk connected to the internet
- Telephone with commute and transit information
- Desk and chairs
- On-site transit ticket sales
- Educational programs organized by the Transportation Coordinator

On-Site Amenities

Amenities on-site reduce external vehicle trips since those resources are readily available to residents. On-site amenities provided by the developer will include:

- Fitness Center
- Community Center
- Dry cleaning pick-up/drop-off
- Package lockers

Estimated C/CAG Trip Reductions

The proposed project would generate 1,108 daily vehicle trips, including 65 AM and 107 PM peak hour trips (see Table 1). Table 2 provides a summary of the measures in the proposed development TDM program for which the project can receive credit in accordance with the C/CAG TDM guidelines. The table shows that the measures proposed by the proposed development could provide up to 252 peak hour trip credit, which exceeds the 107 PM peak hour trips associated with the project.

Table 2
Summary of C/CAG Trip Credits

Proposed TDM Measure	Rate	Size/Amount	Trip Credits
Land Use			
Transit Priority Project (within 1/2 mile of high-quality transit corridor)	100% of trips for residential developments within 1/3 mile of fixed-rail passenger station [1]	n/a	0
Bicycle / Pedestrian Facilities			
Bicycle parking	1 trip per 3 bike parking spaces	72 bike parking spaces	24
Make streets more pedestrian and bicycle friendly	5 trips per facility	2 facilities [2]	10
Provide shared use bikes for residents	1 trip per bike	10 bikes	10
Safety/security systems for pedestrians and bicyclists	5 trips per measure	new lighting on Center Street (with elimination of overhead power lines)	5
Infrastructure			
Business center to facilitate telecommuting	5 trips for a center installed	resident lounge will include free Wi-Fi and desks for use by telecommuters	5
On-site amenities	5 trips per feature	4 features [3]	20
Infill development	2% of peak-hour trips	107 PM peak hour trips	2
Parking Facilities			
Unbundled parking (equivalent to parking cash out program)	1 trip per unbundled space	164 unbundled spaces [4]	164
Information and Promotion			
Install and maintain alternative transportation kiosk	5 trips for each kiosk	1 kiosk	5
Commute Assistance Center	1 trip per feature	6 features [5]	6
Monitoring and Reporting			
Resident survey	3 trips for twice yearly survey	Annual Survey	1
	Total C/CAG Trip Credits		**252**

Notes:

[1] While the project is too far from the Millbrae Intermodal Station to qualify for any trip credits based on C/CAG Guidelines, the site's proximity to BART and Caltrain service as well as the frequency of bus service along El Camino Real are expected to reduce the vehicle trips generated by the project.

[2] Project will replace sidewalks on El Camino Real and Center Street and eliminate overhead power lines on Center Street.

[3] Assumed features include fitness center, community center, dry cleaning pick-up/drop-off, and package lockers.

[4] There are 384 apartment units. Each apartment will include one assigned parking space as part of the lease. Therefore, number of unbundled spaces = total # of spaces (560) - # of visitor spaces (12) - # of assigned spaces for residents (384) = 164.

[5] Assumed features include transit information brochure rack, computer kiosk connected to internet, telephone with commute and transit information, desk and chairs, on site transit ticket sales and educational programs organized by the Transportation Coordinator.

4. TDM Implementation and Monitoring

The purpose of the TDM Plan is to reduce vehicle trips, parking demand, traffic congestion, and vehicle emissions generated by the proposed project. Regular monitoring is required to ensure that the implemented TDM measures are effective. The program will be evaluated annually to assess the actual level of trip reduction achieved at the site.

Implementation

The project applicant will be responsible for ensuring that the trip reduction measures are implemented. This will require that the recommended trip reduction measures be incorporated into the project. The project applicant will designate a TDM coordinator who will oversee the implementation and maintain the TDM program. If the contact person changes for any reason, the city would be notified of the name and phone number of the designated TDM coordinator.

Monitoring

An annual resident survey will be conducted to determine transportation mode choice (i.e. drive alone, carpool, bus, Caltrain, BART, etc.). This annual resident survey will be formatted as a general survey including non-transportation questions (i.e. satisfaction with property management, activities, etc.) to increase the response rate.

The site TDM coordinator will implement the annual resident surveys and document the results in a TDM monitoring report. The annual monitoring report will be submitted to the City by the TDM coordinator for the development.

If certain TDM measures are ineffective or rarely used by residents, the TDM Plan may be altered. Modifications to the TDM plan may include discontinuation of certain TDM measures and the implementation of additional programs or services expected to achieve additional vehicle trip reductions. The annual TDM monitoring report should describe any planned modifications to the TDM program intended to enhance the effectiveness of the Plan.

Appendix L
Traffic Impact Analysis

1100 El Camino Real Mixed-Use Development

Draft Traffic Analysis

Prepared for:

ANTON Devco

December 4, 2020

Hexagon Transportation Consultants, Inc.
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Executive Summary

This report presents the results of the traffic analysis conducted for the proposed development ("project") located at 1100 El Camino Real in Millbrae, California. The report analyzes two development scenarios. The first scenario consists of the proposed project, which would include a five-story 384-unit apartment building with a five and a half level parking garage and surface parking. The second scenario consists of the proposed apartment project plus a 200-room hotel and associated parking. The potential hotel development is in the preliminary planning stages and is being studied for informational purposes only. The project site is currently occupied by a 220-room hotel, restaurant, two single family homes, and a surface parking lot. These uses would be demolished under both the scenarios.

The project site would be served by four driveways. One driveway would be located on El Camino Real and three driveways would be located on Center Street. The driveway on El Camino Real and the first driveway on Center Street would provide access to a small number of surface spaces as well as a potential hotel. Access to the residential parking garage would be provided via the second driveway on Center Street. The third driveway on Center Street would be used for emergency vehicle access only.

VMT Analysis

The Project 's transportation impact on vehicles miles traveled (VMT) was evaluated based on the CEQA Guidelines published by the Governor's Office of Planning and Research (OPR). According to the CEQA Guidelines, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. The project is located within a half mile of SamTrans Route ECR, which is an existing high-quality transit corridor. Therefore, the project is expected to have a less-than-significant impact on vehicle miles travelled.

Project Trip Estimates

The trip estimates for the proposed apartments are based on trip rates for Mid-Rise Multifamily Housing (221) published in the *ITE Trip Generation Manual, 10th Edition*. By itself, the proposed apartment project is estimated to generate a gross 128 trips during the AM peak hour (33 in and 95 out), and 161 trips during the PM peak hour (98 in and 63 out). The trips generated by a potential new hotel were estimated using trip rates observed at the existing hotel on site. The proposed apartment project in combination with a potential hotel are estimated to generate a gross 185 trips during the AM peak hour (67 in and 118 out), and 210 trips during the PM peak hour (123 in and 87 out). Based on the counts at the existing site driveways, the existing buildings generate 63 trips during the AM peak hour (28 in and 35 out), and 54 trips during the PM peak hour (33 in and 21 out).

After crediting the existing trip generation, the proposed apartment project is estimated to generate a net of 65 trips during the AM peak hour (5 in and 60 out), and 107 trips during the PM peak hour (65 in and 42 out). The proposed apartment project in combination with a potential hotel are estimated to generate a net of 122 trips during the AM peak hour (39 in and 83 out), and 156 trips during the PM peak hour (90 in and 66 out).

The observed hotel trip rates are substantially lower than the hotel trip rates published in the ITE *Trip Generation Manual, 10th Edition* due to the project's proximity to transit and other factors related to the project location. To be conservative, the level of service calculations and queuing analysis contained in this report are based on ITE trip rates for hotels. Based on ITE trip rates, the proposed apartment project in combination with a potential hotel are estimated to generate a net of 160 and 231 trips during the AM and PM peak hours, respectively.

Traffic Operations at Intersections

Table ES-1 summarizes the results of the peak-hour intersection level of service analysis for the study intersections under the following conditions: Existing, Existing plus Project, Existing plus Project and Hotel, Background, Background plus Project, and Background plus Project and Hotel. The results of the intersection level of service analysis show that the following two unsignalized intersections currently operate at an unacceptable level:

- El Camino Real / Park Boulevard / San Diego Avenue [LOS E, AM and PM]
- El Camino Real / Ludeman Lane [LOS E, PM]

The traffic associated with approved projects is expected to cause the following signalized study intersection to degrade to an unacceptable level.

- El Camino Real / Millbrae Avenue [LOS F, AM and PM]

Although these intersections are projected to operate at unacceptable conditions, the proposed apartment project alone and in combination with a potential hotel would not cause a deficiency because the increase in delay is less than the delay threshold for signalized intersections and the unsignalized intersection volumes do not satisfy the Caltrans Peak-Hour Volume Signal Warrant for traffic signal installation. It should be noted that the analysis of the apartment project in combination with a potential hotel reflects a conservative analysis that may overstate the trips generated by the project site since it is based on ITE trips rates, which are much higher than trip rates observed at the existing hotel on site.

The residential project would increase the total volume at the El Camino Real and Center Street intersection by 3.53%; the hotel project would increase the total volume by 1.92%. The residential project would increase the westbound approach volumes on Center Street by 31% and 29% in the AM and PM peak hours, respectively; the hotel project would increase westbound approach volumes by 9% and 19% in the AM and PM peak hours, respectively. The increase on its own does not meet protected left turn signal phasing establishment criteria based on volume-only criteria but with the projected increase in bicycle and pedestrian traffic at the intersection from the anticipated El Camino Real/Downtown Specific Plan area traffic at buildout, protected left turn phasing for the westbound Center Street left turn movement may be necessary at a future date.

Queuing Analysis

A queuing analysis was performed at left-turn pockets where the project would add at least 10 left turn trips during one or both peak hours.

The eastbound left-turn queue at the El Camino Real /Meadow Glen intersection and at the El Camino Real/Hillcrest intersection currently exceeds the available storage by about one vehicle length in the PM peak hour. The analysis shows that the traffic added by the proposed apartment project, whether by itself or in combination with a potential hotel, would cause a negligible increase (<= 10 feet) in the 95th percentile vehicle queues.

The southbound left-turn queue at El Camino Real and Millbrae Avenue is expected to exceed the available storage under all analysis scenarios including existing conditions during one or both peak hours. The queuing analysis indicates that the addition of trips from the proposed apartment, alone or in combination with a potential hotel, would increase the 95th percentile queue by about one vehicle in the AM and the PM peak hour. The southbound left-turn lanes could be extended by narrowing the existing landscaped median on El Camino Real. The project would not be individually responsible for making any physical improvements at this intersection since the project would have a minimal effect on a location with an existing queueing deficiency.

Site Access

The site access and on-site circulation evaluation is based on the December 1, 2019 set of site plans of the project. Access to the site would be provided via one driveway on El Camino Real and three driveways on Center Street. There is on-street parking along the project frontage on El Camino Real and Center Street that could limit the sight distance. It is recommended that standard no parking zones be established adjacent to the project driveways to ensure that exiting vehicles can see approaching vehicles and bicycles on the road.

Recommendation: Prohibit on-street parking within 50 feet on either side of each driveway on Center Street and on El Camino Real south of the driveway.

On-Site Circulation

Residential parking would be provided primarily in a residential parking garage (Levels 1 to 6). The project also would include a small number of at-grade parking spaces. The parking stalls in the garage and the at grade surface parking spaces would be at a 90-degrees angle. The width of the drive aisles meets the City of Millbrae’s minimum requirement (24 feet) for 90-degree parking spaces on double-loaded drive aisles with two-way traffic. The parking space dimensions (9 feet wide by 18 feet long for standard parking spaces and 8 feet wide by 16 feet long for compact parking space) meet the City standards.

Parking

The proposed apartment project consists of 384 residential units (49 studios, 198 one-bedroom, and 137 two-bedroom apartments).

The proposed apartment project would provide 560 on-site partially unbundled parking spaces for the residents and visitors. Each apartment unit will include one parking space as part of the lease and additional parking spaces may be purchased if needed. Since the project would provide five percent (19 units) of Very Low-Income Units, it is eligible for a density bonus. Under the State Density Bonus Law, the mandatory maximum residential standard is no more than one vehicle parking space for 0-1-bedroom units and two vehicle parking spaces for 2-3-bedroom units. Per the State Density Bonus Law, the project would be required to provide 521 parking spaces. The project is proposing to provide a total of 560 parking spaces, which would exceed the State requirement by 39 parking spaces.

Bicycle Parking

The City of Millbrae parking requirements state that the number of bicycle parking spaces should be at least 10% of auto parking provided. Based on the City of Millbrae bicycle parking requirements, the proposed project should provide 56 bicycle parking spaces for residential use. The project is proposing a total of 72 bicycle parking spaces for residential use, including 60 long-term and 12 short-term bicycle parking spaces, which exceeds the City's requirement.

Recommendation: Provide bicycle charging stations for at least 25 percent (18 spaces) of the proposed bicycle parking spaces onsite.

Table ES- 1
Intersection Levels of Service Summary

#	Intersection	Control	Standard	Peak Hour	Count Date	Existing Conditions Delay[1] (sec)	Existing Conditions LOS	Existing plus Project Delay[1] (sec)	Existing plus Project LOS	Existing plus Project Incr. in Delay	Existing plus Project plus Hotel Delay[1] (sec)	Existing plus Project plus Hotel LOS	Existing plus Project plus Hotel Incr. in Delay	Background Conditions Delay[1] (sec)	Background Conditions LOS	Background plus Project Delay[1] (sec)	Background plus Project LOS	Background plus Project Incr. in Delay	Background plus Project plus Hotel Delay[1] (sec)	Background plus Project plus Hotel LOS	Background plus Project plus Hotel Incr. in Delay
1	El Camino Real & San Felipe Avenue	Signal	D	AM	09/12/19	11.4	B	11.5	B	0.1	11.5	B	0.1	11.4	B	11.4	B	0.0	11.5	B	0.1
				PM	09/12/19	15.2	B	15.3	B	0.1	15.3	B	0.1	15.8	B	15.9	B	0.1	15.9	B	0.1
2	El Camino Real & Santa Inez Avenue / Park Place	Signal	D	AM	09/12/19	9.9	A	9.9	A	0.0	9.8	A	-0.1	9.6	A	9.6	A	0.0	9.6	A	0.0
				PM	09/12/19	18.2	B	18.2	B	0.0	18.2	B	0.0	14.4	B	14.4	B	0.0	14.4	B	0.0
3	El Camino Real & Park Boulevard / San Diego Avenue	Side-Street Stop	D	AM	09/12/19	**39.5**	**E**	**39.5**	**E**	0.0	**41.2**	**E**	1.7	**>50**	**F**	**>50**	**F**	0.0	**>50**	**F**	3.2
				PM	09/12/19	**45.0**	**E**	**45.8**	**E**	0.8	**49.0**	**E**	4.0	**>50**	**F**	**>50**	**F**	26.8	**>50**	**F**	28.9
4	El Camino Real & Santa Helena Avenue	Side-Street Stop[2]	D	AM	09/12/19	20.7	C	20.7	C	0.0	20.9	C	0.2	25.0	C	25.0	C	0.0	25.2	D	0.2
				PM	09/12/19	19.5	C	19.8	C	0.3	20.2	C	0.7	23.4	C	24.4	C	1.0	25.1	D	1.7
5	El Camino Real & Capuchino Drive	Side-Street Stop	D	AM	09/12/19	23.1	C	23.1	C	0.0	23.4	C	0.3	29.9	D	29.9	D	0.0	30.2	D	0.3
				PM	09/12/19	20.9	C	21.2	C	0.3	21.4	C	0.5	23.5	C	23.7	C	0.2	24.0	C	0.5
6	El Camino Real & Millwood Drive	Signal	D	AM	09/12/19	7.6	A	7.5	A	-0.1	7.6	A	0.0	7.4	A	7.4	A	0.0	7.5	A	0.1
				PM	09/12/19	5.5	A	5.5	A	0.0	5.5	A	0.0	5.3	A	5.3	A	0.0	5.3	A	0.0
7	El Camino Real & Ludeman Lane	Side-Street Stop[2]	D	AM	09/12/19	12.9	B	13.1	B	0.2	13.1	B	0.2	14.5	B	14.5	B	0.0	14.5	B	0.0
				PM	09/12/19	**41.8**	**E**	**43.3**	**E**	1.5	**46.4**	**E**	4.6	**>50**	**F**	**>50**	**F**	0.0	**>50**	**F**	14.4
8	El Camino Real & Center Street	Signal	D	AM	09/12/19	7.0	A	7.8	A	0.8	8.6	A	1.6	6.6	A	7.4	A	0.8	8.1	A	1.5
				PM	09/12/19	15.4	B	18.4	B	3.0	20.9	B	5.5	15.6	B	18.8	B	3.2	21.5	C	5.9
9	El Camino Real & Meadow Glen Avenue	Signal	D	AM	09/12/19	10.7	B	10.6	B	-0.1	10.7	B	0.0	10.3	B	10.2	B	-0.1	10.4	B	0.1
				PM	09/12/19	22.5	C	22.7	C	0.2	23.2	C	0.7	22.9	C	23.1	C	0.2	23.7	C	0.8
10	El Camino Real & Silva Avenue	Signal	D	AM	09/17/19	11.3	B	11.4	B	0.1	11.4	B	0.1	11.5	B	11.5	B	0.0	11.6	B	0.1
				PM	09/17/19	22.5	C	22.6	C	0.1	22.9	C	0.4	22.9	C	23.1	C	0.2	23.4	C	0.5
11	El Camino Real & Hillcrest Boulevard	Signal	D	AM	09/12/19	16.3	B	16.3	B	0.0	16.3	B	0.0	18.2	B	18.3	B	0.1	18.4	B	0.2
				PM	09/12/19	24.8	C	24.8	C	0.0	24.9	C	0.1	38.5	D	38.3	D	-0.2	38.1	D	-0.4
12	El Camino Real & Project Driveway 1	Side-Street Stop	D	AM	05/25/17	14.0	B	13.7	B	-0.3	14.3	B	0.3	14.8	B	14.4	B	-0.4	15.2	C	0.4
				PM	05/25/17	20.9	C	20.8	C	-0.1	23.8	C	2.9	24.0	C	23.8	C	-0.2	28.0	D	4.0
13	Center Street & San Anselmo Avenue	Side-Street Stop	D	AM	09/12/19	9.8	A	10.6	B	0.8	10.6	B	0.8	9.8	A	10.6	B	0.8	10.6	B	0.8
				PM	09/12/19	9.3	A	9.9	A	0.6	9.9	A	0.6	9.3	A	9.9	A	0.6	9.9	A	0.6
14	Center Street & Project Driveway 2	Side-Street Stop	D	AM	05/25/17	10.7	B	10.7	B	0.0	11.8	A	1.1	10.7	B	10.7	B	0.0	11.8	B	1.1
				PM	05/25/17	10.4	B	10.4	B	0.0	12.0	A	1.6	10.4	B	10.4	B	0.0	12.0	B	1.6
15	Center Street & Project Driveway 3	Side-Street Stop[3]	D	AM	n/a	n/a	n/a	10.1	B	n/a	10.1	B	n/a	n/a	n/a	10.1	B	n/a	10.1	B	n/a
				PM	n/a	n/a	n/a	9.9	A	n/a	9.9	A	n/a	n/a	n/a	9.9	A	n/a	9.9	A	n/a
16	El Camino Real & Millbrae Avenue	Signal[4]	E	AM	09/12/19	64.9	E	66.1	E	1.2	66.8	E	1.9	**87.6**	**F**	**89.5**	**F**	1.9	**90.6**	**F**	3.0
				PM	09/12/19	68.5	E	69.7	E	1.2	70.5	E	2.0	**85.3**	**F**	**86.5**	**F**	1.2	**88.2**	**F**	2.9

Notes:

1. The delay reported for the signalized intersections is the average stopped delay for all vehicles entering the intersection and the delay reported for the unsignalized intersections is the worst delay experienced by vehicles on the minor street approach.
2. Side-Street Stop Controlled intersection with High-Intensity Activated Crosswalk (HAWK) Beacon.
3. New Side-Street Stop Controlled intersection under Project conditions
4. CMP Intersection

BOLD indicates a substandard level of service

Impact on Transit Service

Based on the 2013 to 2017 American Community Survey, 85.6% of the Millbrae residents commute to work in their car, and 5.1% used transit (The remaining trips use other modes of transportation such as a motorcycle, walk or bike). Based on this transit percentage, the proposed apartment project is estimated to add 4 to 7 transit trips during the peak hours. The project and the hotel together are estimated to add 13 to 17 transit trips. These trips would be split between the BART, Caltrain, and buses. It is unlikely that the project by itself would generate enough demand for transit service to justify the expansion of bus, Caltrain or BART service. It is anticipated that the existing transit service would be able to accommodate these additional transit trips.

Impact on Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks along all of the surrounding streets except for a 275-foot segment on the south side of the Center Street, between El Camino Real and the existing driveway. The project applicant has voluntarily agreed to close the existing sidewalk gap along Center St to connect the project with the El Camino Real and Downtown Millbrae Specific Plan areas[1], and to make other voluntary improvements to enhance pedestrian safety along Center Street, including constructing an 8-foot wide pathway along the project frontage, bulb-outs, and a 3 way stop sign at Center Street and San Anselmo. The project applicant has also agreed to make a voluntary fair-share contribution of $50,000 toward the El Camino Real streetscape and the El Camino Real & Center St traffic signal modifications.

Impact on Bicycle Facilities

There are currently minimal bicycle facilities in the project area and no designated bike lanes along the surrounding streets. There are some cyclist-suggested routes, which are compiled by cyclists as preferred routes shown on the 2009 San Mateo County Bicycle Map. The *San Mateo County Comprehensive Bicycle and Pedestrian Plan,* adopted on September 8, 2011, has identified the following proposed improvements to the bike network within the project vicinity:

- San Antonio Avenue and Monterey Street are proposed for a Class I bicycle path.
- Larkspur Drive and Rollins Road is proposed to provide Class II bicycle lanes.
- San Anselmo Avenue, Magnolia Avenue, Richmond Drive and Hill Crest Boulevard are proposed for Class III signed bicycle routes.

These bicycle improvements will benefit bicyclists of the project. The project by itself would not create an impact on the transportation system that would require improvements for bicycle travel.

Signal Warrant Analysis

Unsignalized study intersections expected to operate at a poor level of service were checked for a signal warrant on the basis of one-hour traffic volumes. The signal warrants were checked in accordance with the guidelines outlined in the CA MUTCD Section 4C.03 (Warrant 3, One-Hour Vehicular Volume). The analysis showed that the unsignalized intersections operating at unacceptable

[1] This assumes that no right-of-way, utility undergrounding, or signal modifications would be required.

levels of service would not meet the signal warrant with the traffic added by the proposed apartment project whether alone or in combination with a potential hotel.

Construction Traffic

Project construction would temporarily affect off-site circulation due to potential travel lane closures, detours, closure of sidewalks, and increased truck traffic to and from the development site.

Recommendation: Project construction activities should follow the *Plan Bay Area 2040* guidelines to minimize disruptions to the overall circulation in the project area.

Applicable Mitigation Measures from Prior Environmental Documents

The Plan Bay Area 2040 EIR and Millbrae General Plan EIR were reviewed to identify mitigation measures applicable to the proposed development at 1100 El Camino Real. Consistent with Plan Bay Area Mitigation Measure 2.1-3-3(b), the proposed project will incorporate supporting infrastructure for non-motorized modes including bike parking and sidewalks. Furthermore, the project will implement best practice strategies regarding construction activities on the transportation system and apply recommended applicable mitigation measures as defined by state and federal agencies per Plan Bay Area Mitigation Measure 2.1-7. None of the other transportation mitigation measures found in the prior environmental documents are applicable to this project.

1. Introduction

This report presents the results of the traffic analysis conducted for the proposed development ("project") located at 1100 El Camino Real in Millbrae, California. The report analyzes two development scenarios. The first scenario consists of the proposed project, which would include a five-story 384-unit apartment building with a five and a half level parking garage and surface parking. The second scenario consists of the proposed apartment project plus a 200-room hotel and associated parking. The potential hotel development is in the preliminary planning stages and is being studied for informational purposes only. The project site is currently occupied by a 220-room hotel, restaurant, two single family homes, and a surface parking lot. These uses would be demolished under both the scenarios. The project site location and the surrounding study area are shown on Figure 1. The site plan is shown on Figure 2.

The project site would be served by four driveways as shown in Figure 2. One driveway would be located on El Camino Real and three driveways would be located on Center Street. Access to the hotel parking garage would be provided via the driveway on El Camino Real and the first driveway on Center Street. The first driveway on Center Street also provides access to the surface parking lot. Access to the residential parking garage would be provided via the second driveway on Center Street. The third driveway on Center Street would be used for emergency vehicle access only.

Scope of Study

This study was conducted for the purpose of identifying potential transportation deficiencies related to the proposed apartment project alone and in combination with a potential hotel. The potential deficiencies caused by the project were evaluated in accordance with the standards set forth by the City of Millbrae, the City of San Bruno, and the City/County Association of Governments of San Mateo County.

The study analyzes potential traffic deficiencies caused by the proposed apartment project alone and in combination with a potential hotel on the key intersections in the vicinity of the site during the weekday AM and PM peak hours of commute traffic. A signal warrant analysis was prepared to determine the need for signalization at the unsignalized study intersections. An analysis of vehicle queuing, site access and on-site circulation, parking, and transit, bicycle, pedestrian access, and vehicle miles travelled (VMT) is also included.

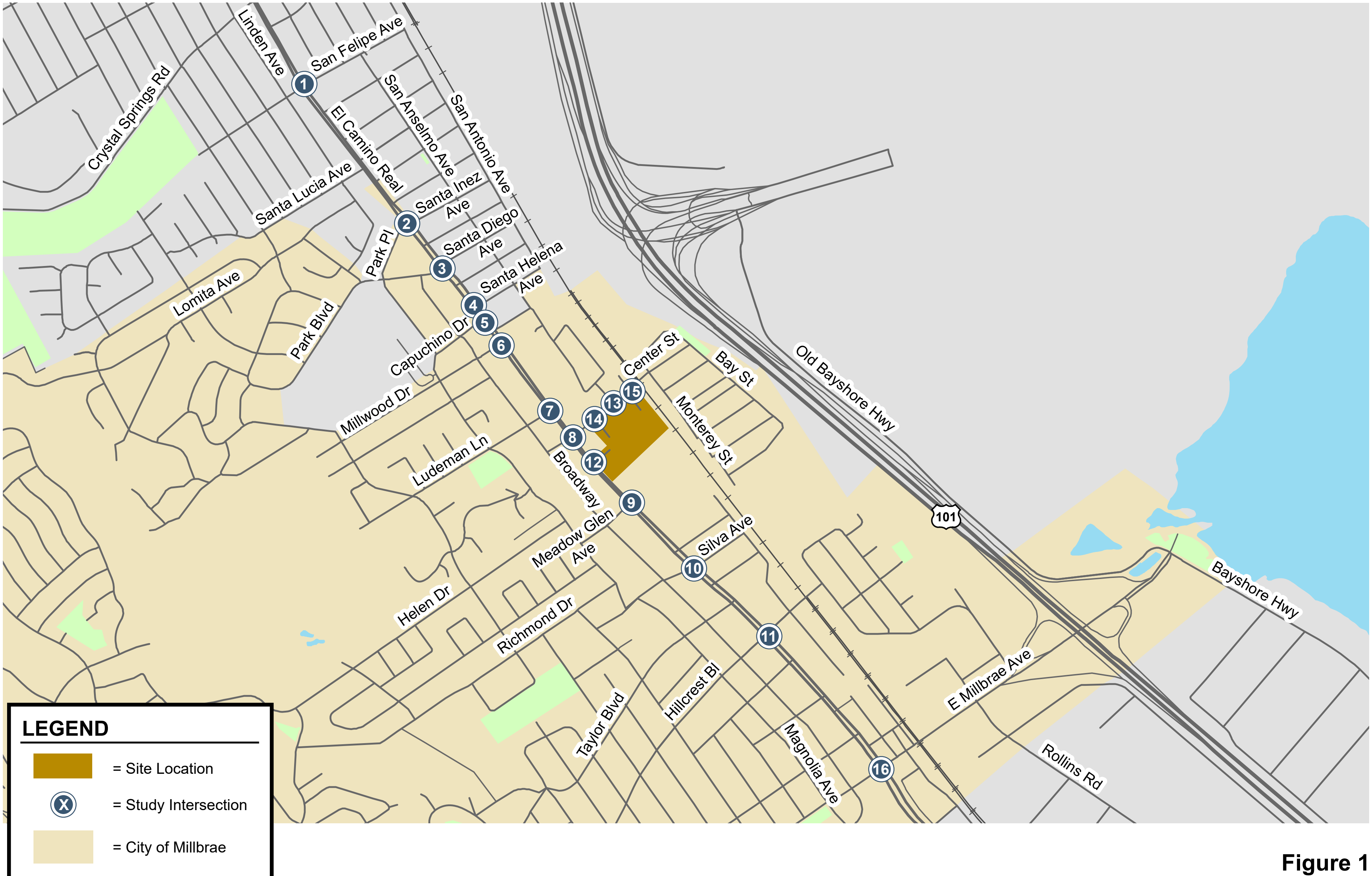


Figure 1
Site Location and Study Intersections

HEXAGON

Figure 2
Site Plan

Study Intersections

The traffic analysis evaluates AM and PM peak-hour levels of service for eight signalized intersections and eight unsignalized intersections. The El Camino Real and San Felipe Avenue intersection is located in San Bruno, and all other intersections are located in Millbrae. The study intersections were selected based on input from City of Millbrae staff. The study intersections are identified below.

1. El Camino Real / San Felipe Avenue (San Bruno)
2. El Camino Real / Santa Inez Avenue / Park Place
3. El Camino Real / Park Boulevard / San Diego Avenue *
4. El Camino Real / Santa Helena Avenue *
5. El Camino Real / Capuchino Drive*
6. El Camino Real / Millwood Drive
7. El Camino Real / Ludeman Lane *
8. El Camino Real / Center Street
9. El Camino Real / Meadow Glen Avenue
10. El Camino Real / Silva Avenue
11. El Camino Real / Hillcrest Boulevard
12. El Camino Real / Project Driveway 1*
13. Center Street / San Anselmo Avenue*
14. Center Street / Project Driveway 2*
15. Center Street / Project Driveway 3*
16. El Camino Real / Millbrae Avenue (CMP)

* Unsignalized Intersection

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour is expected to occur between 7:00 AM and 9:00 AM, and the PM peak hour between 4:00 PM and 6:00 PM on a typical weekday. These are the hours during which most traffic congestion occurs on the roadways.

Traffic conditions were evaluated for the following scenarios:

Scenario 1: *Existing Conditions.* Existing conditions are represented by existing traffic volumes on the existing roadway network. Existing traffic volumes were obtained from recent traffic counts conducted in September 2019.

Scenario 2: *Existing Plus Project Conditions.* Existing plus project peak-hour traffic volumes were estimated by adding to existing traffic volumes the additional traffic generated by the proposed apartment project. Existing plus project conditions were evaluated relative to existing conditions to determine the effects the apartment project would have on the existing roadway network.

Scenario 3: *Existing Plus Project and Hotel Conditions.* Existing plus project and hotel peak-hour traffic volumes were estimated by adding to existing traffic volumes the additional traffic generated by the proposed apartment project and a potential 200-room hotel. Existing plus project and hotel conditions were evaluated relative to existing conditions to determine the effects on the existing roadway network caused by the proposed apartment project in combination with a potential hotel.

Scenario 4: *Background Conditions.* Background traffic conditions are represented by background traffic volumes on the background roadway network prior to the project being built in year 2024. Background traffic volumes were estimated by adding to existing traffic counts the additional traffic generated by approved but not yet constructed developments in the area. The background roadway network includes planned improvements at the El Camino/Millbrae intersection identified in the Millbrae Station Area Specific Plan EIR.

Scenario 5: *Background Plus Project Conditions.* Background plus Project traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the proposed apartment project. Background plus Project conditions were evaluated relative to background conditions to determine potential project deficiencies.

Scenario 6: *Background Plus Project and Hotel Conditions.* Background plus Project and Hotel traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the proposed apartment project and a 200-room hotel. Background plus Project and Hotel conditions were evaluated relative to background conditions to determine potential deficiencies of the proposed apartment project in combination with a potential hotel.

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 new intersection turning movement counts, parking counts, data provided by the City of Millbrae and City of San Bruno, and field observations. The following data were collected from these sources:

- Existing traffic volumes
- Existing lane configurations
- Signal timing and phasing
- Approved project trips

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.

City of Millbrae Signalized Intersections

The City of Millbrae LOS policy for signalized intersections along El Camino Real established LOS D as the minimum standard except for CMP intersections. The City of Millbrae evaluates level of service at signalized intersections based on the *2010 Highway Capacity Manual* (HCM) level of service methodology using the Synchro software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection.

City of San Bruno Signalized Intersections

The intersection of El Camino Real and San Felipe Avenue is located in the City of San Bruno. The City of San Bruno LOS policy for signalized intersections sets forth LOS D as the minimum standard except for CMP intersections. Table 1 shows the level of service definitions for signalized intersections.

San Mateo County Association of Governments (C/CAG)

The San Mateo County Association of Governments is a Joint Powers Authority that plans, funds and delivers transportation programs and projects in San Mateo County. C/CAG has developed LOS standards for roadways and intersections designated as part of the Congestion Management Program (CMP) network. CMP facilities in the project vicinity are US 101, I-280, I-380 and El Camino Real (SR 82). The El Camino Real and Millbrae Avenue intersection is a CMP intersection and has a minimum standard of LOS E.

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 may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lenghts, 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) p10-16.

Unsignalized Intersections

There are eight unsignalized study intersections in the project vicinity. The unsignalized study intersections were analyzed based on the *2010 Highway Capacity Manual* (HCM) level of service methodology using the Synchro software. This method evaluates unsignalized intersections on the basis of average stopped delay at all-way stop controlled intersections, and for the worst-case approach at two-way stop-controlled intersections. The Millbrae General Plan specifies that the minimum acceptable peak-hour level of service for unsignalized intersections is LOS D. Table 2 shows the level of service definitions for unsignalized intersections.

Traffic Signal Warrant

For the unsignalized intersections, the analysis of level of service was supplemented with a signal warrant check. The assessment of the need for signalization was conducted using the peak-hour signal warrants described in the *2014 California Manual on Uniform Traffic Control Devices (*CA MUTCD). This analysis provides an indication of whether traffic conditions are, or would be, sufficient to justify installation of a traffic signal.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average 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) p17-2.

Vehicle Queuing

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

The 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur at 95 percent of the signal cycles. Or, a queue length longer than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn storage pocket designs based on the 95th

percentile queue length would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the "design queue length."

City of Millbrae LOS Standards

The City of Millbrae defines a deficiency at study intersections if addition of project trips causes any of the following to occur:

- Cause peak-hour signalized intersection operations to deteriorate from an acceptable level of service (LOS D or better) to an unacceptable level of service (LOS E or LOS F); or
- Exacerbate unacceptable operations by increasing the average critical delay by five seconds or more at a signalized intersection operating at LOS E or LOS F.
- Increase the delay at an unsignalized intersection operating at an unacceptable level (LOS E or F) by five or more seconds *and* traffic volumes at the intersection satisfy the Caltrans Peak Hour Volume Signal Warrant for traffic signal installation.

City of San Bruno LOS Standards

The City of San Bruno defines a deficiency at study intersections if the addition of project trips causes any of the following to occur:

- Cause peak-hour intersection operations to deteriorate from an acceptable level of service (LOS D or better) to an unacceptable level of service (LOS E or LOS F); or
- Exacerbate unacceptable operations by increasing the average critical delay by four seconds or more at an intersection operating at LOS E or LOS F.

San Mateo County Association of Governments (C/CAG) LOS Standards

The intersection of El Camino Real and Millbrae Avenue is a San Mateo County Congestion Management Program (CMP) intersection. The San Mateo City/ County Association of Governments (C/CAG) has developed LOS standards for roadways on the designated CMP network. The El Camino Real/Millbrae Avenue intersection has a CMP standard of LOS E. Deficiencies at CMP intersections are defined to occur when the addition of project traffic causes:

- Peak-hour intersection operations to deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F); or
- Exacerbation of unacceptable operations by increasing the average critical delay by four seconds or more.

Significant Impact Criteria

VMT Analysis

Per California Senate Bill 743, the California Natural Resources Agency, with assistance from the Governor's Office of Planning and Research (OPR), adopted new CEQA guidelines in December 2018. The new guidelines state that automobile delay, as measured by level of service (LOS), will no longer constitute a significant environmental impact under CEQA, and that VMT is considered the most appropriate metric to evaluate a project's transportation impacts. The City of Millbrae, 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.

The CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor can be presumed to have a less-than significant impact on VMT, A high quality transit corridor is a corridor served by major bus routes with a frequency of service interval of 15 minutes or less during the commute peak periods. The project is located within a half mile of the SamTrans Route ECR stop, which provides service every 15 minutes during weekdays. Therefore, the project is expected to have a less-than-significant impact on VMT.

Report Organization

The remainder of this report is divided into seven chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian and bicycle facilities. Chapter 3 describes the methods used to estimate project traffic and intersection operations both alone and in combination with a potential hotel. Chapter 4 describes the background scenario conditions that includes approved projects in the City of Millbrae. Chapter 5 presents background plus project conditions which are used to determine intersection operations both alone and in combination with a potential hotel. Chapter 6 presents the VMT analysis and analysis of other transportation-related issues, including vehicle queuing analysis at selected intersections, traffic operations at unsignalized intersections, site access and on-site circulation, parking, and potential impacts on bicycle, pedestrian, and transit facilities. Chapter 7 includes a summary of deficiencies and any recommended improvements.

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.

Existing Roadway Network

Regional access to the project site is provided via SR 82, US-101, I-280, and I-380.

US-101 is a north/south freeway that extends from San Francisco through San Mateo and Santa Clara Counties. Near Millbrae, US-101 is mostly eight lanes wide. Access to US-101 is provided via a full interchange with Millbrae Avenue.

I-280 is a north/south freeway that extends from San Francisco through San Mateo and Santa Clara Counties. In Millbrae, I-280 is eight lanes wide. Regional access to the project site is provided via an interchange with Hillcrest Boulevard.

I-380 is a six-lane east/west freeway that connects I-280 and US-101 in San Bruno. El Camino Real provides access to I-380 via a full interchange.

SR-82/El Camino Real is a six-lane north-south arterial with a raised center median within the project area. El Camino Real extends northward to San Francisco where it changes designation to Mission Street and San Jose Avenue, and southward through San Jose. El Camino Real provides direct access to the project site.

Local access to the site is provided via Millbrae Avenue, Hillcrest Boulevard and Center Street. These roadways are described below.

Millbrae Avenue is a major east-west arterial that extends from Old Bayshore Highway to El Camino Real. West of El Camino Real, Millbrae Avenue continues until its terminus at Skyline Boulevard near I-280. Millbrae Avenue connects residential areas to the west with El Camino Real and US 101. Millbrae Avenue varies in width from two- to six-lanes, with six lanes and a median that provides left-turn pockets at the major intersections. Millbrae Avenue provides access to the project site via El Camino Real.

Hillcrest Boulevard is a local east-west collector street that extends from Aviador Avenue to I-280, providing regional connections to I-280 and El Camino Real for the residential areas of west Millbrae.

Near the project vicinity, Hillcrest Boulevard has two lanes and on-street parking. Hillcrest Boulevard provides access to the project site via El Camino Real.

Center Street is an east-west local street that extends from Monterey Street to Broadway, providing residential areas with connections to Broadway and El Camino Real. Center Street near the project has two lanes and on-street parking on both sides. Center Street provides direct access to the project site via two driveways.

Bicycle Facilities

There are currently minimal bicycle facilities in the project area and no designated bike lanes along the surrounding streets. There are some cyclist-suggested routes, which are compiled by cyclists as preferred routes shown on the 2009 San Mateo County Bicycle Map. These suggested routes are listed below and shown on Figure 3.

- Park Place between Magnolia Avenue and El Camino Real
- Santa Inez between El Camino Real and San Antonio Avenue
- San Anselmo Avenue south of Santa Inez Avenue
- Center Street west of San Anselmo Avenue
- Broadway between Center Street and Meadow Glen Avenue
- Meadow Glen Avenue
- Magnolia Avenue north of Millbrae Avenue
- Helen Drive east of Larkspur Drive
- Hillcrest Boulevard between Magnolia Avenue and Skyline Boulevard
- Lomita Avenue west of Magnolia Avenue
- Crystal Springs Avenue west of El Camino Real
- Laurel Avenue

Bicyclists can use the above-mentioned bike routes to access the project site.

The *San Mateo County Comprehensive Bicycle and Pedestrian Plan,* adopted on September 8, 2011, has identified the following proposed improvements to the bike network within the project vicinity:

- San Antonio Avenue and Monterey Street are proposed for Class I bicycle path.
- Larkspur Drive and Rollins Road are proposed to provide Class II bicycle lanes.
- San Anselmo Avenue, Magnolia Avenue, Richmond Drive and Hillcrest Boulevard are proposed for Class III signed bicycle routes.

Pedestrian Facilities

Pedestrian facilities in the study area consist of sidewalks along all of the surrounding streets except for a 275-foot segment on the south side of the Center Street near the project, between El Camino Real and the existing driveway. Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area. At the three intersections listed below, the City has installed hybrid beacon signal heads allowing pedestrians to safely cross El Camino Real.

3. El Camino Real / Park Boulevard / San Diego Avenue,
4. El Camino Real / Santa Helena Avenue, and
7. El Camino Real / Ludeman Lane.

These pedestrian hybrid beacon signals (also known as the High intensity Activated crossWalK or HAWK) are pedestrian-activated warning devices located on mast arms over pedestrian crossings. The beacon head consists of two red lenses above a single yellow lens. The beacon head is "dark" until a pedestrian wants to cross the street. The pedestrian pushes a button to activate the beacon. After displaying brief flashing and steady yellow intervals, the device displays a steady red light for drivers on El Camino Real and a "WALK" sign to pedestrians, allowing them to cross while traffic is stopped. After the pedestrian phase ends, the "WALK" sign changes to a flashing orange hand to notify pedestrians that their clearance time is ending. The hybrid beacon displays alternating flashing red lights to drivers while pedestrians finish their crossings before once again going dark at the conclusion of the cycle. Without a pedestrian call, these beacon signals heads are dark, and the intersections operate under stop control. Therefore, these intersections are analyzed as side-street stop controlled.

Overall, the existing pedestrian facilities provide adequate connectivity between the site and the surrounding land uses in the area.

Existing Transit Service

Existing transit service in the study area is provided by San Mateo County Transit District (SamTrans), BART, and Caltrain. The transit routes that serve the project area are described below and shown on Figure 4.

SamTrans Bus Service

The project is served by the ECR SamTrans bus route with bus stops located near the intersection of El Camino Real and Center Street. These bus stops are within a very short walking distance (about 600 feet) from the proposed project.

Route ECR provides service along El Camino Real between the Palo Alto Transit Center and the Daly City BART Station with 15-minute headways during weekdays and 20-minute headways during weekends. This route provides frequent service to the Millbrae Intermodal Terminal.

Caltrain Service

Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. Trains that stop at the Millbrae Station operate at approximately 25-minute headways in both directions during commute hours, with somewhat less frequent service midday. Caltrain operates between about 5:35 AM and 11:45 PM in the northbound direction and between 5:15 AM and 12:30 AM in the southbound direction. The Millbrae station is served by local, limited, and Baby Bullet trains.

Bicycles are permitted on Caltrain. There are bicycle racks and bicycle lockers available at the Millbrae Station. The project site is not within the walking distance of the Millbrae Caltrain station, but project residents could easily ride their bike the one-mile distance or take transit to the station. As part of the Caltrain Modernization Program, the rail service will be electrified. The electrified Caltrain system will provide increased service and improved travel times in an environmentally friendly and reliable way. Electrification is also expected to increase ridership through much improved system operations.

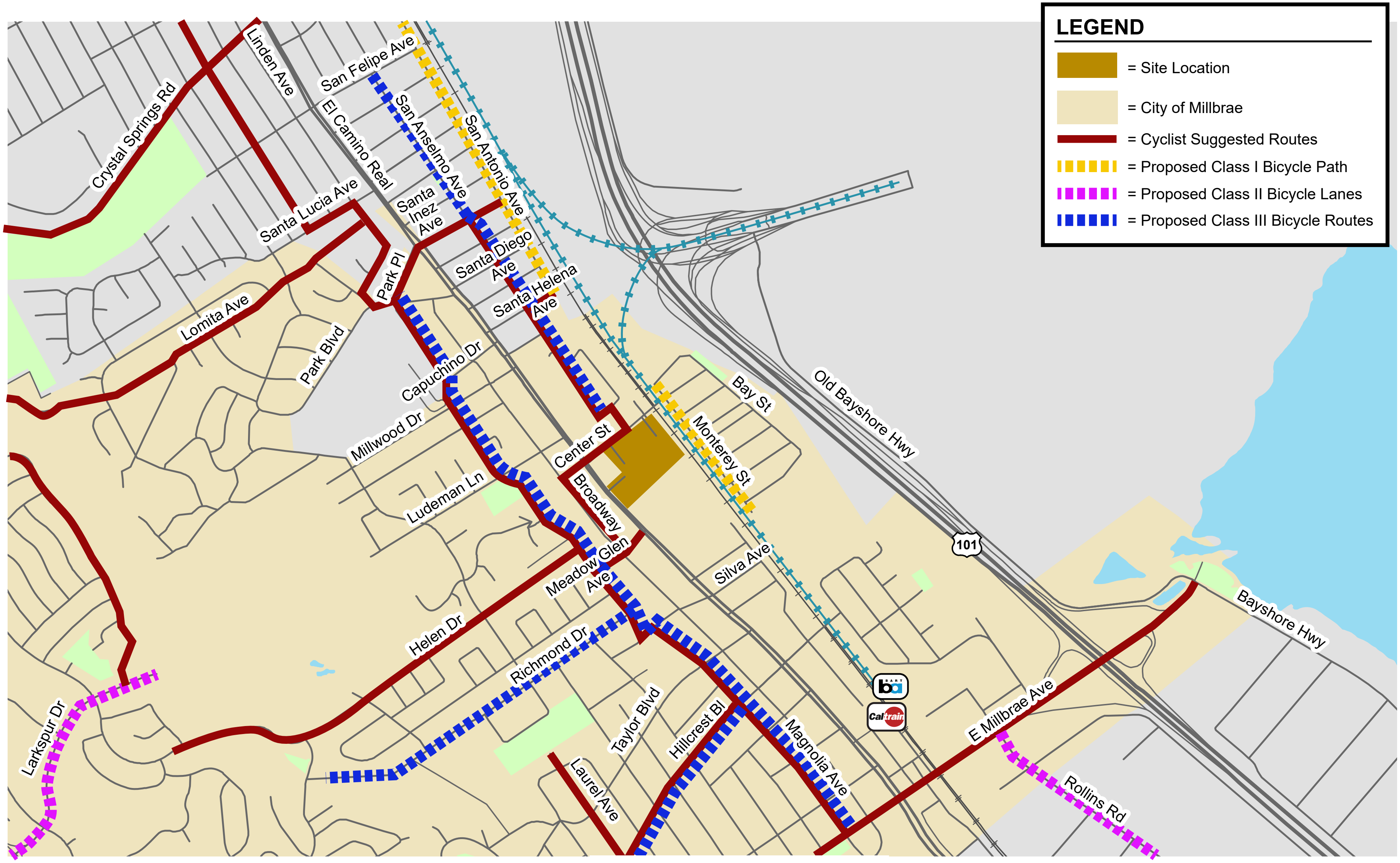


Figure 3
Existing Bicycle Network

NORTH
Not to Scale

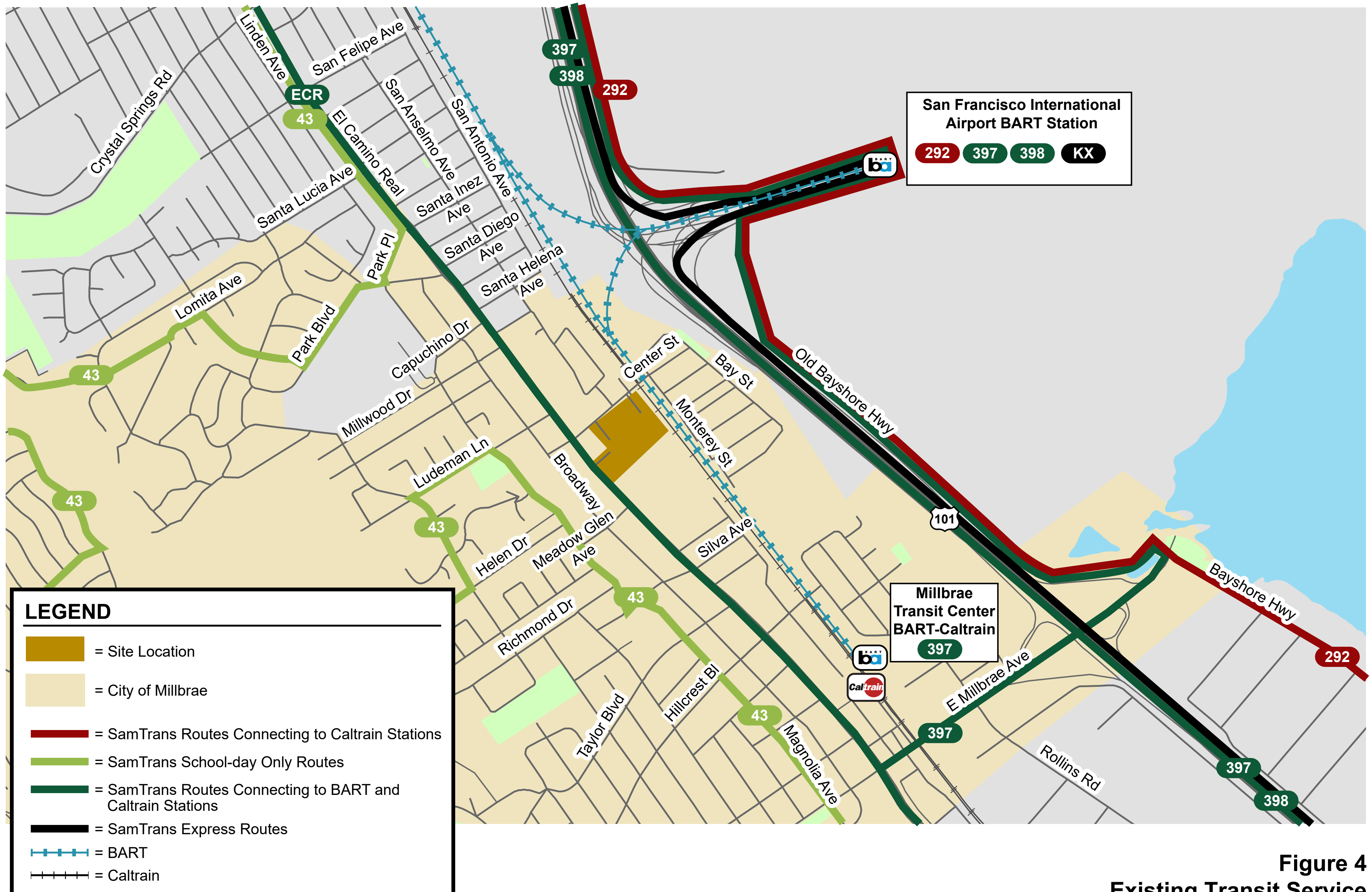


Figure 4
Existing Transit Service

BART Service

Bay Area Rapid Transit (BART) operates regional rail service in the Bay Area. The Millbrae Station is the southern terminus of the Richmond-Millbrae Line on weekdays before 9:00 PM, Antioch-Millbrae Line on weekdays after 9:00 PM, and the SFO Airport-Millbrae Line before 9:00 PM on weekdays and at all time Sundays. The Millbrae BART Station provides a direct intermodal connection to the Caltrain commuter rail system and provides fast and frequent service to many parts of the Bay Area, including downtown San Francisco, downtown Oakland, and the San Francisco International Airport. BART provides service from 4:00 AM to 12:00 AM on weekdays with typical headways of 15 minutes on the Richmond-Millbrae Line serving the station during peak and mid-day hours. BART provides 20-minute headways on the Antioch-Millbrae Line in the evening after 9:00 PM on weekdays and between 6:00 AM (8:00 AM on Sundays) to 12:00 AM on weekends.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 5.

Existing Traffic Volumes

Existing traffic volumes were obtained from counts collected on September 2019. The existing peak-hour intersection volumes are shown on Figure 6. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

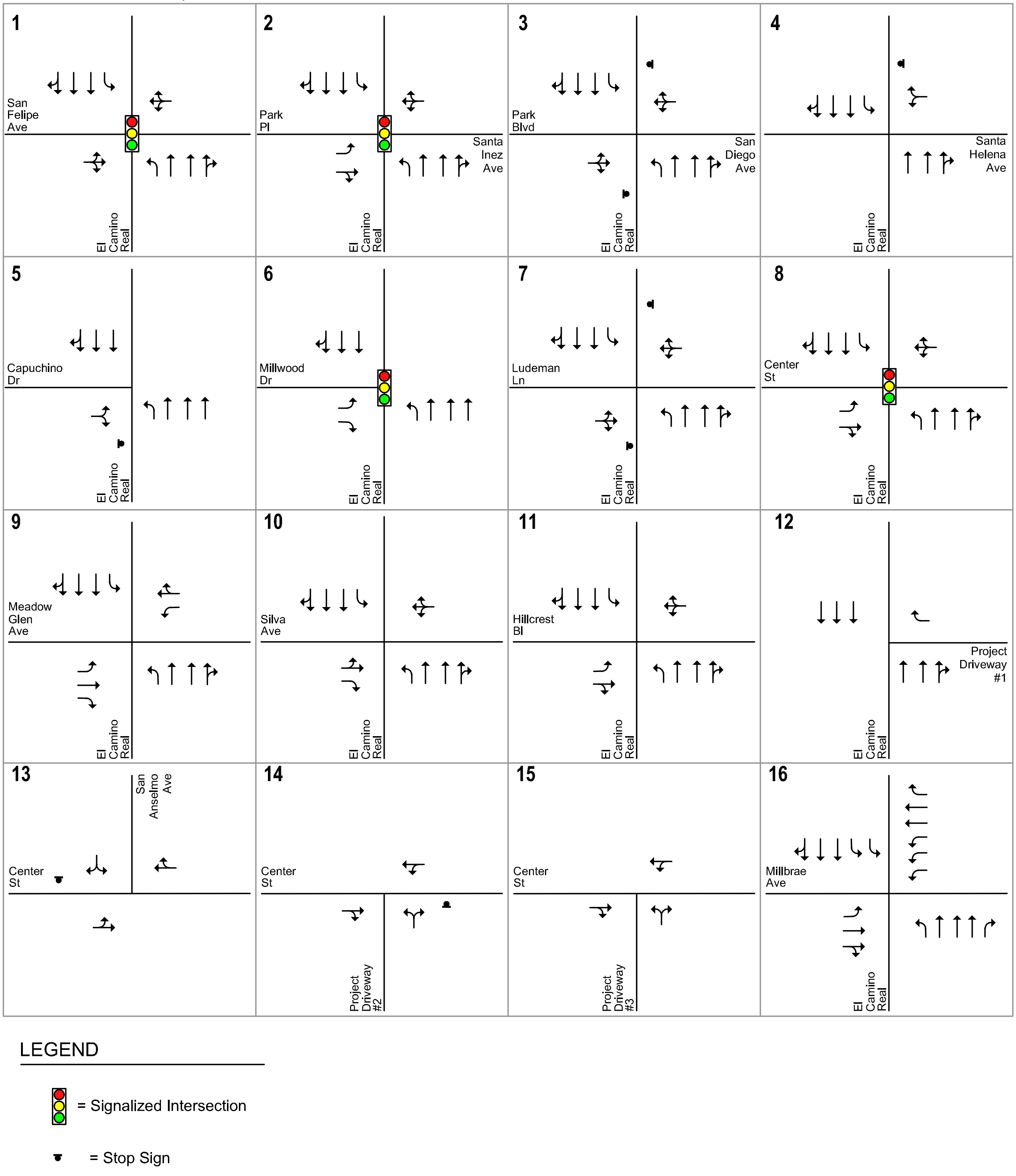
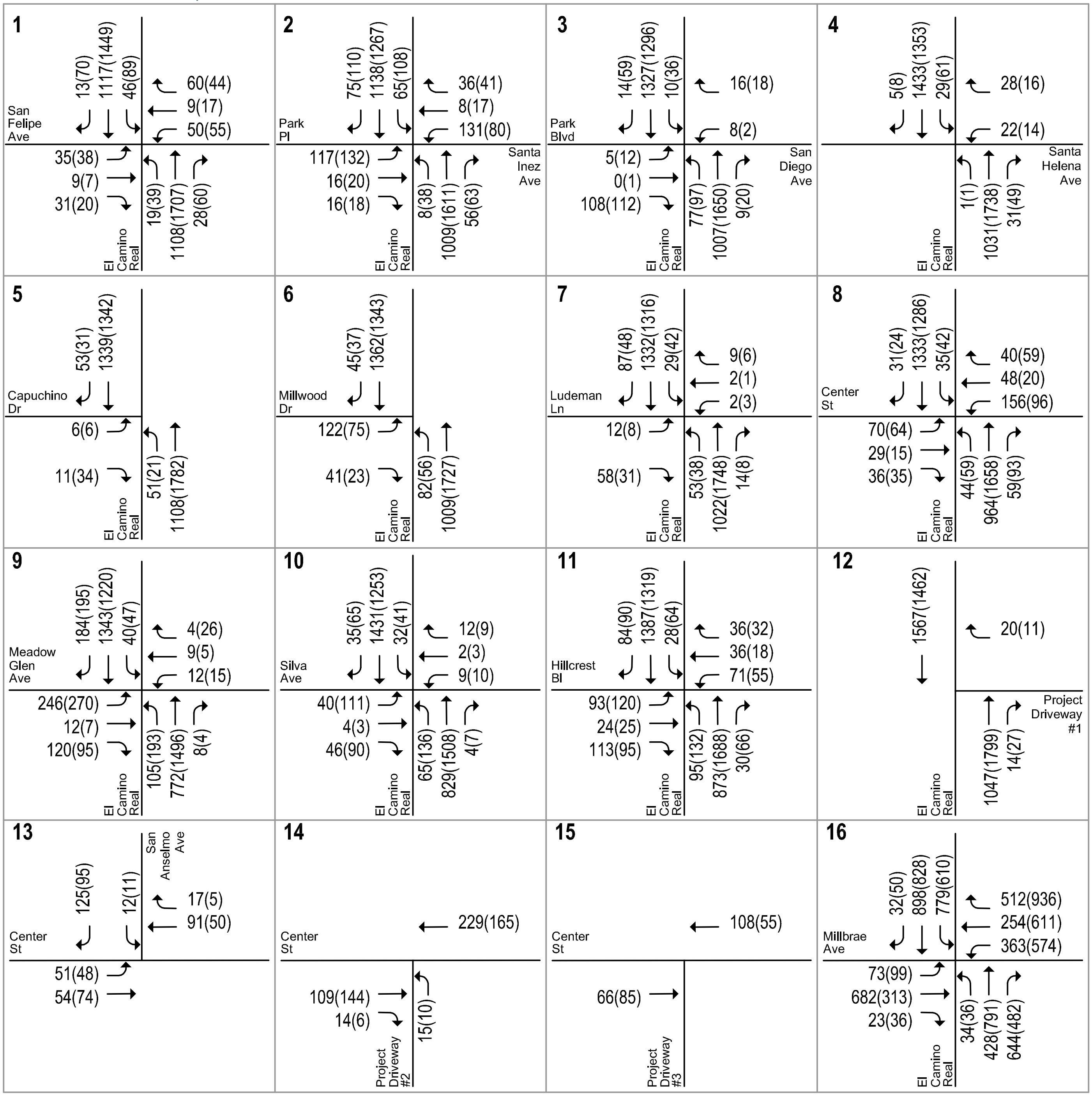


Figure 5
Existing Lane Configurations

HEXAGON

NORTH
Not to Scale



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 6
Existing Traffic Volumes

NORTH
Not to Scale

Existing Intersection Levels of Service

Intersection levels of service were evaluated against City of Millbrae, City of San Bruno and CMP standards. The results of the intersection level of service analysis under existing conditions are summarized in Table 3.

Signalized Intersections

The results of the analysis show that all the signalized study intersections currently operate at an acceptable level during the AM and PM peak hours of traffic.

Unsignalized Intersections

With two exceptions, the unsignalized study intersections currently operate at an acceptable level (LOS D or better) during the AM and PM peak commute hours. At the two-way stop-controlled intersection of El Camino Real and Park Boulevard / San Diego Avenue, the average delay reported in Table 3 reflects the worst approach (westbound in the AM peak hour and eastbound in the PM peak hour). Because of the high volume of traffic on El Camino Real, vehicles entering El Camino Real from westbound San Diego Avenue during the AM peak hour are estimated to experience about 39.5 seconds of delay, which corresponds to LOS E and vehicles entering El Camino Real from eastbound Park Boulevard during the PM peak hour are estimated to experience about 45 seconds of delay, which also corresponds to LOS E. However, traffic volumes on the westbound approach during the AM peak hour and the eastbound approach during the PM peak hour are low. During the AM peak-hour, there are 24 vehicles (16 right-turns and 8 left-turns) approaching the intersection with El Camino Real on the westbound approach. During the PM peak hour, there are 125 vehicles (12 left-turns and 112 right-turns) on the eastbound approach.

At the two-way stop-controlled intersection of El Camino Real and Ludeman Lane, the average delay reported in Table 3 reflects the worst (eastbound) approach. Because of the high volume of traffic on El Camino Real, vehicles entering El Camino Real from eastbound Ludeman Lane during the PM peak hour are estimated to experience about 41.8 seconds of delay, which corresponds to LOS E. However, traffic volumes on the eastbound approach are low. During the PM peak-hour, there are 39 vehicles (8 left-turns and 31 right-turns) on the eastbound approach.

A signal warrant analysis was conducted to determine if the two stop-controlled intersections listed above would require a traffic signal based on the peak-hour volume warrant. The analysis showed that, based on the peak-hour signal warrants, neither intersection would require a traffic signal. The signal warrant analysis is presented and further discussed in Chapter 6.

Note that field observations showed that the delays at the unsignalized intersection appear to be shorter compared to the delays computed by the Synchro software and shown in the level of service tables. Motorists accept smaller gaps in the conflicting traffic flow to enter the intersections than what is modeled in the Synchro software. Therefore, the delays at the unsignalized intersections shown in the tables are conservative estimates.

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

Table 3
Existing Intersection Levels of Service

#	Intersection	Control	Peak Hour	Count Date	Existing Conditions Delay[1] (sec)	Existing Conditions LOS
1	El Camino Real & San Felipe Avenue	Signal	AM	09/12/19	11.4	B
			PM	09/12/19	15.2	B
2	El Camino Real & Santa Inez Avenue / Park Place	Signal	AM	09/12/19	9.9	A
			PM	09/12/19	18.2	B
3	El Camino Real & Park Boulevard / San Diego Avenue	Side-Street Stop	AM	09/12/19	**39.5**	**E**
			PM	09/12/19	**45.0**	**E**
4	El Camino Real & Santa Helena Avenue	Side-Street Stop[2]	AM	09/12/19	20.7	C
			PM	09/12/19	19.5	C
5	El Camino Real & Capuchino Drive	Side-Street Stop	AM	09/12/19	23.1	C
			PM	09/12/19	20.9	C
6	El Camino Real & Millwood Drive	Signal	AM	09/12/19	7.6	A
			PM	09/12/19	5.5	A
7	El Camino Real & Ludeman Lane	Side-Street Stop[2]	AM	09/12/19	12.9	B
			PM	09/12/19	**41.8**	**E**
8	El Camino Real & Center Street	Signal	AM	09/12/19	7.0	A
			PM	09/12/19	15.4	B
9	El Camino Real & Meadow Glen Avenue	Signal	AM	09/12/19	10.7	B
			PM	09/12/19	22.5	C
10	El Camino Real & Silva Avenue	Signal	AM	09/17/19	11.3	B
			PM	09/17/19	22.5	C
11	El Camino Real & Hillcrest Boulevard	Signal	AM	09/12/19	16.3	B
			PM	09/12/19	24.8	C
12	El Camino Real & Project Driveway 1	Side-Street Stop	AM	05/25/17	14.0	B
			PM	05/25/17	20.9	C
13	Center Street & San Anselmo Avenue	Side-Street Stop	AM	09/12/19	9.8	A
			PM	09/12/19	9.3	A
14	Center Street & Project Driveway 2	Side-Street Stop	AM	05/25/17	10.7	B
			PM	05/25/17	10.4	B
15	Center Street & Project Driveway 3	Side-Street Stop[3]	AM	05/25/17	n/a	n/a
			PM	05/25/17	n/a	n/a
16	El Camino Real & Millbrae Avenue	Signal[4]	AM	09/12/19	64.9	E
			PM	09/12/19	68.5	E

Notes:
1. The delay reported for the signalized intersections is the average stopped delay for all vehicles entering the intersection and the delay reported for the unsignalized intersections is the worst delay experienced by vehicles on the minor street approach.
2. Side-Street Stop Controlled intersection with High-Intensity Activated Crosswalk (HAWK) Beacon.
3. New Side-Street Stop Controlled intersection under Project conditions
4. CMP Intersection

BOLD indicates a substandard level of service

Observed Existing Traffic Conditions

Traffic conditions in the field were observed in order to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions. Overall, the study intersections operate adequately during both the AM and PM peak hours of traffic, and the level of service analysis at the signalized intersections appears to accurately reflect actual existing traffic conditions. Field observations showed operational issues at the following intersections.

El Camino Real and Center Street (#8) – During the AM peak hour, westbound vehicles on Center Street extend beyond the driveway of the O'Reilly Auto Parts store but the queue always clears in one signal cycle. This didn't cause any operational issues since the driveway is one of two entrances to a small parking lot with 17 stalls, which generates very few trips.

El Camino Real and Millbrae Avenue (#16) – During the AM peak hour, left-turning traffic on southbound El Camino Real and westbound Millbrae Avenue occasionally require two signal cycles to clear the intersection. Because of the high demand, southbound left-turn queues frequently spill over into the southbound through lane.

Unsignalized Intersections: The observed delays at the unsignalized intersections with El Camino Real generally appeared to be shorter than the delays calculated with the Synchro software and shown in the tables. This is likely because drivers are accepting shorter gaps in the vehicle stream when entering or crossing El Camino Real than what is assumed in the Synchro software.

3.
Existing Plus Project Conditions

This chapter describes traffic conditions with the project both alone and in combination with a potential hotel. It begins with a description of the transportation system under existing plus project conditions and the method by which project traffic is estimated. A summary of levels of service under existing plus project traffic conditions both alone and in combination with a potential hotel is presented in this chapter. Existing plus project traffic conditions could potentially occur if the project were to be built and occupied prior to other approved projects in the area.

Transportation Network under Existing Plus Project Conditions

It is assumed in this analysis that the transportation network under existing plus project conditions both alone and in combination with a potential hotel would be the same as the existing 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 project was estimated for the AM and PM peak hours both alone and in combination with a potential hotel. As part of the project trip distribution, the directions to and from the project that the trips would travel were estimated. In the project trip assignment step, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data has been collected that correlate to common land uses and their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The trip estimates for the proposed apartment project are based on trip rates published in the *ITE Trip Generation Manual, 10th Edition*. The rates published for Mid-Rise Multifamily Housing (221) were used to estimate the trips generated by the proposed apartment project. By itself, the proposed apartment project is estimated to generate a gross 128 trips during the AM peak hour (33 in and 95 out), and 161 trips during the PM peak hour (98 in and 63 out).

The trips generated by a potential new hotel were estimated using the trip rates observed at the existing hotel on site. The proposed apartment project in combination with a potential hotel are estimated to generate a gross 185 trips during the AM peak hour (67 in and 118 out), and 210 trips during the PM peak hour (123 in and 87 out). The trips generated by the existing buildings on the site were obtained from counts completed on Thursday May 25th, 2017. It is expected that the trips generated by the project site remain approximately the same in 2019. Based on the driveway counts, the existing buildings generate 63 trips during the AM peak hour (28 in and 35 out), and 54 trips during the PM peak hour (33 in and 21 out).

After crediting the existing trip generation, the proposed apartment project is estimated to generate a net of 65 trips during the AM peak hour (5 in and 60 out), and 107 trips during the PM peak hour (65 in and 42 out). The proposed apartment project in combination with a potential hotel are estimated to generate a net of 122 trips during the AM peak hour (39 in and 83 out), and 156 trips during the PM peak hour (90 in and 66 out). The trip generation estimates are shown in Tables 4 and 5.

The observed hotel trip rates are substantially lower than the hotel trip rates published in the ITE *Trip Generation Manual, 10th Edition*. This is due to the project's proximity to transit and other factors related to the project location. Based on ITE rates, the proposed 200-room hotel is estimated to generate 1,831 daily trips including 95 and 124 trips during the AM and PM peak hours, respectively. After crediting the existing trip generation, the proposed apartment project in combination with a potential hotel are estimated to generate a net of 160 trips during the AM peak hour and 231 trips during the PM peak hour. To be conservative, the level of service calculations and queuing analysis contained in this report are based on ITE trip rates for hotels.

Trip Distribution and Assignment

The trip distribution pattern, shown on Figure 7, was forecast based on existing travel patterns and the relative locations of complementary land uses. Trips were assigned to the project driveways based on the parking plan and existing driveway counts. Site-generated traffic was assigned to the study intersections based on the trip distribution patterns and the proposed location of project driveways. Figures 8 and 9 present the trip assignment during AM and PM peak hours for the proposed apartment project and the proposed apartment project plus potential hotel, respectively.

Table 4
Trip Generation Estimates – Proposed Apartment Project

			Daily		AM Peak Hour				PM Peak Hour			
	ITE		Trip	Daily	Pk-Hr	Trips			Pk-Hr	Trips		
Land Use	Code	Size	Rates	Trips	Rate	In	Out	Total	Rate	In	Out	Total
Proposed Project												
Apartments[1]	221	384 units	5.45	2,091	0.33	33	95	128	0.42	98	63	161
		Gross Trips:		2,091		33	95	128		98	63	161
Existing Use												
Hotel/Restaurant /Residential[2,3,4]		220 rooms	4.47	(983)	0.29	(28)	(35)	(63)	0.25	(33)	(21)	(54)
Net New Project Trips:				**1,108**		**5**	**60**	**65**		**65**	**42**	**107**

Notes:

[1] Trips for apartments were estimated using regression equation from ITE *Trip Generation Manual, 10th Edition* , 2017.

[2] Peak-hour trips from driveway counts conducted on Thursday, May 25th, 2017. Daily trips were estimated based on the ratio of daily trips to AM and PM peak hour trips published in the ITE *Trip Generation Manaul, 10th Edition* , 2017.

[3] ITE rates for a hotel include trips generated by the sleeping accommodations as well as supporting facilities such as restaurants.

[4] There are only two single family residential homes on the site, which will produce minimal trips, therefore, only the hotel rates are used.

Table 5
Trip Generation Estimates – Proposed Apartment Project Plus Potential Hotel

Land Use	ITE Code	Size	Daily Trip Rates	Daily Trips	AM Peak Hour Pk-Hr Rate	AM Trips In	AM Trips Out	AM Trips Total	PM Peak Hour Pk-Hr Rate	PM Trips In	PM Trips Out	PM Trips Total
Proposed Project												
Apartments[1]	221	384 units	5.45	2,091	0.33	33	95	128	0.42	98	63	161
Hotel[2,3]	310	200 rooms	4.47	894	0.29	34	23	57	0.25	25	24	49
		Gross Trips:		2,985		67	118	185		123	87	210
Existing Use												
Hotel/Restaurant /Residential[3,4,5]		220 rooms	4.47	(983)	0.29	(28)	(35)	(63)	0.25	(33)	(21)	(54)
Net New Project Trips:				**2,002**		**39**	**83**	**122**		**90**	**66**	**156**

Notes:

[1] Trips for apartments were estimated using regression equation from ITE *Trip Generation Manual, 10th Edition* , 2017.

[2] Hotel trips listed in this table were estimated using the trip rates observed at the existing hotel on site. The observed hotel trip rates are substantially lower than the hotel trip rates published in the ITE *Trip Generation Manual, 10th Edition* due to the project's proximity to transit and other factors related to the project location. To be conservative, the level of service calculations and queuing analysis contained in this report are based on ITE trip rates for hotels. Based on ITE rates, the proposed 200-room hotel is estimated to generate 1,831 daily trips including 95 and 124 trips during the AM and PM peak hours, respectively.

[3] ITE rates for a hotel include trips generated by the sleeping accommodations as well as supporting facilities such as restaurants.

[4] Peak-hour trips from driveway counts conducted on Thursday, May 25th, 2017. Daily trips were estimated based on the ratio of daily trips to AM and PM peak hour trips published in the ITE *Trip Generation Manual, 10th Edition* , 2017.

[5] There are only two single family residential homes on the site, which will produce minimal trips, therefore, only the hotel rates are used.

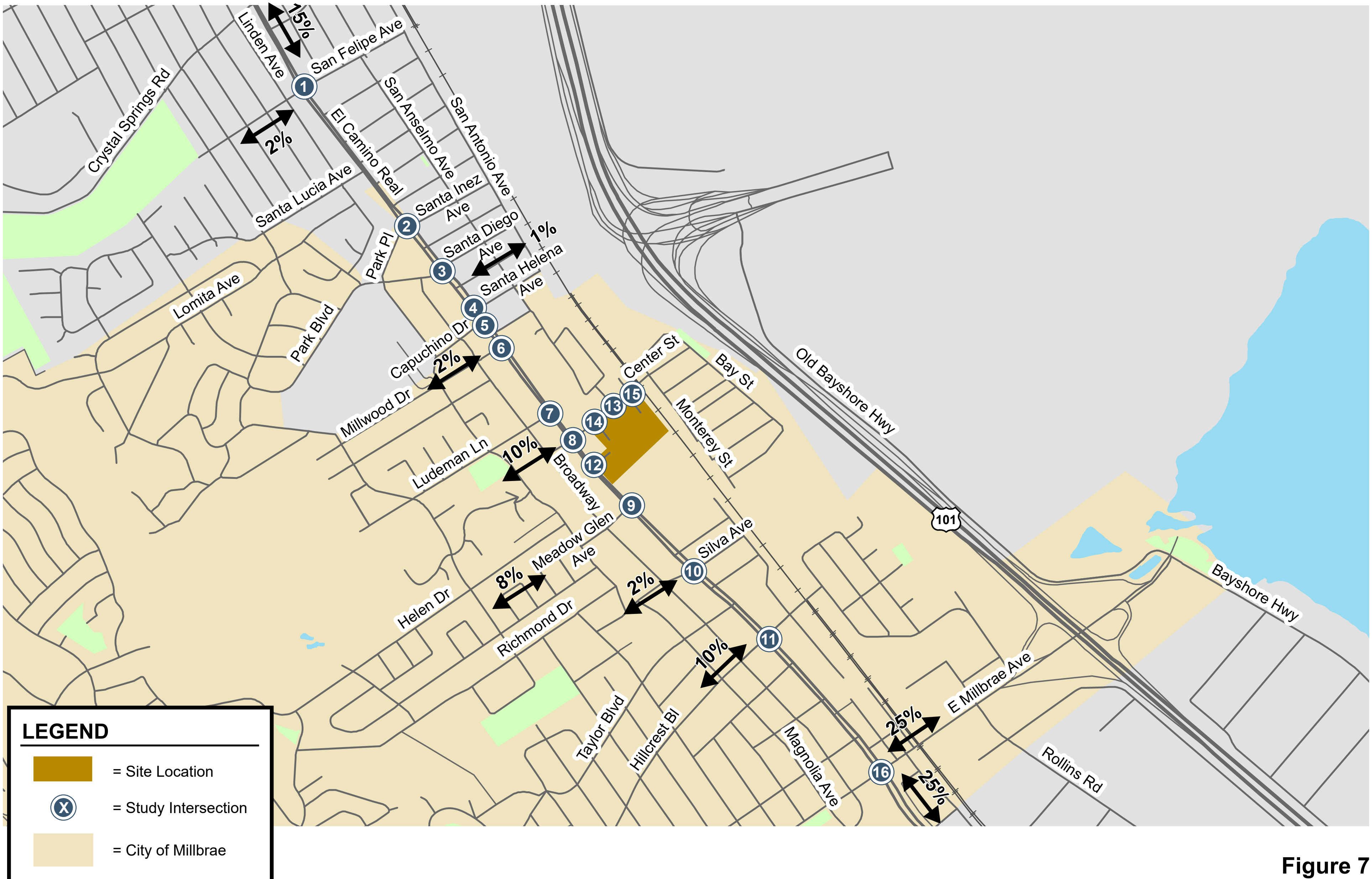
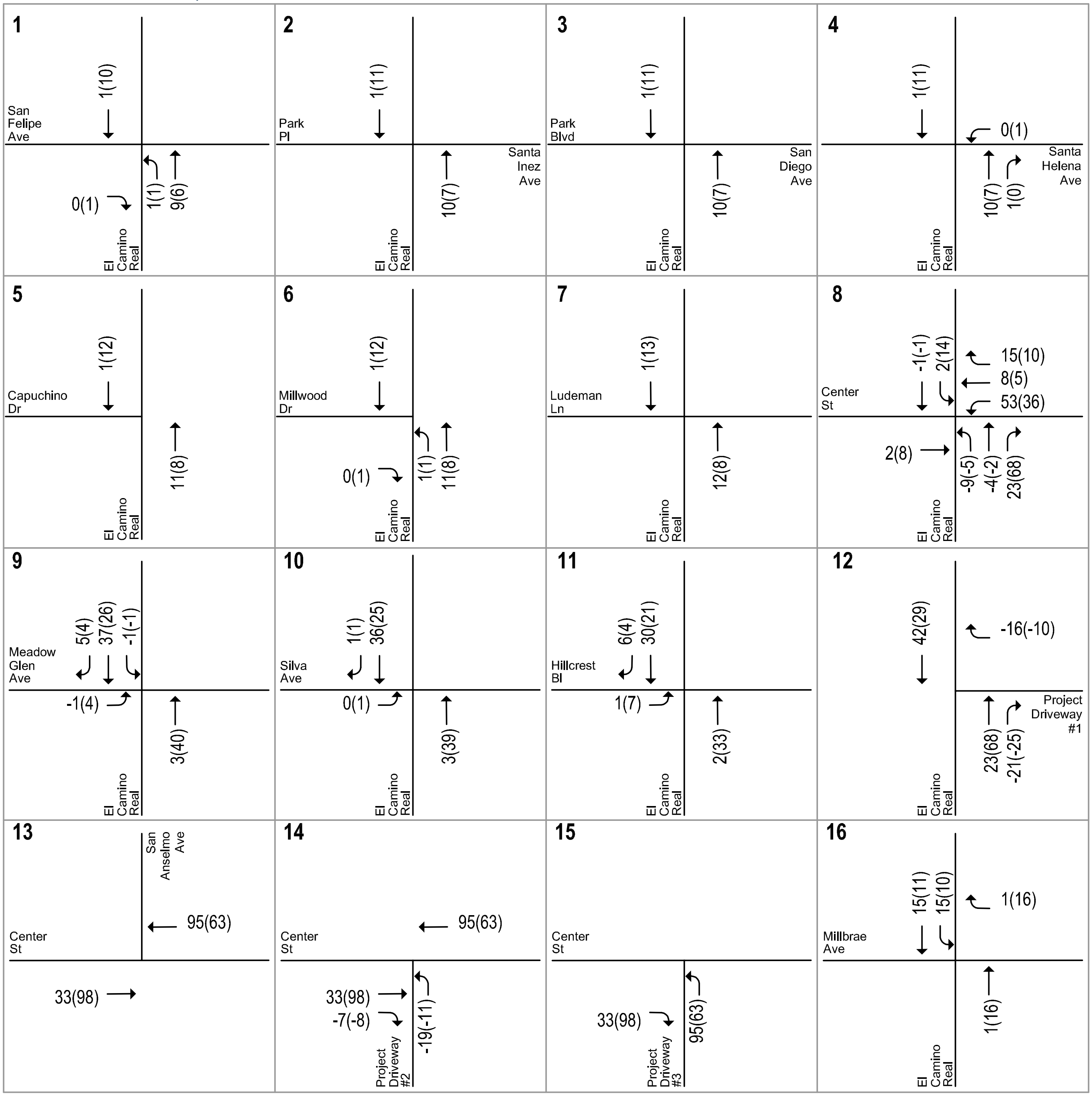


Figure 7
Project Trip Distribution



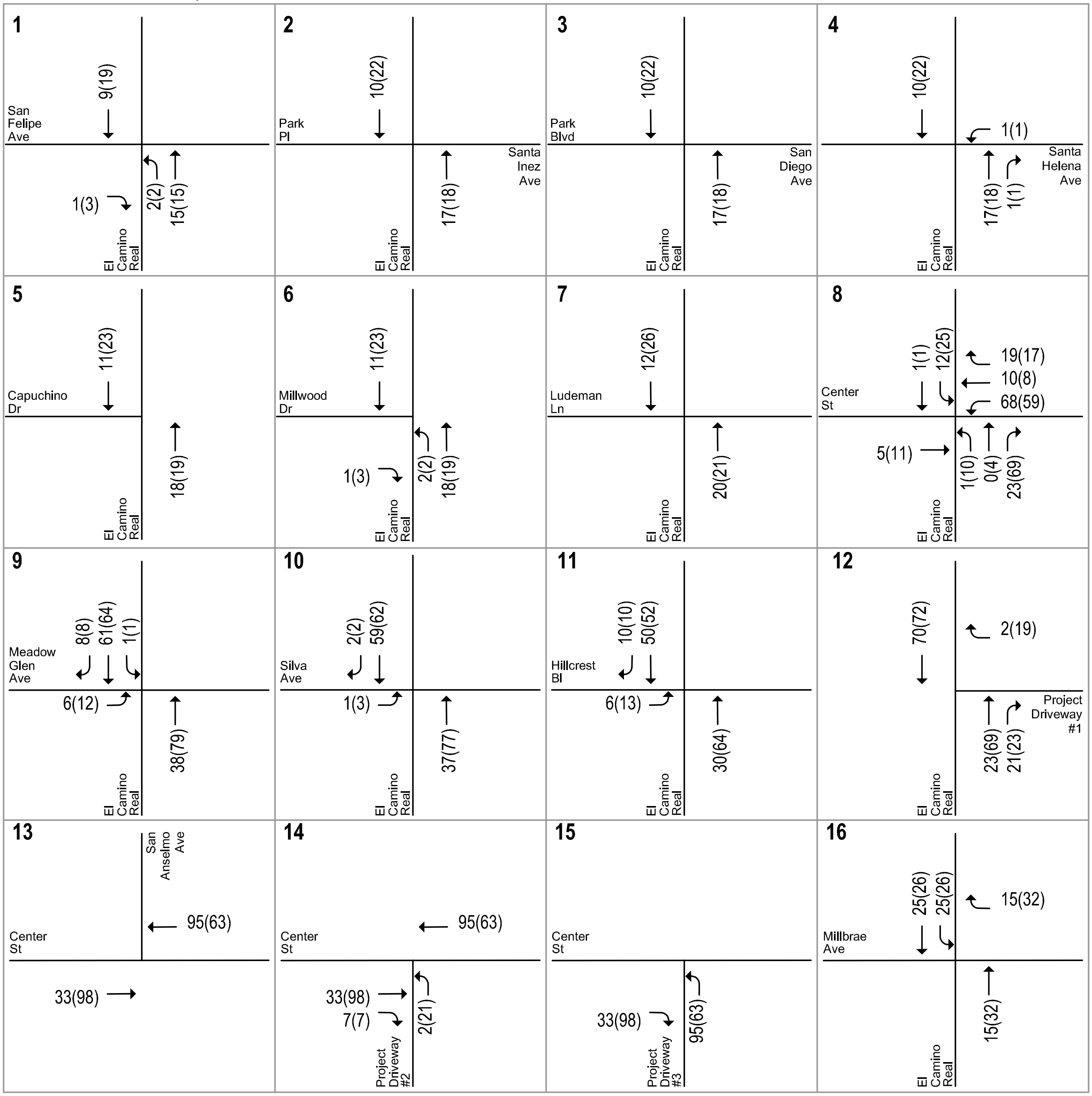
LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 8
Trip Assignment - Proposed Apartment Project

HEXAGON

NORTH
Not to Scale



LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 9
Trip Assignment - Proposed Apartment Plus Potential Hotel

HEXAGON

NORTH
Not to Scale

Existing Plus Project Traffic Volumes

Project trips, as represented in the above trip assignments, were added to existing traffic volumes to obtain existing plus project traffic volumes both alone and in combination with a potential hotel. The existing plus project traffic volumes are shown on Figure 10 while the existing plus project and hotel traffic volumes are shown on Figure 11.

Existing Plus Project Intersection Analysis

The results of the level of service analysis under existing plus project conditions both alone and in combination with a potential hotel are summarized in Tables 6 and Table 7, respectively.

Signalized Intersections

The results of the analysis as presented in Tables 6 and 7 show that all signalized study intersections would continue to operate at acceptable levels of service during both AM and PM peak hours of traffic under existing plus project conditions both alone and in combination with a potential hotel.

El Camino Real and Center Street

The El Camino Real and Center Street intersection currently operates with permissive left turn signal phasing on Center Street where left turn vehicles yield to oncoming vehicle and pedestrian/bicycle traffic. The eastbound Center Street approach from Downtown Millbrae includes a dedicated left turn lane, the westbound Center Street approach does not.

The residential project would increase the total volume at the El Camino Real and Center Street intersection by 3.53%; the hotel project would increase the total volume by 1.92%. The residential project would increase the westbound approach volumes on Center Street by 31% and 29% in the AM and PM peak hours, respectively; the hotel project would increase westbound approach volumes by 9% and 19% in the AM and PM peak hours, respectively. The increase on its own does not meet protected left turn signal phasing establishment criteria based on volume-only criteria but with the projected increase in bicycle and pedestrian traffic at the intersection from the anticipated El Camino Real/Downtown Specific Plan area traffic at buildout, protected left turn phasing may be necessary at a future date. The City of Millbrae is exploring the implementation of an El Camino Real streetscape project that may include the reduction of vehicle lanes on El Camino Real from 6- to 4-lanes along with protected left-turn phasing traffic signal modifications at key intersections such as Center Street to improve bicycle-pedestrian mobility.

Unsignalized Intersections

Two of the unsignalized study intersections are expected to operate at an unacceptable level (LOS E) during the AM and PM peak commute hours.

El Camino Real and Park Boulevard / San Diego Avenue

For the side street stop-controlled intersection of El Camino Real and Park Boulevard / San Diego Avenue, the average delay reported in Tables 6 and 7 reflects the worst approach.

Due to heavy traffic on El Camino Real, westbound traffic in the AM peak hour and eastbound traffic in the PM peak hour would continue to operate at LOS E under existing plus project conditions both without and with the potential hotel. The trips associated with the proposed apartment project would not cause an increase in average delay for the westbound vehicles during the AM peak hour. Delay for the eastbound vehicles would increase by 0.8 seconds during PM peak hour.

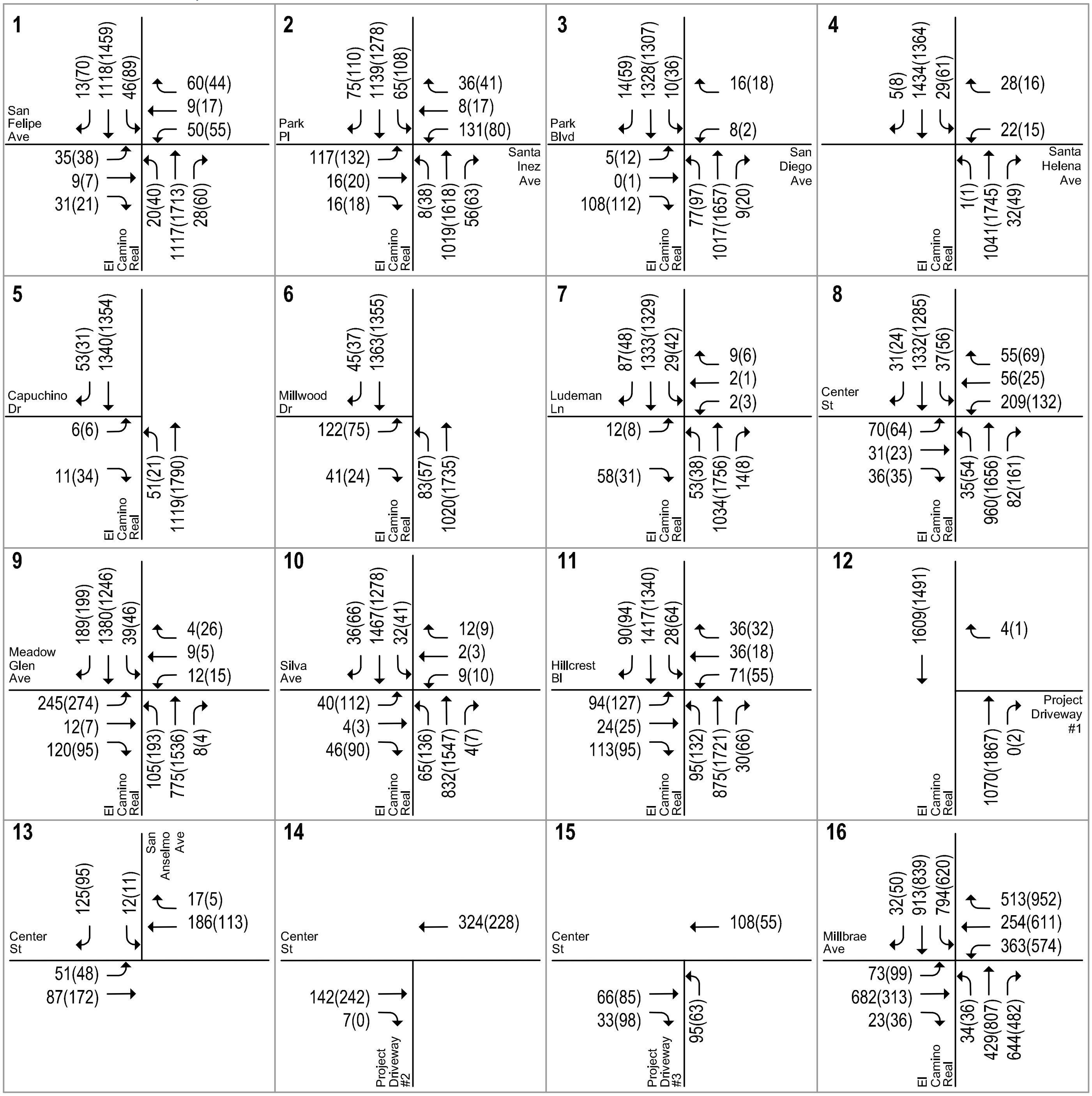
The trips associated with the proposed apartment project in combination with the potential hotel would cause the average delay for westbound vehicles to increase by 1.7 seconds during the AM peak hour. The average delay for eastbound vehicles would increase by 4.0 seconds during PM peak hour.

A signal warrant analysis was conducted to determine if this intersection would require a traffic signal using the peak-hour volume warrant. Based on the peak-hour volume signal warrant analysis it was found that the intersection of El Camino Real and Park Boulevard / San Diego Avenue does not meet the signal warrant, and therefore does not require a traffic signal. The signal warrant analysis is presented and further discussed in Chapter 6.

El Camino Real and Ludeman Lane

At the two-way stop-controlled intersection of El Camino Real and Ludeman Lane, the average delay reported in Tables 6 and 7 reflects the worst approach (eastbound). Because of the high volume of traffic on El Camino Real, vehicles entering El Camino Real from eastbound Ludeman Lane during the PM peak hour would continue to experience LOS E conditions. The average delay for vehicles on the eastbound Ludeman Lane approach would increase by 1.5 seconds per vehicle due to the addition of trips added by the proposed apartment project. The traffic generated by the proposed apartment project in combination with a potential hotel would increase the average delay for the eastbound Ludemen Lane approach by 4.6 seconds per vehicle.

However, as mentioned in the Existing Conditions chapter, the volume on the eastbound approach is extremely low. A signal warrant analysis was conducted to determine if this intersection would require a traffic signal based on the peak-hour volume warrant. Based on the signal warrant analysis it was found that the intersection of El Camino Real and Ludeman Lane does not meet the signal warrant, and therefore does not require a traffic signal. The signal warrant analysis is presented in Chapter 6. The intersection level of service calculation sheets are included in Appendix B.



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 10
Existing Plus Project Traffic Volumes

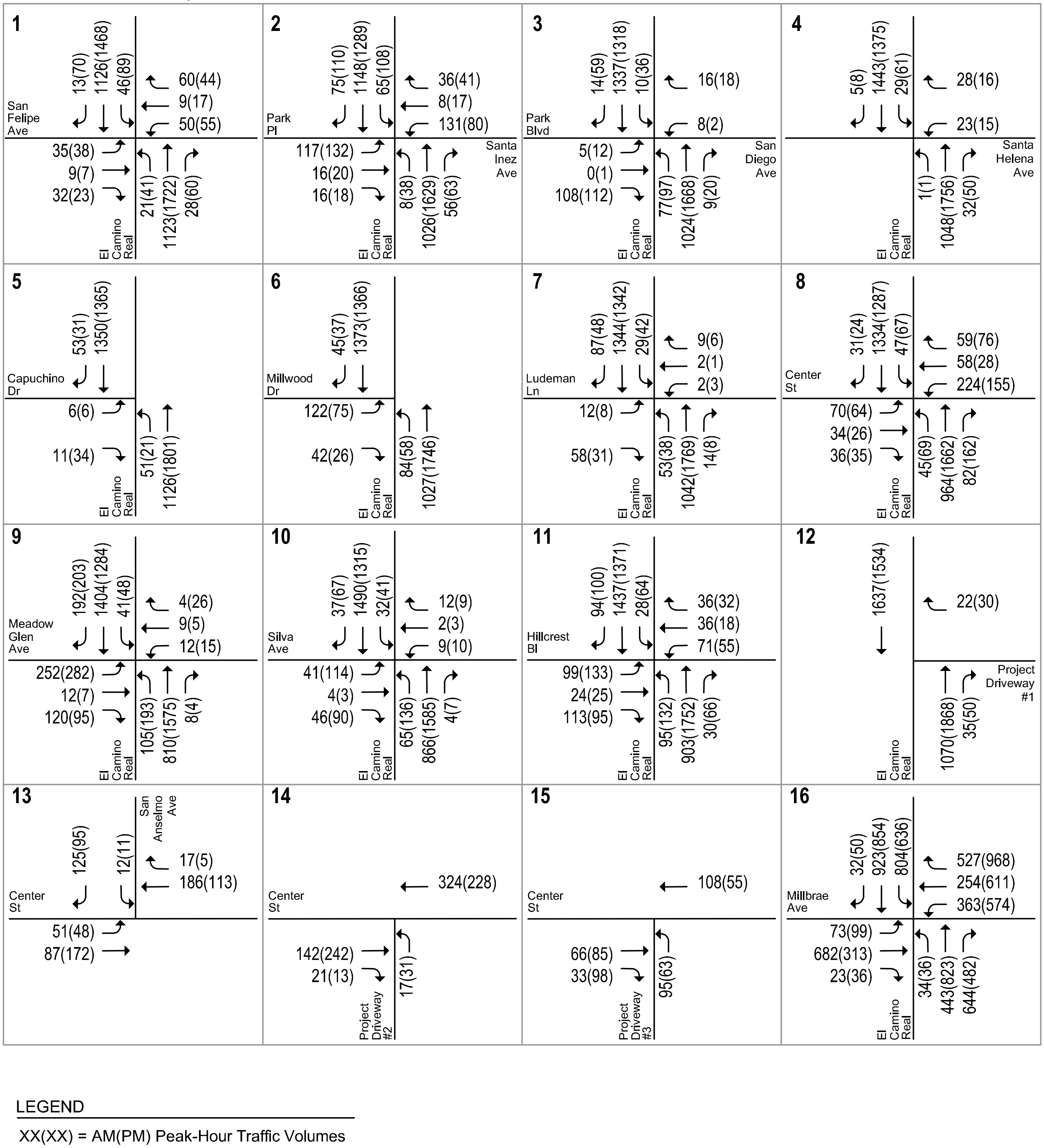


Figure 11
Existing Plus Project and Hotel Traffic Volumes

Table 6
Existing Plus Project Intersection Levels of Service

#	Intersection	Control	Peak Hour	Existing Conditions Delay[1] (sec)	Existing Conditions LOS	Existing plus Project Conditions Delay[1] (sec)	Existing plus Project Conditions LOS	Incr. in Delay
1	El Camino Real & San Felipe Avenue	Signal	AM	11.4	B	11.5	B	0.1
			PM	15.2	B	15.3	B	0.1
2	El Camino Real & Santa Inez Avenue / Park Place	Signal	AM	9.9	A	9.9	A	0.0
			PM	18.2	B	18.2	B	0.0
3	El Camino Real & Park Boulevard / San Diego Avenue	Side-Street Stop	AM	**39.5**	**E**	**39.5**	**E**	**0.0**
			PM	**45.0**	**E**	**45.8**	**E**	**0.8**
4	El Camino Real & Santa Helena Avenue	Side-Street Stop[2]	AM	20.7	C	20.7	C	0.0
			PM	19.5	C	19.8	C	0.3
5	El Camino Real & Capuchino Drive	Side-Street Stop	AM	23.1	C	23.1	C	0.0
			PM	20.9	C	21.2	C	0.3
6	El Camino Real & Millwood Drive	Signal	AM	7.6	A	7.5	A	-0.1
			PM	5.5	A	5.5	A	0.0
7	El Camino Real & Ludeman Lane	Side-Street Stop[2]	AM	12.9	B	13.1	B	0.2
			PM	**41.8**	**E**	**43.3**	**E**	**1.5**
8	El Camino Real & Center Street	Signal	AM	7.0	A	7.8	A	0.8
			PM	15.4	B	18.4	B	3.0
9	El Camino Real & Meadow Glen Avenue	Signal	AM	10.7	B	10.6	B	-0.1
			PM	22.5	C	22.7	C	0.2
10	El Camino Real & Silva Avenue	Signal	AM	11.3	B	11.4	B	0.1
			PM	22.5	C	22.6	C	0.1
11	El Camino Real & Hillcrest Boulevard	Signal	AM	16.3	B	16.3	B	0.0
			PM	24.8	C	24.8	C	0.0
12	El Camino Real & Project Driveway 1	Side-Street Stop	AM	14.0	B	13.7	B	-0.3
			PM	20.9	C	20.8	C	-0.1
13	Center Street & San Anselmo Avenue	Side-Street Stop	AM	9.8	A	10.6	B	0.8
			PM	9.3	A	9.9	A	0.6
14	Center Street & Project Driveway 2	Side-Street Stop	AM	10.7	B	10.7	B	0.0
			PM	10.4	B	10.4	B	0.0
15	Center Street & Project Driveway 3	Side-Street Stop[3]	AM	n/a	n/a	10.1	B	n/a
			PM	n/a	n/a	9.9	A	n/a
16	El Camino Real & Millbrae Avenue	Signal[4]	AM	64.9	E	66.1	E	1.2
			PM	68.5	E	69.7	E	1.2

Notes:
1. The delay reported for the signalized intersections is the average stopped delay for all vehicles entering the intersection and the delay reported for the unsignalized intersections is the worst delay experienced by vehicles on the minor street approach.

2. Side-Street Stop Controlled intersection with High-Intensity Activated Crosswalk (HAWK) Beacon.

3. New Side-Street Stop Controlled intersection under Project conditions

4. CMP Intersection

BOLD indicates a substandard level of service

Table 7
Existing Plus Project and Hotel Intersection Levels of Service

#	Intersection	Control	Peak Hour	Existing Conditions Delay[1] (sec)	Existing Conditions LOS	Existing plus Project plus Hotel Conditions Delay[1] (sec)	Existing plus Project plus Hotel Conditions LOS	Incr. in Delay
1	El Camino Real & San Felipe Avenue	Signal	AM	11.4	B	11.5	B	0.1
			PM	15.2	B	15.3	B	0.1
2	El Camino Real & Santa Inez Avenue / Park Place	Signal	AM	9.9	A	9.8	A	-0.1
			PM	18.2	B	18.2	B	0.0
3	El Camino Real & Park Boulevard / San Diego Avenue	Side-Street Stop	AM	**39.5**	**E**	**41.2**	**E**	**1.7**
			PM	**45.0**	**E**	**49.0**	**E**	**4.0**
4	El Camino Real & Santa Helena Avenue	Side-Street Stop[2]	AM	20.7	C	20.9	C	0.2
			PM	19.5	C	20.2	C	0.7
5	El Camino Real & Capuchino Drive	Side-Street Stop	AM	23.1	C	23.4	C	0.3
			PM	20.9	C	21.4	C	0.5
6	El Camino Real & Millwood Drive	Signal	AM	7.6	A	7.6	A	0.0
			PM	5.5	A	5.5	A	0.0
7	El Camino Real & Ludeman Lane	Side-Street Stop[2]	AM	12.9	B	13.1	B	0.2
			PM	**41.8**	**E**	**46.4**	**E**	**4.6**
8	El Camino Real & Center Street	Signal	AM	7.0	A	8.6	A	1.6
			PM	15.4	B	20.9	B	5.5
9	El Camino Real & Meadow Glen Avenue	Signal	AM	10.7	B	10.7	B	0.0
			PM	22.5	C	23.2	C	0.7
10	El Camino Real & Silva Avenue	Signal	AM	11.3	B	11.4	B	0.1
			PM	22.5	C	22.9	C	0.4
11	El Camino Real & Hillcrest Boulevard	Signal	AM	16.3	B	16.3	B	0.0
			PM	24.8	C	24.9	C	0.1
12	El Camino Real & Project Driveway 1	Side-Street Stop	AM	14.0	B	14.3	B	0.3
			PM	20.9	C	23.8	C	2.9
13	Center Street & San Anselmo Avenue	Side-Street Stop	AM	9.8	A	10.6	B	0.8
			PM	9.3	A	9.9	A	0.6
14	Center Street & Project Driveway 2	Side-Street Stop	AM	10.7	B	11.8	A	1.1
			PM	10.4	B	12.0	A	1.6
15	Center Street & Project Driveway 3	Side-Street Stop[3]	AM	n/a	n/a	10.1	B	n/a
			PM	n/a	n/a	9.9	A	n/a
16	El Camino Real & Millbrae Avenue	Signal[4]	AM	64.9	E	66.8	E	1.9
			PM	68.5	E	70.5	E	2.0

Notes:
1. The delay reported for the signalized intersections is the average stopped delay for all vehicles entering the intersection and the delay reported for the unsignalized intersections is the worst delay experienced by vehicles on the minor street approach.

2. Side-Street Stop Controlled intersection with High-Intensity Activated Crosswalk (HAWK) Beacon.

3. New Side-Street Stop Controlled intersection under Project conditions

4. CMP Intersection

BOLD indicates a substandard level of service

4. Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion of the proposed project. Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions. The background scenario predicts a realistic traffic condition that would occur as approved developments get built and occupied.

Based on direction from City staff, traffic from the following projects were assumed in this analysis:

- Millbrae Station Area Specific Plan – Transit Oriented Development #1 and #2
- 30 Hermosa Avenue

These developments are relatively close to the project site and would generate additional traffic at most of the study intersections.

Transportation Network

The transportation network under background conditions is assumed to be the same as under existing conditions except at the intersection of El Camino Real and Millbrae Avenue. Background conditions assume the planned improvements at this intersection identified in the Millbrae Station Area Specific Plan (MSASP) Update EIR include restriping of one northbound through lane to a northbound right-turn lane and restriping of one westbound through lane to a right-turn lane. The new right-turn lanes will have a storage length of approximately 200 feet. The new intersection configuration will not include any right-of-way acquisition.

Traffic Volumes

Trips generated by TOD #1 and TOD #2 were obtained from the MSASP Update EIR. These trips were then assigned to study intersections and added to the existing traffic volumes. Traffic volumes under background conditions are shown on Figure 12.

Intersection Levels of Service Analysis

Intersection levels of service under background conditions were evaluated against City of Millbrae, City of San Bruno, and CMP standards.

Signalized Intersections

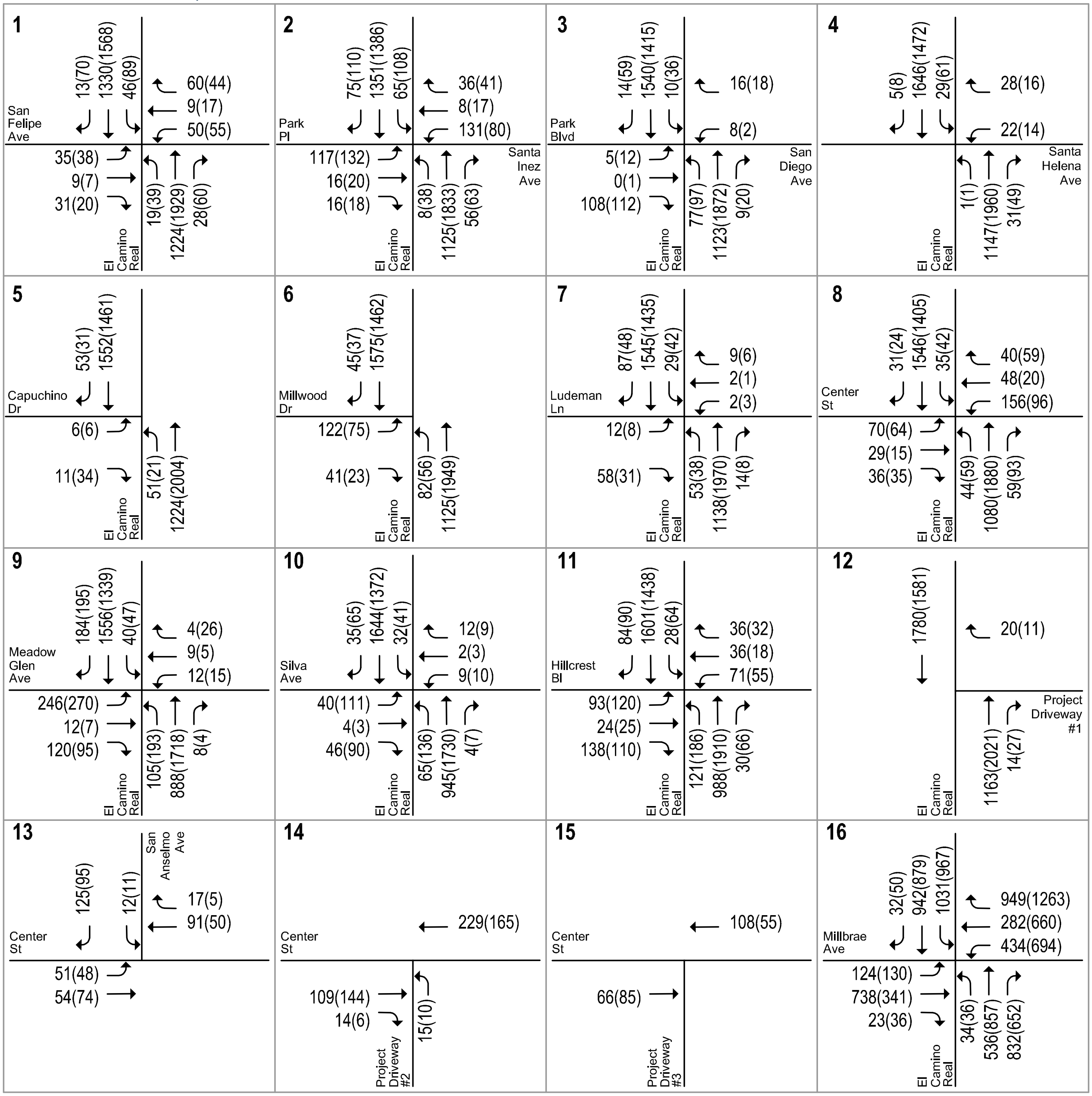
The results of the analysis show that seven of the eight signalized study intersections would continue to operate at acceptable levels of service under background conditions, during the AM and PM peak hours of traffic. The intersection of El Camino and Millbrae Avenue is expected to degrade to an unacceptable level (LOS F) in both the AM and PM peak hours.

Unsignalized Intersections

All but two of the unsignalized study intersections would continue to operate at acceptable levels of service under background conditions, during the AM and PM peak hours of traffic. At the two-way stop-controlled intersection of El Camino Real and Park Boulevard / San Diego Avenue, the westbound San Diego Avenue approach is expected to degrade from LOS E to LOS F during the AM peak hour and the eastbound Park Boulevard approach also would degrade from LOS E to LOS F during the PM peak hour At the two-way stop-controlled intersection of El Camino Real and Ludeman Lane, the average delay on the eastbound worst approach is expected to corresponds to LOS F during the PM peak hour.

A signal warrant analysis was conducted to determine if the two stop-controlled intersections listed above would require a traffic signal based on the peak-hour volume warrant. The analysis showed that, based on the peak-hour signal warrants, neither intersection would require a traffic signal. The signal warrant analysis is presented and further discussed in Chapter 6.

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



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 12
Background Traffic Volumes

Table 8
Background Intersection Level of Service

#	Intersection	Control	Peak Hour	Existing Conditions Delay[1] (sec)	Existing Conditions LOS	Background Conditions Delay[1] (sec)	Background Conditions LOS
1	El Camino Real & San Felipe Avenue	Signal	AM	11.4	B	11.4	B
			PM	15.2	B	15.8	B
2	El Camino Real & Santa Inez Avenue / Park Place	Signal	AM	9.9	A	9.6	A
			PM	18.2	B	14.4	B
3	El Camino Real & Park Boulevard / San Diego Avenue	Side-Street Stop	AM	**39.5**	**E**	**>50**	**F**
			PM	**45.0**	**E**	**>50**	**F**
4	El Camino Real & Santa Helena Avenue	Side-Street Stop[2]	AM	20.7	C	25.0	C
			PM	19.5	C	23.4	C
5	El Camino Real & Capuchino Drive	Side-Street Stop	AM	23.1	C	29.9	D
			PM	20.9	C	23.5	C
6	El Camino Real & Millwood Drive	Signal	AM	7.6	A	7.4	A
			PM	5.5	A	5.3	A
7	El Camino Real & Ludeman Lane	Side-Street Stop[2]	AM	12.9	B	14.5	B
			PM	**41.8**	**E**	**>50**	**F**
8	El Camino Real & Center Street	Signal	AM	7.0	A	6.6	A
			PM	15.4	B	15.6	B
9	El Camino Real & Meadow Glen Avenue	Signal	AM	10.7	B	10.3	B
			PM	22.5	C	22.9	C
10	El Camino Real & Silva Avenue	Signal	AM	11.3	B	11.5	B
			PM	22.5	C	22.9	C
11	El Camino Real & Hillcrest Boulevard	Signal	AM	16.3	B	18.2	B
			PM	24.8	C	38.5	D
12	El Camino Real & Project Driveway 1	Side-Street Stop	AM	14.0	B	14.8	B
			PM	20.9	C	24.0	C
13	Center Street & San Anselmo Avenue	Side-Street Stop	AM	9.8	A	9.8	A
			PM	9.3	A	9.3	A
14	Center Street & Project Driveway 2	Side-Street Stop	AM	10.7	B	10.7	B
			PM	10.4	B	10.4	B
15	Center Street & Project Driveway 3	Side-Street Stop[3]	AM	n/a	n/a	n/a	n/a
			PM	n/a	n/a	n/a	n/a
16	El Camino Real & Millbrae Avenue	Signal[4]	AM	64.9	E	**87.6**	**F**
			PM	68.5	E	**85.3**	**F**

Notes:
1. The delay reported for the signalized intersections is the average stopped delay for all vehicles entering the intersection and the delay reported for the unsignalized intersections is the worst delay experienced by vehicles on the minor street approach.
2. Side-Street Stop Controlled intersection with High-Intensity Activated Crosswalk (HAWK) Beacon.
3. New Side-Street Stop Controlled intersection under Project conditions
4. CMP Intersection
BOLD indicates a substandard level of service

5.
Background Plus Project Conditions

This chapter describes near-term traffic conditions that most likely would occur when the project is complete. Background plus project conditions were evaluated relative to background conditions in order to determine potential project deficiencies for the proposed apartment project by itself and in combination with a potential hotel. This scenario represents a more congested traffic condition than the existing plus project scenario, since it includes traffic generated by approved but not yet built projects in the area.

Transportation Network

The transportation network under project conditions is assumed to be the same as under background conditions.

Background Plus Project Traffic Volumes

Project trips were added to background traffic volumes to obtain background plus project traffic volumes both alone and in combination with a potential hotel. The background plus project traffic volumes are shown on Figure 13 and the background plus project and hotel traffic volumes are shown on Figure 14.

Background Plus Project Intersection Analysis

Intersection levels of service under background plus project conditions were evaluated against City of Millbrae, City of San Bruno, and CMP standards. The intersection levels of service calculation sheets are included in Appendix B.

Signalized Intersections

The results of the intersection level of service analysis under background plus project conditions both alone and in combination with a potential hotel are summarized in Tables 9 and 10, respectively. All non-CMP signalized study intersections are expected to operate at an acceptable LOS D or better during both peak hours under background plus project conditions for the project alone and in combination with a potential hotel.

Under background plus project conditions, the CMP intersection of El Camino Real and Millbrae Avenue operates at LOS F in the AM and PM peak hours with a delay of 89.5 seconds and 86.5

seconds, respectively. The trips generated by the proposed apartment project would increase the average delay by 1.9 seconds in the AM peak hour and 1.2 seconds in the PM peak hour.

Under background plus project and hotel conditions, the CMP intersection of El Camino Real and Millbrae Avenue operates at LOS F in the AM and PM peak hours with a delay of 90.6 seconds and 88.2 seconds, respectively. The trips generated by the proposed apartment in combination with a potential hotel would increase the average delay by 3.0 seconds in the AM peak hour and 2.9 seconds in the PM peak hour.

The level of service calculation sheets are included in Appendix B. Since the increase in delay would be less than four seconds, the addition of project trips would not cause an intersection deficiency.

Unsignalized Intersections

All but two of the unsignalized study intersections are expected to continue to operate at an acceptable level (LOS D or better).

El Camino Real and Park Boulevard / San Diego Avenue

For the side-street stop-controlled intersection of El Camino Real and Park Boulevard / San Diego Avenue, the average delay reported in Tables 9 and 10 reflects the worst approach.

Due to heavy traffic on El Camino Real, westbound traffic in the AM peak hour and eastbound traffic in the PM peak hour would continue to operate at LOS F under background plus project conditions both without and with the potential hotel. The trips associated with the proposed apartment project would not cause an increase in average delay for the westbound vehicles during the AM peak hour. Delay for the eastbound vehicles would increase by 26.8 seconds during PM peak hour.

The trips associated with the proposed apartment project in combination with the potential hotel would cause the average delay for westbound vehicles to increase by 3.2 seconds during the AM peak hour. The average delay for eastbound vehicles would increase by 28.9 seconds during PM peak hour.

Neither the proposed apartment project nor the potential hotel would add traffic to the stop-controlled approaches at this intersection. However, since the minor street is already very close to capacity, a relatively small increase in through traffic on northbound and southbound El Camino Real associated with the project would result in a large increase in delay on the stop-controlled approach.

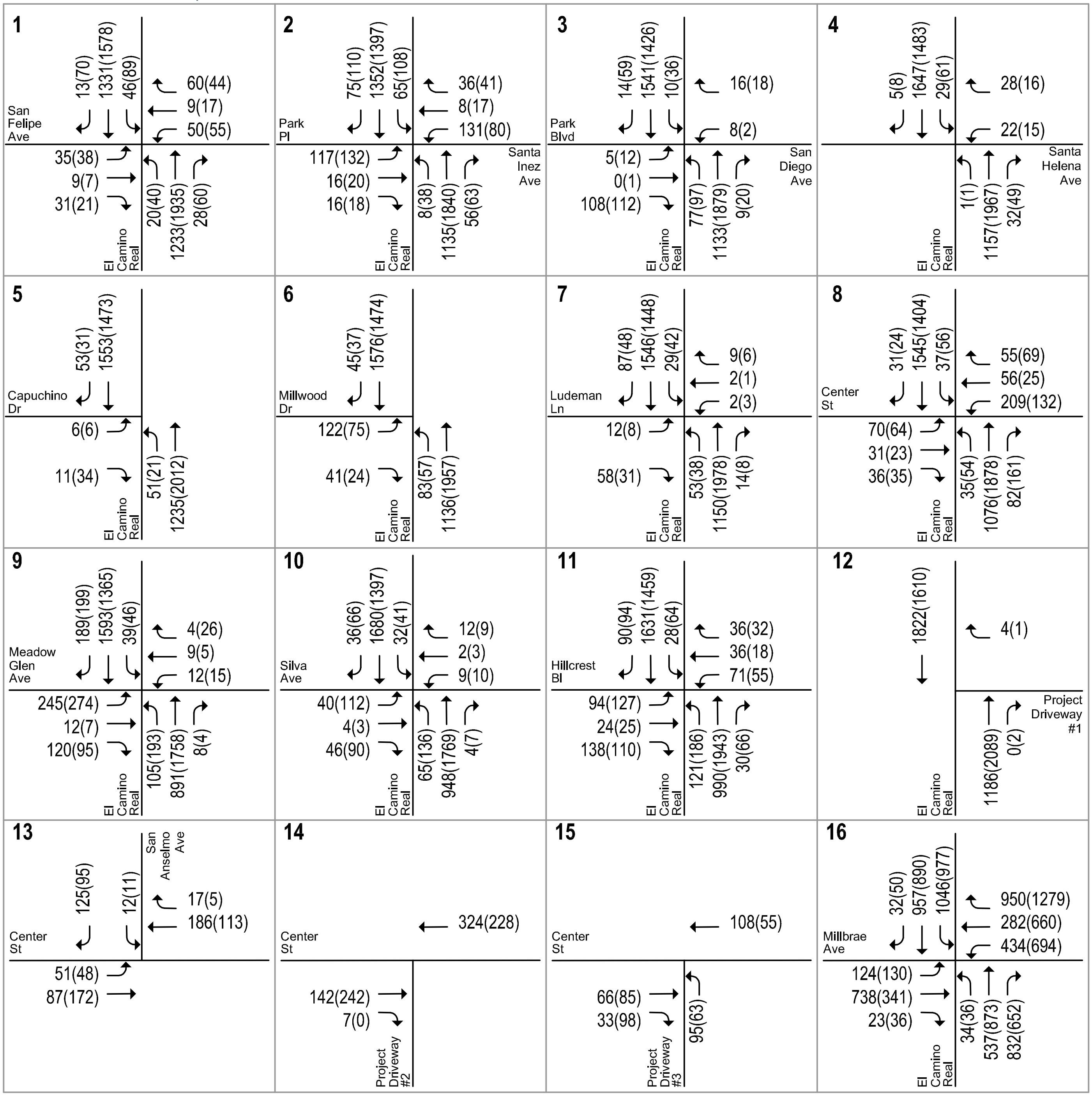
El Camino Real and Ludeman Lane

Because of the high volume of traffic on El Camino Real, vehicles entering El Camino Real from eastbound Ludeman Lane during the PM peak hour would continue to experience LOS F conditions. The trips associated with the proposed apartment project would not cause an increase in average delay for the eastbound vehicles during the PM peak hour.

The trips associated with the proposed apartment project in combination with the potential hotel would cause the average delay for eastbound vehicles to increase by 14.4 seconds during the PM peak hour.

A signal warrant analysis was conducted to determine if the two stop-controlled intersections listed above would require a traffic signal based on the peak-hour volume warrant. The analysis showed that, based on the peak-hour signal warrants, neither intersection would require a traffic signal. The signal warrant analysis is presented and further discussed in Chapter 6.

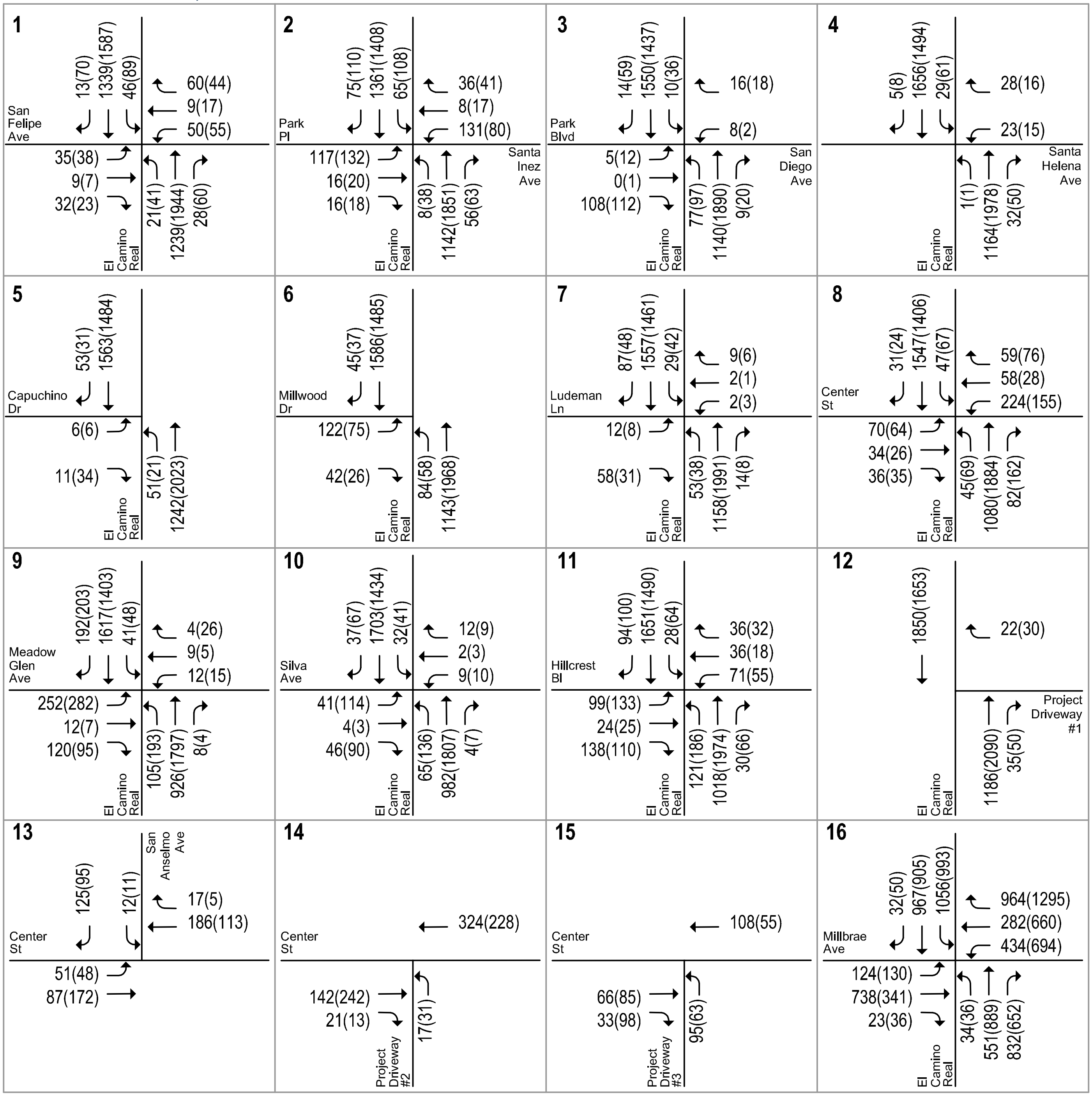
It should be noted that the analysis of the apartment project in combination with a potential hotel reflects a conservative analysis that may overstate the trips generated by the project site since it is based on ITE trips rates, which are much higher than trip rates observed at the existing hotel on site.



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 13
Background Plus Project Traffic Volumes



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 14
Background Plus Project and Hotel Traffic Volumes

Table 9
Background Plus Project Intersection Levels of Service

#	Intersection	Control	Peak Hour	Background Conditions Delay[1] (sec)	Background Conditions LOS	Background plus Project Conditions Delay[1] (sec)	Background plus Project Conditions LOS	Incr. in Delay
1	El Camino Real & San Felipe Avenue	Signal	AM	11.4	B	11.4	B	0.0
			PM	15.8	B	15.9	B	0.1
2	El Camino Real & Santa Inez Avenue / Park Place	Signal	AM	9.6	A	9.6	A	0.0
			PM	14.4	B	14.4	B	0.0
3	El Camino Real & Park Boulevard / San Diego Avenue	Side-Street Stop	AM	**>50**	**F**	**>50**	**F**	**0.0**
			PM	**>50**	**F**	**>50**	**F**	**26.8**
4	El Camino Real & Santa Helena Avenue	Side-Street Stop[2]	AM	25.0	C	25.0	C	0.0
			PM	23.4	C	24.4	C	1.0
5	El Camino Real & Capuchino Drive	Side-Street Stop	AM	29.9	D	29.9	D	0.0
			PM	23.5	C	23.7	C	0.2
6	El Camino Real & Millwood Drive	Signal	AM	7.4	A	7.4	A	0.0
			PM	5.3	A	5.3	A	0.0
7	El Camino Real & Ludeman Lane	Side-Street Stop[2]	AM	14.5	B	14.5	B	0.0
			PM	**>50**	**F**	**>50**	**F**	**0.0**
8	El Camino Real & Center Street	Signal	AM	6.6	A	7.4	A	0.8
			PM	15.6	B	18.8	B	3.2
9	El Camino Real & Meadow Glen Avenue	Signal	AM	10.3	B	10.2	B	-0.1
			PM	22.9	C	23.1	C	0.2
10	El Camino Real & Silva Avenue	Signal	AM	11.5	B	11.5	B	0.0
			PM	22.9	C	23.1	C	0.2
11	El Camino Real & Hillcrest Boulevard	Signal	AM	18.2	B	18.3	B	0.1
			PM	38.5	D	38.3	D	-0.2
12	El Camino Real & Project Driveway 1	Side-Street Stop	AM	14.8	B	14.4	B	-0.4
			PM	24.0	C	23.8	C	-0.2
13	Center Street & San Anselmo Avenue	Side-Street Stop	AM	9.8	A	10.6	B	0.8
			PM	9.3	A	9.9	A	0.6
14	Center Street & Project Driveway 2	Side-Street Stop	AM	10.7	B	10.7	B	0.0
			PM	10.4	B	10.4	B	0.0
15	Center Street & Project Driveway 3	Side-Street Stop[3]	AM	n/a	n/a	10.1	B	n/a
			PM	n/a	n/a	9.9	A	n/a
16	El Camino Real & Millbrae Avenue	Signal[4]	AM	**87.6**	**F**	**89.5**	**F**	**1.9**
			PM	**85.3**	**F**	**86.5**	**F**	**1.2**

Notes:
1. The delay reported for the signalized intersections is the average stopped delay for all vehicles entering the intersection and the delay reported for the unsignalized intersections is the worst delay experienced by vehicles on the minor street approach.
2. Side-Street Stop Controlled intersection with High-Intensity Activated Crosswalk (HAWK) Beacon.
3. New Side-Street Stop Controlled intersection under Project conditions
4. CMP Intersection
BOLD indicates a substandard level of service

Table 10
Background Plus Project and Hotel Intersection Levels of Service

#	Intersection	Control	Peak Hour	Background Conditions Delay[1] (sec)	Background Conditions LOS	Background plus Project plus Hotel Conditions Delay[1] (sec)	Background plus Project plus Hotel Conditions LOS	Incr. in Delay
1	El Camino Real & San Felipe Avenue	Signal	AM	11.4	B	11.5	B	0.1
			PM	15.8	B	15.9	B	0.1
2	El Camino Real & Santa Inez Avenue / Park Place	Signal	AM	9.6	A	9.6	A	0.0
			PM	14.4	B	14.4	B	0.0
3	El Camino Real & Park Boulevard / San Diego Avenue	Side-Street Stop	AM	**>50**	**F**	**>50**	**F**	**3.2**
			PM	**>50**	**F**	**>50**	**F**	**28.9**
4	El Camino Real & Santa Helena Avenue	Side-Street Stop[2]	AM	25.0	C	25.2	D	0.2
			PM	23.4	C	25.1	D	1.7
5	El Camino Real & Capuchino Drive	Side-Street Stop	AM	29.9	D	30.2	D	0.3
			PM	23.5	C	24.0	C	0.5
6	El Camino Real & Millwood Drive	Signal	AM	7.4	A	7.5	A	0.1
			PM	5.3	A	5.3	A	0.0
7	El Camino Real & Ludeman Lane	Side-Street Stop[2]	AM	14.5	B	14.5	B	0.0
			PM	**>50**	**F**	**>50**	**F**	**14.4**
8	El Camino Real & Center Street	Signal	AM	6.6	A	8.1	A	1.5
			PM	15.6	B	21.5	C	5.9
9	El Camino Real & Meadow Glen Avenue	Signal	AM	10.3	B	10.4	B	0.1
			PM	22.9	C	23.7	C	0.8
10	El Camino Real & Silva Avenue	Signal	AM	11.5	B	11.6	B	0.1
			PM	22.9	C	23.4	C	0.5
11	El Camino Real & Hillcrest Boulevard	Signal	AM	18.2	B	18.4	B	0.2
			PM	38.5	D	38.1	D	-0.4
12	El Camino Real & Project Driveway 1	Side-Street Stop	AM	14.8	B	15.2	C	0.4
			PM	24.0	C	28.0	D	4.0
13	Center Street & San Anselmo Avenue	Side-Street Stop	AM	9.8	A	10.6	B	0.8
			PM	9.3	A	9.9	A	0.6
14	Center Street & Project Driveway 2	Side-Street Stop	AM	10.7	B	11.8	B	1.1
			PM	10.4	B	12.0	B	1.6
15	Center Street & Project Driveway 3	Side-Street Stop[3]	AM	n/a	n/a	10.1	B	n/a
			PM	n/a	n/a	9.9	A	n/a
16	El Camino Real & Millbrae Avenue	Signal[4]	AM	**87.6**	**F**	**90.6**	**F**	**3.0**
			PM	**85.3**	**F**	**88.2**	**F**	**2.9**

Notes:
1. The delay reported for the signalized intersections is the average stopped delay for all vehicles entering the intersection and the delay reported for the unsignalized intersections is the worst delay experienced by vehicles on the minor street approach.
2. Side-Street Stop Controlled intersection with High-Intensity Activated Crosswalk (HAWK) Beacon.
3. New Side-Street Stop Controlled intersection under Project conditions
4. CMP Intersection
BOLD indicates a substandard level of service

6.
Other Transportation Issues

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

- VMT Analysis
- Vehicle queuing
- Site access and circulation
- Parking
- Signal warrant
- Potential impacts to transit, bicycle, and pedestrian facilities
- Applicable mitigation measures from prior environmental documents

VMT Analysis

The CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor have a less-than significant impact on VMT. A high-quality transit corridor is a corridor, which is served by major bus routes with a frequency of service interval of 15 minutes or less during the commute peak periods. This presumption would not apply if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

The project is located within a half mile of the SamTrans Route ECR stop, which provides service every 15 minutes during weekdays. Therefore, the project is expected to have a less-than-significant impact on VMT. The project is expected to have a FAR of greater than 0.75 and also plans to implement a transportation demand management (TDM) plan to provide less parking than what is required by the City of Millbrae. The project replaces an existing hotel, restaurant, and single-family residential homes on-site to provide multi-family housing and is therefore, consistent with the *Plan Bay Area 2040* goals as a high-density infill residential development project near transit. Since the project meets the above criteria, it is expected to have a less-than-significant impact on VMT.

Queuing Analysis

The operations analysis is based on vehicle queuing for left-turn pockets to which the project adds at least ten peak-hour trips, which is on average one trip every six minutes. More than ten left-turn trips would be added to the following intersection movements:

- El Camino Real and Center Street, westbound shared left, through, and right turn approach
- El Camino Real and Center Street, southbound left
- El Camino Real and Meadow Glen Avenue, eastbound left
- El Camino Real and Hillcrest Boulevard, eastbound left
- El Camino Real and Millbrae Avenue, southbound left

The 95th percentile vehicle queue means that a queue of that distance or a shorter distance would occur 95 percent of the time. Or, a queue length longer than the 95th percentile queue would only occur 5 percent of the time. For a signal that operates with a 60 second cycle length, which equates to 60 cycles per hour, the vehicle queue would be longer than the 95th percentile during 3 of the 60 cycles. Therefore, left-turn pockets with a distance equal to the 95th percentile queue would ensure that storage space would be exceeded only 5 percent of the time. The 95th percentile queue length is also known as the "design queue length."

El Camino Real & Center Street – Westbound Approach

Currently, the westbound approach has only one lane that is shared by the left, through, and right turn movements. In the AM and PM peak hours, the 95th percentile queues under no project conditions are 200 feet and 175 feet, respectively. The analysis shows that the traffic added by the proposed apartment project, whether by itself or in combination with a potential hotel, would cause increases to the 95th percentile vehicle queues by a maximum of 79 feet (approximately three to four vehicles) during both peak hours. Under both project conditions, the maximum 95th percentile queue length would be 275 feet. The distance between westbound approach limit line and the upstream intersection at San Anselmo Avenue is 480 feet. Therefore, the 95th percentile queue on the westbound Center Street approach will not spill over to the upstream intersection at San Anselmo Avenue. Although the queue may block some of the intermediate driveways along Center Street temporarily, it is anticipated to be brief and would not impact traffic operations on Center Street.

El Camino Real & Center Street – Southbound Left Turn

There is approximately 110 feet of queue storage space in the left-turn pocket on southbound El Camino Real at Center Street, which is adequate for approximately four to five vehicles. The analysis shows that the traffic added by the proposed apartment project, whether by itself or in combination with a potential hotel, will accommodate the 95th percentile vehicle queues by the existing storage space during both peak hours.

El Camino Real and Meadow Glen Avenue, Eastbound Left Turn

There is approximately 210 feet of queue storage space in the left-turn pocket on eastbound Meadow Glen Avenue at El Camino Real, which is adequate for approximately eight vehicles. In the PM peak hour, the 95th percentile queue under no project conditions exceeds the storage capacity by one vehicle. The queuing analysis indicates that, the addition of trips from the proposed apartment, whether alone or in combination with a potential hotel, would cause a negligible increase (≤10 feet) to the 95th percentile queue.

El Camino Real and Hillcrest Boulevard, Eastbound Left Turn

There is approximately 100 feet of queue storage space in the left-turn pocket on eastbound Hillcrest Avenue at El Camino Real, which is adequate for approximately four vehicles. In the PM peak hour, the

95th percentile queue under no project conditions exceeds the storage capacity by one vehicle. The queuing analysis indicates that the addition of trips from the proposed apartment, whether alone or in combination with a potential hotel, would cause a negligible increase (≤10 feet) to the 95th percentile queue.

El Camino Real and Millbrae Avenue – Southbound Left Turn

The southbound left-turn queue at El Camino Real and Millbrae Avenue is expected to exceed the available queue storage space under all analysis scenarios during one or both peak hours. The queuing analysis indicates that the addition of trips from the proposed apartment, whether alone or in combination with a potential hotel, would increase the 95th percentile queue by about one vehicle in the AM and the PM peak hour. The southbound left-turn lanes could be extended by narrowing the landscaped median on El Camino Real. The project would not be individually responsible for making any physical improvements at this intersection since the project would have a minimal effect on a location with an existing queueing deficiency.

Tables 11 and 12 show the estimated queue lengths at these intersections for the proposed apartment project and the proposed apartment project plus potential hotel, respectively. The intersection queue length calculation sheets are included in Appendix C.

Table 11
Queuing Analysis Summary – Proposed Apartment Project

	El Camino Real and Center Street				El Camino Real and Millbrae Avenue	
Movement:	**SBL**		**WB [1]**		**SBL [2]**	
Peak Hour Period:	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Existing						
Total Volume / Lane	35	42	244	175	779	610
Total 95th %. Queue (ft.)	50	75	200	175	#575	350
Total Storage (ft.)	110	110	480	480	800	800
Adequate (Y/N)	Y	Y	Y	Y	**N**	Y
Existing Plus Project						
Total Volume / Lane	37	56	320	226	794	620
Total 95th %. Queue (ft.)	50	75	250	225	#600	375
Total Storage (ft.)	110	110	480	480	800	800
Adequate (Y/N)	Y	Y	Y	Y	**N**	Y
Background						
Total Volume / Lane	35	42	244	175	1031	967
Total 95th %. Queue (ft.)	50	75	200	175	#850	#700
Total Storage (ft.)	110	110	480	480	800	800
Adequate (Y/N)	Y	Y	Y	Y	**N**	**N**
Background Plus Project						
Total Volume / Lane	37	56	320	226	1046	977
Total 95th %. Queue (ft.)	50	75	250	225	#875	#700
Total Storage (ft.)	110	110	480	480	800	800
Adequate (Y/N)	Y	Y	Y	Y	**N**	**N**

Notes:

[1] Westbound queue at El Camino Real / Center Street is estimated for westbound left, through and right movements because all the movements share the same lane.
Storage is measured from the limit line to the next upstream intersection at San Anselmo Avenue.

[1] Southbound left-turn pocket at El Camino Real/ Millbrae Avenue consists of two turn lanes. Left-turn storage doubled to represent total left-turn storage.

95th percentile volume exceeds capacity, queue maybe longer. Queue shown is maximum after two cycles

Table 12
Queuing Analysis Summary – Proposed Apartment Project Plus Potential Hotel

	El Camino Real and Center Street				El Camino Real and Meadow Glen Avenue		El Camino Real & Hilcrest Boulevard		El Camino Real and Millbrae Avenue	
Movement:	SBL		WB [1]		EBL		EBL		SBL [2]	
Peak Hour Period:	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Existing										
Total Volume / Lane	35	42	244	175	246	270	93	120	779	610
Total 95th %. Queue (ft.)	50	75	200	175	200	225	100	125	#575	350
Total Storage (ft.)	110	110	480	480	210	210	100	100	800	800
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	Y	**N**	**N**	Y
Existing Plus Project										
Total Volume / Lane	47	67	341	259	252	282	99	134	804	636
Total 95th %. Queue (ft.)	75	100	275	275	200	225	100	125	#600	375
Total Storage (ft.)	110	110	480	480	210	210	100	100	800	800
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	Y	**N**	**N**	Y
Background										
Total Volume / Lane	35	42	244	175	246	270	93	120	1031	967
Total 95th %. Queue (ft.)	50	70	200	175	200	225	100	125	#850	#700
Total Storage (ft.)	110	110	480	480	210	210	100	100	800	800
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	Y	**N**	**N**	**N**
Background Plus Project										
Total Volume / Lane	47	67	341	259	252	282	99	133	1056	993
Total 95th %. Queue (ft.)	75	100	275	275	200	225	100	125	#875	#725
Total Storage (ft.)	110	110	480	480	210	210	100	100	800	800
Adequate (Y/N)	Y	Y	Y	Y	Y	**N**	Y	**N**	**N**	**N**

Notes:

[1] Westbound queue at El Camino Real / Center Street is estimated for westbound left, through and right movements because all the movements share the same lane. Storage is measured from the limit line to the next upstream intersection at San Anselmo Avenue.

[2] Southbound left-turn pocket at El Camino Real/ Millbrae Avenue consists of two turn lanes. Left-turn storage doubled to represent total left-turn storage.

95th percentile volume exceeds capacity, queue maybe longer. Queue shown is maximum after two cycles

Site Access

The site access and on-site circulation evaluation is based on the December 1, 2019 set of site plans of the project. The site plan is shown on Figure 2 near the beginning of this report.

Access to the site would be provided via driveways on El Camino Real and Center Street. The driveways along Center Street would provide access to the residential parking spaces. The driveway closer to the intersection of El Camino Real and Center Street (Driveway 2) would provide access to the at-grade residential parking spaces. A second driveway on Center Street (Driveway 3) would provide access to the Building A residential garage. A third driveway on Center Street (Driveway 4) would connect to an emergency vehicle access lane that would extend along the south and east edge of the side and connect with the driveway on El Camino Real.

As shown in the site plan, the driveway on El Camino Real (Driveway 1) is assumed to provide access to the potential hotel. Driveway 1 would connect internally with driveway 2, both of which would provide access to a small number of surface parking spaces.

The width of Driveway 1 on El Camino Real would be 26 feet, Driveways 2 and 3 on Center Street would be 24 feet, and Driveway 4 on Center Street would be 20 feet. According to the City of Millbrae standards, two-way driveways should have a minimum width of 20 feet. The project access points should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians coming from either direction on the sidewalk and other vehicles or bicycles traveling on the street. Any landscaping and signage should be located in such a way as to ensure an unobstructed view for drivers entering and exiting the site.

Adequate sight distance reduces the likelihood of a collision and provides drivers with the ability to locate sufficient gaps in the traffic flow. Sight distance generally should be provided in accordance with Caltrans standards. The minimum acceptable sight distance is often considered the Caltrans stopping sight distance. Sight distance requirements vary depending on the roadway speeds. The speed limit on Center Street is 25 mph. The Caltrans recommended stopping sight distance is 150 feet. This means that a driver must be able to see 150 feet down Center Street in order to stop for this speed and to avoid a collision with another vehicle. There is on-street parking along the project frontage on El Camino Real and Center Street that could limit the sight distance. It is recommended that standard no parking zones be established adjacent to the project driveways to ensure that exiting vehicles can see approaching vehicles and bicycles on the road.

<u>Recommendation:</u> Prohibit on-street parking within 50 feet on either side of each driveway on Center Street and on El Camino Real south of the driveway.

Driveway 1

The El Camino Real driveway would allow for right-in and right-out access only. Hotel traffic approaching from the south on El Camino Real is assumed to enter the site via driveway 1. A small number of residential trips, primarily drop-off or pick-up vehicles could also use the El Camino Driveway. However, since the driveway would not provide access to the parking garage, residential use of this driveway would be minimal. Outbound hotel trips headed south, are expected to use the Center Street driveway because the El Camino Real driveway only allows right turns out and it would be difficult for vehicles to cross three lanes on El Camino Real to enter the left-turn lane and make a U-turn at the El Camino Real and Center Street intersection.

Driveway 2

The existing driveway on Center Street would be removed and a new driveway would be constructed approximately 50 feet further west, which is about 300 feet east of the intersection with El Camino Real. Driveway 2 provides access to a small number of at-grade parking spaces. Hotel traffic coming from the north on El Camino Real is expected to turn left onto Center Street to enter via driveway 2. Driveway 2 is projected to serve the fewer project trips than driveways 1 or 3.

Driveway 3

Driveway 3 would be located approximately 50 feet from the eastern boundary of the site and would provide access to the residential parking garage. Driveway 3 is projected to serve the most project trips.

Driveway 4

Driveway 4 would be located adjacent the eastern boundary of the site. Driveway 4 would connect to an emergency vehicle access lane that would extend along the east and south sides of the site's perimeter and connect to the driveway on El Camino Real. Driveway 4 is expected to be used only by emergency access and maintenance vehicles.

On-Site Circulation

The on-site circulation was reviewed in accordance with generally accepted traffic engineering standards. A specific development proposal and site plan have not yet been created for a potential hotel. Thus, the on-site circulation analysis focus only on the site plan for the proposed residential development

Residential parking is provided primarily in a residential parking garage (Levels 1 to 6). The site also includes a small number of at-grade parking spaces. All residential spaces would be accessible through the two driveways on Center Street. The parking stalls in the garage and the at grade surface parking are at a 90-degrees angle. The width of the drive aisles meets the City of Millbrae's minimum requirement (24 feet) for 90-degree parking spaces on double-loaded drive aisles with two-way traffic. The parking space dimensions (9 feet wide by 18 feet long for standard parking spaces and 8 feet wide by 16 feet long for compact parking space) meet the City standards.

Transit, Pedestrian and Bicycle Analysis

This section of the report describes the potential impact of the project on transit, pedestrian, and bicycle travel.

Impact on Transit Service

Based on the 2013 to 2017 American Community Survey, 85.6% of the Millbrae residents commute to work in their car, and 5.1% used transit (The remaining trips use other modes of transportation such as a motorcycle, walk or bike). Based on this transit percentage, the proposed apartment project is estimated to add 4 to 7 transit trips during the peak hours. The project and the hotel together are estimated to add 13 to 17 transit trips. These trips would be split between the BART, Caltrain, and buses. It is unlikely that the project by itself would generate enough demand for transit service to justify the expansion of bus, Caltrain or BART service. It is anticipated that the existing transit service would be able to accommodate these additional transit trips.

Impact on Pedestrian Facilities

Sidewalks are present along all of the surrounding streets except for a 275-foot segment on the south side of the Center Street between El Camino Real and the existing site driveway. The project applicant has voluntarily agreed to close the existing sidewalk gap along Center St to connect the project with the El Camino Real and Downtown Millbrae Specific Plan areas[2], and to make other voluntary improvements to enhance pedestrian safety along Center Street, including constructing an 8-foot wide pathway along the project frontage, bulb-outs, and a 3 way stop sign at Center Street and San Anselmo. The project applicant has also voluntarily agreed to make a voluntary fair-share contribution of $50,000 toward the El Camino Real streetscape and the El Camino Real & Center St traffic signal modifications.

Crosswalks with pedestrian signal heads are located at all signalized intersections in the study area and the City of Millbrae has installed hybrid beacon signal heads at three pedestrian crossings on El Camino Real. Overall, the existing pedestrian facilities provide adequate connectivity between the site and the surrounding land uses in the area. These signalized crosswalks assist pedestrians who walk across El Camino Real.

Impact on Bicycle Facilities

There are currently minimal bicycle facilities in the project area (see Figure 3) and no designated bike lanes along the surrounding streets. There are some cyclist-suggested routes, which are compiled by cyclists as preferred routes shown on the 2009 San Mateo County Bicycle Map. The *San Mateo County Comprehensive Bicycle and Pedestrian Plan,* adopted on September 8, 2011, has identified the following proposed improvements to the bike network within the project vicinity:

- San Antonio Avenue and Monterey Street are proposed for a Class I bicycle path.
- Larkspur Drive and Rollins Road is proposed to provide Class II bicycle lanes.
- San Anselmo Avenue, Magnolia Avenue, Richmond Drive and Hill Crest Boulevard are proposed for Class III signed bicycle routes.

These bicycle improvements will benefit bicyclists of the project. The project by itself would not create an impact on the transportation system that would require improvements for bicycle travel.

Parking Analysis

On-Site Parking Analysis

The proposed apartment project would consist of 384 residential units (49 studios, 198 one-bedroom, and 137 two-bedroom apartments). Since a specific development proposal and site plan have not yet been created for a potential hotel, a parking analysis has not been conducted for a development that contains both the proposed apartments plus a hotel.

According to the site plan dated December 1, 2019, the proposed apartment project would provide 560 on-site partially unbundled parking spaces for the residents and visitors. Each apartment unit will include one parking space as part of the lease and additional parking spaces may be purchased if needed. Millbrae's Municipal Code (Section 10.05.2100) sets forth the following parking requirements:

[2] This assumes that no right-of-way, utility undergrounding, or signal modifications would be required.

Multi-family units:

- Studio units : 1.0 spaces per unit
- One-bedroom units : 1.5 spaces per unit
- Two or more-bedroom units : 2.0 spaces per unit

According to the City's parking code, the project would be required to provide 620 spaces for residential use. Based on these calculations, the project fall would fall short by 60 parking spaces.

However, since the project would provide five percent (19 units) of Very Low-Income Units, it is eligible for a density bonus. The mandatory maximum residential standards under the State Density Bonus Law require no more than one vehicle parking space for 0-1-bedroom units and two vehicle parking spaces for 2-3-bedroom units. Per the State Density Bonus Law, the project would be required to provide 521 parking spaces. The project is proposing to provide a total of 560 parking spaces, which would exceed the State requirement by 39 parking spaces.

Hexagon has completed numerous parking occupancy counts for apartment developments in the greater San Francisco Bay Area (see Appendix D). The data show that the average number of occupied parking spaces is 1.26 spaces per unit. Similarly, the data show that the average number of occupied parking spaces per bedroom is 0.78 spaces per bedroom. Using these ratios, the proposed project would need 484 spaces (based on unit count) or 407 spaces (based on bedroom count). These totals are substantially lower than the 560 parking spaces the project proposes to provide. Therefore, it can be concluded that the project proposes sufficient parking.

Bicycle Parking

The City of Millbrae parking requirements state that the number of bicycle parking spaces should be at least 10% of auto parking provided. Based on the City of Millbrae bicycle parking requirements, the proposed apartment should provide 56 bicycle parking spaces for residential use. According to the site plan dated December 1, 2019, the project is proposing a total of 72 bicycle parking spaces for residential use, including 60 long-term and 12 short-term bicycle parking spaces, which exceeds the City's requirement.

In order to promote the transportation mode share for bicycle, it is recommended that electric bicycle charging stations be provided for at least 25 percent (18 spaces) of the proposed bicycle parking spaces onsite.

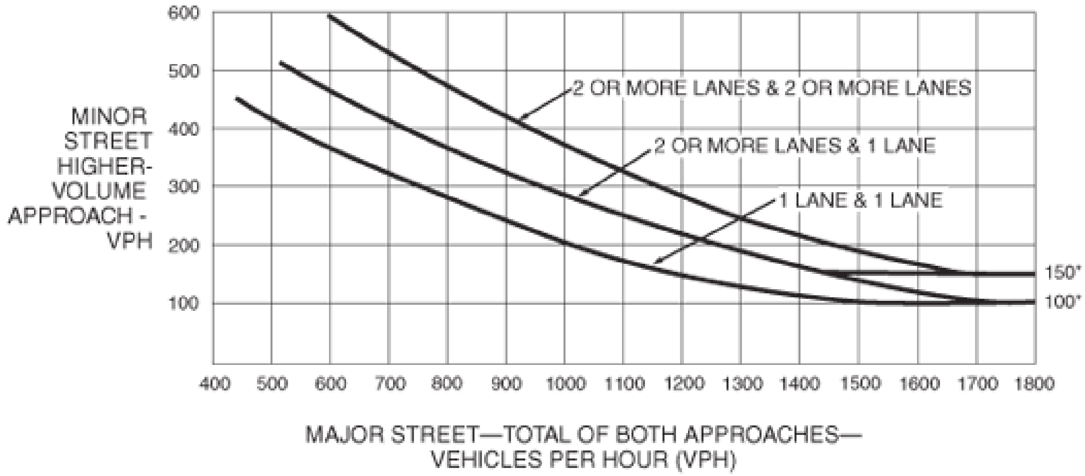
Recommendation: Provide bicycle charging stations for at least 25 percent (18 spaces) of the proposed bicycle parking spaces onsite.

Signal Warrant Analysis

The unsignalized study intersections that are expected to operate at substandard level (LOS E or LOS F) were checked for a signal warrant on the basis of one-hour traffic volumes. The signal warrants were checked in accordance with the guidelines outlined in the CA MUTCD Section 4C.03 (Warrant 3, One-Hour Vehicular Volume).

The need for a traffic control signal shall be considered if an engineering study finds that, for one hour of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only) all falls above the applicable curve in Figure 4C-3 for the existing combination of approach lanes.

Figure 4C-3. Warrant 3, Peak Hour



*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.

Tables 13 and 14 provide a summary of the AM and PM peak-hour volumes on the major and minor street approaches for all unsignalized intersections for the proposed apartment project alone and in combination with a potential hotel, respectively. As shown in the graph 4C-3, the minimum volume on the minor street with one lane approach is 100 vehicles to warrant a traffic signal. Therefore, although the intersection of El Camino Real and Ludeman Lane operates poorly (LOS F) in the PM peak hour as analyzed in the chapters above, a signal at this intersection is not warranted since the minor street has less than 100 vehicles.

The highest side street volume for El Camino Real and Park Boulevard / San Diego Avenue is 113 vehicles during the AM peak and 125 vehicles during the PM peak hour. Almost all of these vehicles (105) are making right-turns and only 8 vehicles are turning left in the AM peak hour. Among 125 vehicles in PM peak hour, 112 vehicles turn right and only 13 vehicles would turn left onto El Camino Real.

Per Guidance 10 in Chapter 4C of the MUTCD, right-turn volumes can be excluded from the minor street approach volumes because this movement has minimal conflict with traffic on the major street. Excluding the right-turn volumes results in 13 vehicles or fewer on the minor street approach which is far less that the minimum volume of 100 vehicles per hour. Therefore, installation of traffic signals at this intersection is not recommended.

Table 13
Peak-Hour Approach Volumes at Unsignalized Intersections – Proposed Apartment Project

	Intersection	Existing			Existing+Project			Background			Background+Project		
		Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]	Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]	Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]	Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]
AM Peak Hour	El Camino Real & Park Boulevard / San Diego Avenue	2444	113	8	2455	113	8	2773	113	8	2784	113	8
	El Camino Real & Ludeman Lane	2537	70	12	2550	70	12	2866	70	12	2879	70	12
PM Peak Hour	El Camino Real & Park Boulevard / San Diego Avenue	3158	125	13	3176	125	13	3499	125	13	3517	125	13
	El Camino Real & Ludeman Lane	3200	39	8	3221	39	8	3541	39	8	3562	39	8

[1] Sum of the intersection approach volumes in both directions on the major street

[2] Highest intersection approach volume of minor street

[3] As per MUTCD Guidance 10, right-turn volumes were excluded from the minor street approach because this movement has minimal conflict with the major street volumes.

Table 14
Peak-Hour Approach Volumes at Unsignalized Intersections – Proposed Apartment Project Plus Potential Hotel

	Intersection	Existing			Existing plus Project plus Hotel			Background			Background plus Project plus Hotel		
		Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]	Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]	Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]	Major Approaches[1]	Minor Approach Total[2]	Minor Approach Without RT[3]
AM Peak Hour	El Camino Real & Park Boulevard / San Diego Avenue	2444	113	8	2471	113	8	2773	113	8	2800	113	8
	El Camino Real & Ludeman Lane	2537	70	12	2569	70	12	2866	70	12	2898	70	12
PM Peak Hour	El Camino Real & Park Boulevard / San Diego Avenue	3158	125	13	3198	125	13	3499	125	13	3539	125	13
	El Camino Real & Ludeman Lane	3200	39	8	3247	39	8	3541	39	8	3588	39	8

[1] Sum of the intersection approach volumes in both directions on the major street

[2] Highest intersection approach volume of minor street

[3] As per MUTCD Guidance 10, right-turn volumes were excluded from the minor street approach because this movement has minimal conflict with the major street volumes.

Construction Traffic

Project construction would temporarily affect off-site circulation due to potential travel lane closures, detours, closure of sidewalks, and increased truck traffic to and from the development site.

Recommendation: Project construction activities should follow the *Plan Bay Area 2040* guidelines to minimize disruptions to the overall circulation in the project area. The project should implement the following measures during construction:

- prepare a transportation construction plan with construction phasing/staging schedule and sequence.
- identify arrival/departure times for trucks and construction workers to avoid peak periods of adjacent street traffic and encourage construction workers to use transit, carpool, and other sustainable transportation modes when commuting to and from the site to minimize effect on traffic.
- identify optimal delivery and haul routes to and from the site and also identify appropriate detour routes with wayfinding signs for motorists, bicycles, and pedestrians in areas affected by construction.
- preserve emergency vehicle access.
- notify adjacent property owners when major deliveries, detours, and lane closures will occur.

Applicable Mitigation Measures from Prior Environmental Documents

The Plan Bay Area 2040 EIR and Millbrae General Plan EIR were reviewed to identify mitigation measures applicable to the proposed development at 1100 El Camino Real. Consistent with Plan Bay Area Mitigation Measure 2.1-3-3(b), the proposed project will incorporate supporting infrastructure for non-motorized modes including bike parking and sidewalks. Furthermore, the project will implement best practice strategies regarding construction activities on the transportation system and apply recommended applicable mitigation measures as defined by state and federal agencies per Plan Bay Area Mitigation Measure 2.1-7. None of the other transportation mitigation measures found in the prior environmental documents are applicable to this project.

7.
Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Millbrae, the City of San Bruno and the City/County Association of Governments of San Mateo County Congestion Management Program (CMP). The study included VMT analysis, the analysis of traffic conditions at eight signalized and eight unsignalized intersections during the weekday AM and PM peak hours, and a review of the site plan.

VMT Analysis

The Project ‘s transportation impact on vehicles miles traveled (VMT) was evaluated based on the CEQA Guidelines published by the Governor’s Office of Planning and Research (OPR). According to the CEQA Guidelines, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. The project is located within a half mile of SamTrans Route ECR, which is an existing high-quality transit corridor. Therefore, the project is expected to have a less-than-significant impact on vehicles miles travelled.

Intersection Level of Service Analysis

The results of the intersection level of service analysis shows that the following two unsignalized intersections currently operate at an unacceptable level:

- El Camino Real / Park Boulevard / San Diego Avenue [LOS E, AM and PM]
- El Camino Real / Ludeman Lane [LOS E, PM]

The traffic associated with approved projects is expected to cause the following signalized study intersection to degrade to an unacceptable level.

- El Camino Real / Millbrae Avenue [LOS F, AM and PM]

Although these intersections are projected to operate at unacceptable conditions, the proposed apartment project, both alone and in combination with a potential hotel, would not cause a deficiency because the increase in delay is less than the delay threshold for signalized intersections and the unsignalized intersection volumes do not satisfy the Caltrans Peak Hour Volume Signal Warrant for traffic signal installation.

It should be noted that the analysis of the apartment project in combination with a potential hotel reflects a conservative analysis that may overstate the trips generated by the project site since it is based on ITE trips rates, which are much higher than trip rates observed at the existing hotel on site.

The residential project would increase the total volume at the El Camino Real and Center Street intersection by 3.53%; the hotel project would increase the total volume by 1.92%. The residential project would increase the westbound approach volumes on Center Street by 31% and 29% in the AM and PM peak hours, respectively; the hotel project would increase westbound approach volumes by 9% and 19% in the AM and PM peak hours, respectively. The increase on its own does not meet protected left turn signal phasing establishment criteria based on volume-only criteria but with the projected increase in bicycle and pedestrian traffic at the intersection from the anticipated El Camino Real/Downtown Specific Plan area traffic at buildout, protected left turn phasing for the westbound Center Street left turn movement may be necessary at a future date.

Other Transportation Issues

Queuing Analysis

A queuing analysis was performed at left-turn pockets where the project would add at least 10 left-turn trips during one or both peak hours.

The eastbound left-turn queue at the El Camino Real/Meadow Glen intersection and at the El Camino Real/Hillcrest intersection currently exceeds the available storage capacity by about one vehicle length in the PM peak hour. The analysis shows that the traffic added by the proposed apartment project, whether by itself or in combination with a potential hotel, would cause a negligible increase (<= 10 feet) in the 95th percentile vehicle queues.

The southbound left-turn queue at El Camino Real and Millbrae Avenue is expected to exceed the available storage under all analysis scenarios, including existing conditions, during one or both peak hours. The queuing analysis indicates that the addition of trips from the proposed apartment, alone or in combination with a potential hotel, would increase the 95th percentile queue by about one vehicle in the AM and the PM peak hour. The southbound left-turn lanes could be extended by narrowing the existing landscaped median on El Camino Real. The project would not be individually responsible for making any physical improvements at this intersection since the project would have a minimal effect on a location with an existing queueing deficiency.

On-Site Circulation

The traffic analysis did not identify any on-site traffic circulation issues for the proposed apartment project.

Site Access

The project access points should be free and clear of any obstructions to provide adequate sight distance to ensure that exiting vehicles can see vehicles and bicycles traveling on the street.

<u>Recommendation:</u> Prohibit on-street parking within 50 feet on either side of each driveway on Center Street and on El Camino Real south of the driveway.

Parking

The proposed apartment project would provide 560 partially unbundled vehicle parking spaces for residents, which is 39 parking spaces above the requirement under the State Density Bonus Law. Each apartment unit will include one parking space as part of the lease and additional parking spaces may be purchased if needed.

The proposed apartment project is proposing a total of 72 bicycle parking spaces for residential use which exceeds the City's requirement by 16 spaces.

Recommendation: Provide bicycle charging stations for at least 25 percent (18 spaces) of the proposed bicycle parking spaces onsite.

Transit, Pedestrian, and Bicycle Analysis

The proposed apartment project, both alone and in combination with a potential hotel, would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the study area. However, there is no sidewalk along the south side on Center Street between El Camino Real and the western project driveway. The project applicant has voluntarily agreed to close the existing sidewalk gap along Center St to connect the project with the El Camino Real and Downtown Millbrae Specific Plan areas[3], and to make other voluntary improvements to enhance pedestrian safety along Center Street, including constructing an 8-foot wide pathway along the project frontage, bulb-outs, and a 3 way stop sign at Center Street and San Anselmo. The project applicant has also agreed to make a voluntary fair-share contribution of $50,000 toward the El Camino Real streetscape and the El Camino Real & Center St traffic signal modifications.

Signal Warrants

The unsignalized study intersections expected to operate at an unacceptable level of service were checked for a signal warrant on the basis of one-hour traffic volumes. The signal warrants were checked in accordance with the guidelines outlined in the CA MUTCD Section 4C.03 (Warrant 3, One-Hour Vehicular Volume). The analysis showed that the unsignalized intersections operating at unacceptable levels of service would not meet the signal warrant with the traffic generated by the proposed apartment project, whether alone or in combination with a potential hotel.

Construction Traffic

Project construction would temporarily affect off-site circulation due to travel lane closures, detours, increased truck traffic to and from the development site, potential closure of sidewalks, and blockage of bicycle facilities and transit routes during construction.

Recommendation: Project construction activities should follow the *Plan Bay Area 2040* guidelines to minimize disruptions to the overall circulation in the project area.

Applicable Mitigation Measures from Prior Environmental Documents

Consistent with Plan Bay Area Mitigation Measure 2.1-3-3(b), the proposed project will incorporate supporting infrastructure for non-motorized modes including bike parking and sidewalks. Furthermore, the project will implement best practice strategies regarding construction activities on the transportation system and apply recommended applicable mitigation measures as defined by state and federal agencies per Plan Bay Area Mitigation Measure 2.1-7. None of the other transportation mitigation measures found in the Plan Bay Area 2040 EIR and Millbrae General Plan EIR are applicable to this project.

[3] This assumes that no right-of-way, utility undergrounding, or signal modifications would be required.

1100 El Camino Real Mixed Use
Traffic Analysis

Technical Appendices

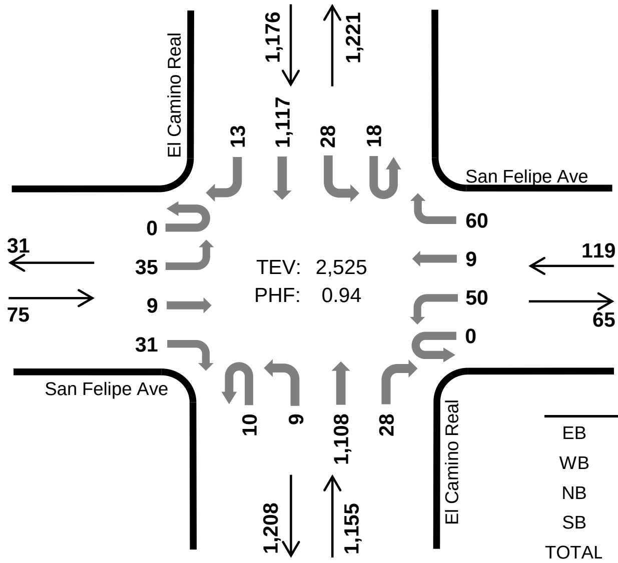
Appendix A
Traffic Counts

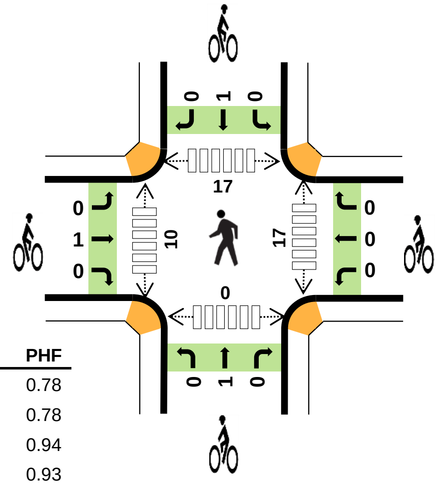
El Camino Real
San Felipe Ave

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

N

Peak Hour





	HV %:	PHF
EB	1.3%	0.78
WB	1.7%	0.78
NB	2.2%	0.94
SB	2.3%	0.93
TOTAL	2.2%	0.94

Two-Hour Count Summaries

Interval Start		San Felipe Ave Eastbound				San Felipe Ave 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	4	2	12	0	8	2	12	1	4	180	5	0	6	174	2	412	0
7:15 AM		0	13	1	6	0	12	2	12	1	1	167	3	1	6	179	0	404	0
7:30 AM		0	9	2	11	0	14	1	9	3	2	218	3	3	4	271	1	551	0
7:45 AM		**0**	**11**	**2**	**11**	**0**	**18**	**1**	**19**	**4**	**1**	**271**	**8**	**4**	**4**	**285**	**2**	**641**	2,008
8:00 AM		**0**	**10**	**1**	**9**	**0**	**11**	**1**	**15**	**2**	**2**	**291**	**10**	**4**	**6**	**302**	**4**	**668**	2,264
8:15 AM		**0**	**7**	**3**	**4**	**0**	**11**	**6**	**13**	**3**	**4**	**293**	**7**	**4**	**11**	**251**	**1**	**618**	2,478
8:30 AM		**0**	**7**	**3**	**7**	**0**	**10**	**1**	**13**	**1**	**2**	**253**	**3**	**6**	**7**	**279**	**6**	**598**	**2,525**
8:45 AM		0	18	1	3	0	10	1	14	3	2	257	11	10	8	273	0	611	2,495
Count Total		0	79	15	63	0	94	15	107	18	18	1,930	50	32	52	2,014	16	4,503	0
Peak Hour	**All**	**0**	**35**	**9**	**31**	**0**	**50**	**9**	**60**	**10**	**9**	**1,108**	**28**	**18**	**28**	**1,117**	**13**	**2,525**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**24**	**0**	**1**	**3**	**23**	**0**	**55**	**0**
	HV%	**-**	**3%**	**0%**	**0%**	**-**	**2%**	**0%**	**2%**	**10%**	**0%**	**2%**	**0%**	**6%**	**11%**	**2%**	**0%**	**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	4	8	*13*	0	0	1	0	*1*	2	2	4	0	*8*
7:15 AM	0	0	4	8	*12*	0	0	0	0	*0*	5	5	3	0	*13*
7:30 AM	0	0	10	7	*17*	0	0	1	0	*1*	1	3	2	1	*7*
7:45 AM	**0**	**0**	**5**	**9**	***14***	**0**	**0**	**0**	**0**	***0***	**6**	**1**	**3**	**0**	*10*
8:00 AM	**0**	**0**	**5**	**8**	***13***	**1**	**0**	**0**	**0**	***1***	**4**	**3**	**4**	**0**	*11*
8:15 AM	**1**	**0**	**10**	**6**	***17***	**0**	**0**	**0**	**1**	***1***	**4**	**4**	**5**	**0**	*13*
8:30 AM	**0**	**2**	**5**	**4**	***11***	**0**	**0**	**1**	**0**	***1***	**3**	**2**	**5**	**0**	***10***
8:45 AM	0	0	8	6	*14*	1	0	0	0	*1*	6	8	8	0	*22*
Count Total	1	3	51	56	*111*	2	0	3	1	*6*	31	28	34	1	*94*
Peak Hour	**1**	**2**	**25**	**27**	***55***	**1**	**0**	**1**	**1**	***3***	**17**	**10**	**17**	**0**	***44***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	San Felipe Ave				San Felipe Ave				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	0	0	1	0	0	4	0	0	0	8	0	13	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	2	6	0	12	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	7	0	17	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**0**	**1**	**1**	**7**	**0**	**14**	56
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**8**	**0**	**13**	56
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**2**	**4**	**0**	**17**	61
8:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**4**	**0**	**11**	**55**
8:45 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	1	5	0	14	55
Count Total	0	1	0	0	0	1	0	2	1	0	50	0	1	6	49	0	111	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**24**	**0**	**1**	**3**	**23**	**0**	**55**	**0**

Two-Hour Count Summaries - Bikes

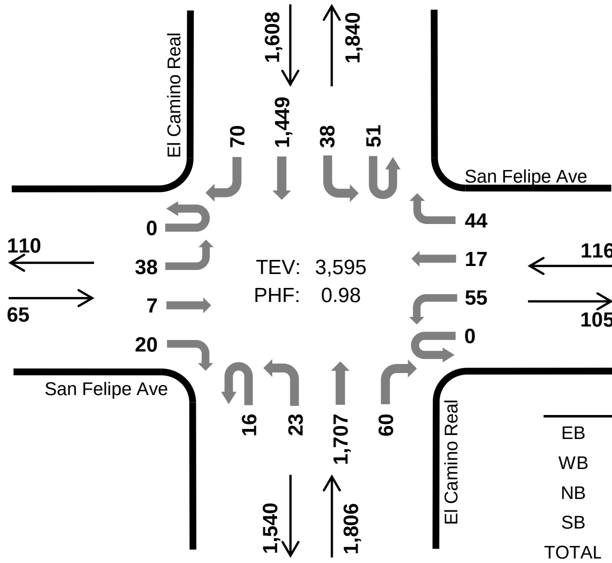
Interval Start	San Felipe Ave			San Felipe Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	3
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**3**
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	4
Count Total	0	2	0	0	0	0	0	3	0	0	1	0	6	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	**0**

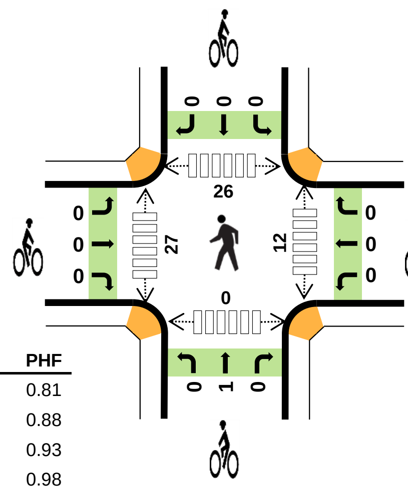
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
San Felipe Ave

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.81
WB	0.9%	0.88
NB	1.3%	0.93
SB	0.9%	0.98
TOTAL	1.1%	0.98

Two-Hour Count Summaries

Interval Start		San Felipe Ave Eastbound UT	LT	TH	RT	San Felipe Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	8	0	4	0	16	4	7	5	4	303	12	8	8	298	8	685	0
4:15 PM		0	3	0	2	0	10	2	12	8	3	331	9	13	10	280	9	692	0
4:30 PM		0	2	3	5	0	22	1	11	1	1	318	5	10	11	325	5	720	0
4:45 PM		0	7	3	7	0	12	6	12	4	5	349	14	10	21	344	9	803	2,900
5:00 PM		**0**	**9**	**1**	**5**	**0**	**11**	**6**	**11**	**3**	**7**	**390**	**19**	**8**	**13**	**376**	**13**	**872**	3,087
5:15 PM		**0**	**11**	**2**	**4**	**0**	**16**	**3**	**9**	**6**	**4**	**429**	**11**	**13**	**8**	**373**	**14**	**903**	3,298
5:30 PM		**0**	**6**	**1**	**6**	**0**	**10**	**5**	**12**	**5**	**7**	**461**	**14**	**16**	**7**	**340**	**26**	**916**	3,494
5:45 PM		**0**	**12**	**3**	**5**	**0**	**18**	**3**	**12**	**2**	**5**	**427**	**16**	**14**	**10**	**360**	**17**	**904**	**3,595**
Count Total		0	58	13	38	0	115	30	86	34	36	3,008	100	92	88	2,696	101	6,495	0
Peak Hour	**All**	**0**	**38**	**7**	**20**	**0**	**55**	**17**	**44**	**16**	**23**	**1,707**	**60**	**51**	**38**	**1,449**	**70**	**3,595**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**24**	**0**	**0**	**2**	**12**	**0**	**39**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**2%**	**0%**	**0%**	**1%**	**0%**	**0%**	**5%**	**1%**	**0%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	5	6	*11*	0	0	0	0	*0*	3	6	4	0	*13*
4:15 PM	0	0	2	5	*7*	0	0	0	0	*0*	14	5	2	0	*21*
4:30 PM	0	0	5	5	*10*	0	0	0	0	*0*	4	5	1	0	*10*
4:45 PM	0	0	2	8	*10*	0	0	0	0	*0*	3	6	3	0	*12*
5:00 PM	**0**	**0**	**11**	**3**	***14***	**0**	**0**	**1**	**0**	***1***	**4**	**6**	**3**	**0**	***13***
5:15 PM	**0**	**1**	**4**	**5**	***10***	**0**	**0**	**0**	**0**	***0***	**6**	**10**	**8**	**0**	***24***
5:30 PM	**0**	**0**	**5**	**3**	***8***	**0**	**0**	**0**	**0**	***0***	**1**	**11**	**13**	**0**	***25***
5:45 PM	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**0**	***3***
Count Total	0	1	38	38	*77*	0	0	1	0	*1*	36	49	36	0	*121*
Peak Hour	**0**	**1**	**24**	**14**	***39***	**0**	**0**	**1**	**0**	***1***	**12**	**27**	**26**	**0**	***65***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	San Felipe Ave Eastbound UT	LT	TH	RT	San Felipe Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6	0	11	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	7	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	10	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	10	38
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**3**	**0**	**14**	41
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**2**	**3**	**0**	**10**	44
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**3**	**0**	**8**	42
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**7**	**39**
Count Total	0	0	0	0	0	0	0	1	0	0	38	0	0	2	36	0	77	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**24**	**0**	**0**	**2**	**12**	**0**	**39**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	San Felipe Ave Eastbound LT	TH	RT	San Felipe Ave Westbound LT	TH	RT	El Camino Real Northbound LT	TH	RT	El Camino Real Southbound LT	TH	RT	15-min Total	Rolling One Hour
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**	**1**	**0**	**0**	**0**	**0**	**1**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	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	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

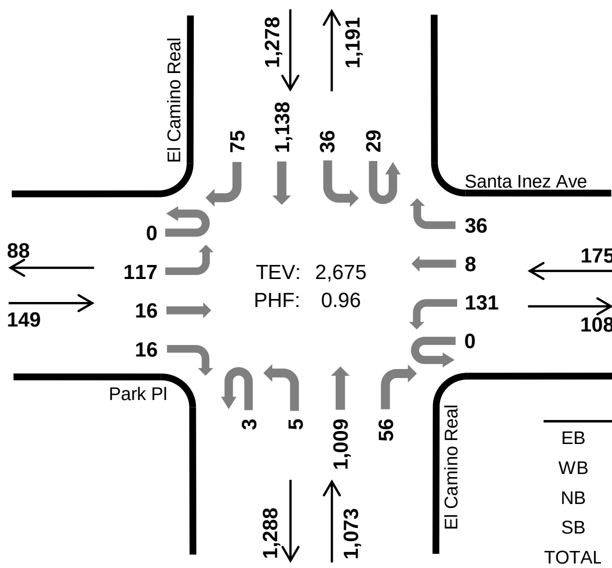
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Park Pl

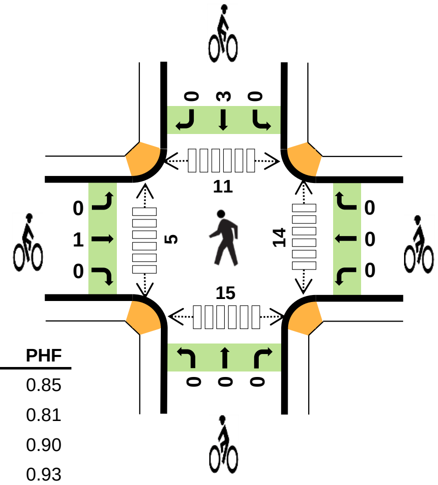
Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

N

Peak Hour



	HV %:	PHF
EB	0.7%	0.85
WB	1.7%	0.81
NB	2.2%	0.90
SB	1.8%	0.93
TOTAL	1.9%	0.96



Two-Hour Count Summaries

Interval Start	Park Pl Eastbound UT	LT	TH	RT	Santa Inez Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	12	1	2	0	20	2	8	0	0	154	2	7	0	192	6	406	0
7:15 AM	0	12	2	3	0	11	1	8	1	0	152	5	1	5	199	9	409	0
7:30 AM	0	15	3	0	0	33	0	11	0	0	178	3	3	7	325	10	588	0
7:45 AM	**0**	**29**	**3**	**2**	**0**	**44**	**2**	**8**	**0**	**1**	**241**	**5**	**4**	**8**	**310**	**22**	**679**	2,082
8:00 AM	**0**	**26**	**0**	**7**	**0**	**27**	**2**	**7**	**1**	**1**	**281**	**15**	**4**	**9**	**298**	**18**	**696**	2,372
8:15 AM	**0**	**31**	**9**	**4**	**0**	**28**	**1**	**10**	**1**	**2**	**265**	**18**	**14**	**10**	**276**	**12**	**681**	2,644
8:30 AM	**0**	**31**	**4**	**3**	**0**	**32**	**3**	**11**	**1**	**1**	**222**	**18**	**7**	**9**	**254**	**23**	**619**	**2,675**
8:45 AM	0	34	5	3	0	24	7	13	1	1	207	11	7	10	247	36	606	2,602
Count Total	0	190	27	24	0	219	18	76	5	6	1,700	77	47	58	2,101	136	4,684	0
Peak Hour All	**0**	**117**	**16**	**16**	**0**	**131**	**8**	**36**	**3**	**5**	**1,009**	**56**	**29**	**36**	**1,138**	**75**	**2,675**	**0**
Peak Hour HV	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**24**	**0**	**0**	**0**	**23**	**0**	**51**	**0**
Peak Hour HV%	**-**	**1%**	**0%**	**0%**	**-**	**1%**	**0%**	**6%**	**0%**	**0%**	**2%**	**0%**	**0%**	**0%**	**2%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	4	7	*11*	0	0	1	0	*1*	0	0	0	1	*1*
7:15 AM	0	0	5	8	*13*	0	0	1	0	*1*	0	0	2	4	*6*
7:30 AM	0	1	3	8	*12*	0	0	0	0	*0*	1	1	1	3	*6*
7:45 AM	**0**	**2**	**4**	**7**	***13***	**1**	**0**	**0**	**2**	***3***	**4**	**1**	**1**	**3**	*9*
8:00 AM	**0**	**0**	**6**	**7**	***13***	**0**	**0**	**0**	**0**	***0***	**8**	**1**	**1**	**5**	*15*
8:15 AM	**0**	**0**	**9**	**4**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**3**	**1**	*6*
8:30 AM	**1**	**1**	**5**	**5**	***12***	**0**	**0**	**0**	**1**	***1***	**2**	**1**	**6**	**6**	***15***
8:45 AM	1	1	5	4	*11*	0	0	0	1	*1*	6	2	4	3	*15*
Count Total	2	5	41	50	*98*	1	0	2	4	*7*	21	8	18	26	*73*
Peak Hour	**1**	**3**	**24**	**23**	***51***	**1**	**0**	**0**	**3**	***4***	**14**	**5**	**11**	**15**	***45***

Project Manager: (415) 310-6469

project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Park Pl				Santa Inez Ave				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	0	0	0	0	0	4	0	0	0	7	0	11	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	4	1	0	1	7	0	13	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	0	1	7	0	12	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**4**	**0**	**0**	**0**	**7**	**0**	**13**	49
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**0**	**13**	51
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**4**	**0**	**13**	51
8:30 AM	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**0**	**12**	**51**
8:45 AM	0	1	0	0	0	1	0	0	0	0	5	0	0	0	3	1	11	49
Count Total	0	2	0	0	0	2	0	3	0	0	40	1	0	2	47	1	98	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**24**	**0**	**0**	**0**	**23**	**0**	**51**	**0**

Two-Hour Count Summaries - Bikes

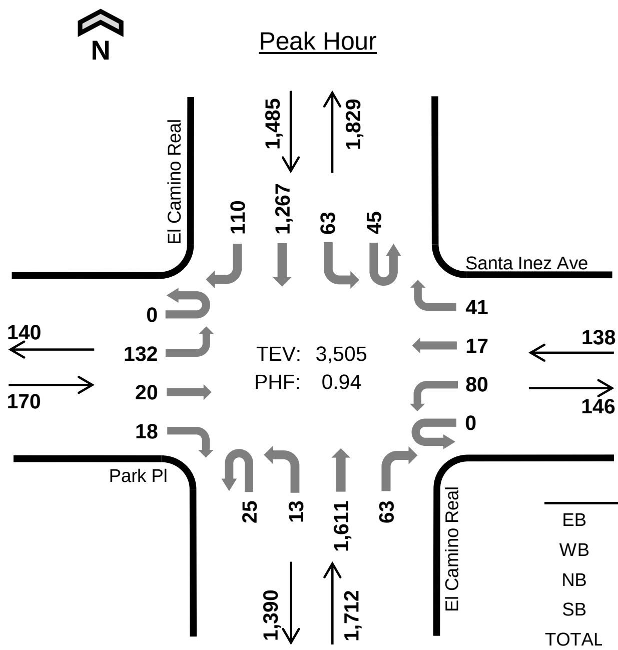
Interval Start	Park Pl			Santa Inez Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**4**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Count Total	0	1	0	0	0	0	0	2	0	0	3	1	7	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**4**	**0**

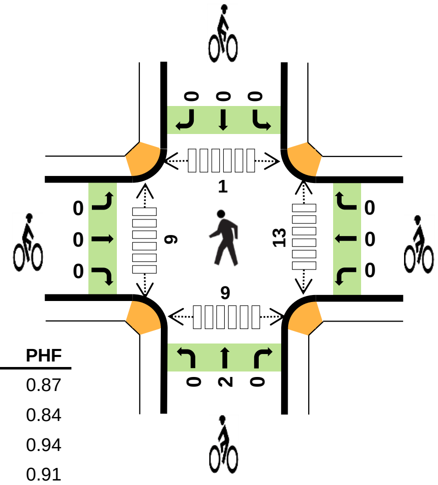
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Park Pl

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.87
WB	0.0%	0.84
NB	1.2%	0.94
SB	0.7%	0.91
TOTAL	0.9%	0.94

Two-Hour Count Summaries

Interval Start		Park Pl Eastbound UT	LT	TH	RT	Santa Inez Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	22	2	5	0	16	3	10	2	2	319	13	13	10	279	21	717	0
4:15 PM		0	24	8	6	0	16	1	11	2	5	290	15	4	2	247	21	652	0
4:30 PM		0	21	1	6	0	15	1	9	3	5	308	11	9	12	301	20	722	0
4:45 PM		0	34	5	6	0	29	2	10	5	2	335	11	11	12	307	25	794	2,885
5:00 PM		**0**	**25**	**2**	**2**	**0**	**22**	**4**	**9**	**5**	**1**	**372**	**13**	**10**	**15**	**323**	**27**	**830**	2,998
5:15 PM		**0**	**29**	**6**	**8**	**0**	**17**	**4**	**9**	**4**	**2**	**421**	**20**	**13**	**22**	**346**	**27**	**928**	3,274
5:30 PM		**0**	**41**	**6**	**2**	**0**	**24**	**4**	**13**	**7**	**6**	**426**	**18**	**8**	**12**	**289**	**27**	**883**	3,435
5:45 PM		**0**	**37**	**6**	**6**	**0**	**17**	**5**	**10**	**9**	**4**	**392**	**12**	**14**	**14**	**309**	**29**	**864**	**3,505**
Count Total		0	233	36	41	0	156	24	81	37	27	2,863	113	82	99	2,401	197	6,390	0
Peak Hour	**All**	**0**	**132**	**20**	**18**	**0**	**80**	**17**	**41**	**25**	**13**	**1,611**	**63**	**45**	**63**	**1,267**	**110**	**3,505**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**10**	**0**	**30**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0%**	**1%**	**0%**	**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 EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	4	6	*10*	0	0	0	0	*0*	4	1	3	7	*15*
4:15 PM	0	0	2	5	*7*	0	0	0	0	*0*	0	1	1	0	*2*
4:30 PM	0	0	6	5	*11*	0	0	0	1	*1*	13	4	2	3	*22*
4:45 PM	0	0	4	8	*12*	0	0	0	0	*0*	2	2	0	5	*9*
5:00 PM	**0**	**0**	**8**	**3**	***11***	**0**	**0**	**1**	**0**	***1***	**2**	**3**	**0**	**2**	*7*
5:15 PM	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**3**	**1**	**0**	**3**	*7*
5:30 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**1**	**0**	***1***	**3**	**2**	**0**	**3**	*8*
5:45 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**5**	**3**	**1**	**1**	***10***
Count Total	0	0	36	34	*70*	0	0	2	1	*3*	32	17	7	24	*80*
Peak Hour	**0**	**0**	**20**	**10**	***30***	**0**	**0**	**2**	**0**	***2***	**13**	**9**	**1**	**9**	***32***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Park Pl				Santa Inez Ave				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	4	0	0	0	6	0	10	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	7	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	1	4	0	11	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	12	40
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**3**	**0**	**11**	41
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**7**	41
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	36
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	**30**
Count Total	0	0	0	0	0	0	0	0	0	0	36	0	0	1	33	0	70	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**10**	**0**	**30**	**0**

Two-Hour Count Summaries - Bikes

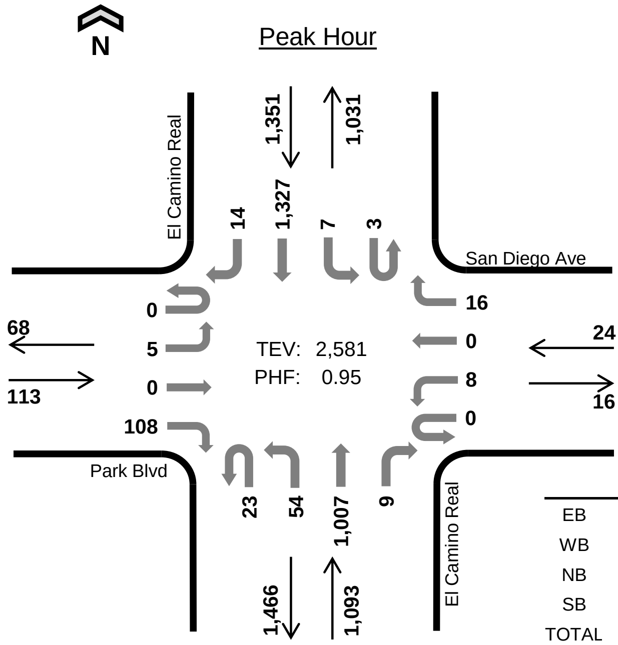
Interval Start	Park Pl			Santa Inez Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Count Total	0	0	0	0	0	0	0	2	0	0	1	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**

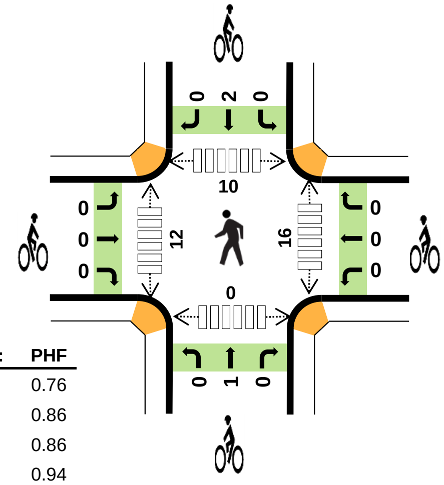
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Park Blvd

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	0.0%	0.76
WB	4.2%	0.86
NB	2.2%	0.86
SB	1.9%	0.94
TOTAL	2.0%	0.95

Two-Hour Count Summaries

Interval Start		Park Blvd Eastbound UT	LT	TH	RT	San Diego Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	0	0	19	0	1	0	1	2	3	153	2	1	2	209	2	395	0
7:15 AM		0	1	0	15	0	3	0	5	3	6	150	0	0	1	212	3	399	0
7:30 AM		**0**	**1**	**0**	**36**	**0**	**1**	**0**	**4**	**4**	**8**	**185**	**1**	**0**	**0**	**352**	**2**	**594**	0
7:45 AM		**0**	**2**	**0**	**25**	**0**	**3**	**0**	**4**	**3**	**12**	**242**	**2**	**0**	**1**	**354**	**3**	**651**	2,039
8:00 AM		**0**	**0**	**0**	**23**	**0**	**3**	**0**	**3**	**7**	**21**	**286**	**3**	**1**	**3**	**322**	**6**	**678**	2,322
8:15 AM		**0**	**2**	**0**	**24**	**0**	**1**	**0**	**5**	**9**	**13**	**294**	**3**	**2**	**3**	**299**	**3**	**658**	**2,581**
8:30 AM		0	3	0	25	0	0	0	0	8	4	240	3	1	1	280	6	571	2,558
8:45 AM		0	5	0	10	0	0	0	0	1	12	202	2	1	0	271	3	507	2,414
Count Total		0	14	0	177	0	12	0	22	37	79	1,752	16	6	11	2,299	28	4,453	0
Peak Hour	**All**	**0**	**5**	**0**	**108**	**0**	**8**	**0**	**16**	**23**	**54**	**1,007**	**9**	**3**	**7**	**1,327**	**14**	**2,581**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**22**	**0**	**0**	**1**	**25**	**0**	**51**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**6%**	**0%**	**4%**	**2%**	**0%**	**0%**	**14%**	**2%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	4	6	*10*	0	0	1	0	*1*	2	0	0	0	*2*
7:15 AM	0	0	4	8	*12*	0	0	0	0	*0*	2	0	1	0	*3*
7:30 AM	**0**	**1**	**3**	**7**	***11***	**0**	**0**	**1**	**0**	***1***	**5**	**3**	**6**	**0**	*14*
7:45 AM	**0**	**0**	**6**	**8**	***14***	**0**	**0**	**0**	**2**	***2***	**2**	**1**	**2**	**0**	*5*
8:00 AM	**0**	**0**	**6**	**6**	***12***	**0**	**0**	**0**	**0**	***0***	**5**	**5**	**1**	**0**	*11*
8:15 AM	**0**	**0**	**9**	**5**	***14***	**0**	**0**	**0**	**0**	***0***	**4**	**3**	**1**	**0**	***8***
8:30 AM	0	0	4	6	*10*	0	0	0	1	*1*	2	7	3	0	*12*
8:45 AM	0	0	8	4	*12*	0	0	0	0	*0*	4	4	4	0	*12*
Count Total	0	1	44	50	*95*	0	0	2	3	*5*	26	23	18	0	*67*
Peak Hour	**0**	**1**	**24**	**26**	***51***	**0**	**0**	**1**	**2**	***3***	**16**	**12**	**10**	**0**	***38***

Project Manager: (415) 310-6469

project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Park Blvd				San Diego Ave				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	0	0	0	0	0	4	0	0	0	6	0	10	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	12	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**7**	**0**	**11**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**0**	**8**	**0**	**14**	47
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**5**	**0**	**12**	49
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**0**	**5**	**0**	**14**	**51**
8:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	10	50
8:45 AM	0	0	0	0	0	0	0	0	0	1	7	0	0	0	4	0	12	48
Count Total	0	0	0	0	0	0	0	1	0	3	41	0	0	1	49	0	95	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**22**	**0**	**0**	**1**	**25**	**0**	**51**	**0**

Two-Hour Count Summaries - Bikes

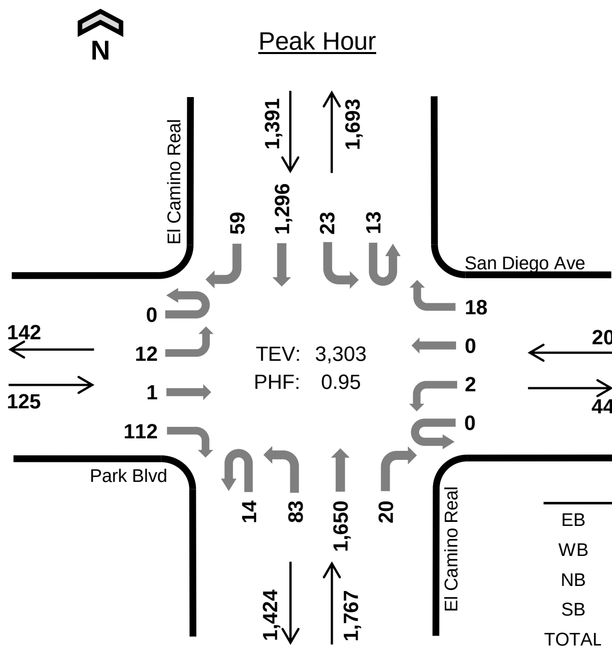
Interval Start	Park Blvd			San Diego Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	4
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	2	0	0	3	0	5	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**	**0**

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

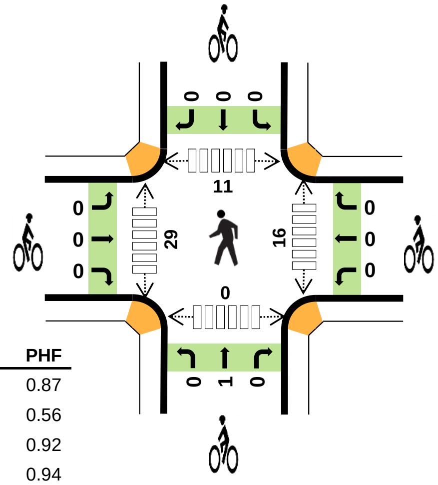
El Camino Real
Park Blvd

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour



	HV %:	PHF
EB	0.0%	0.87
WB	0.0%	0.56
NB	1.1%	0.92
SB	0.7%	0.94
TOTAL	0.9%	0.95



Two-Hour Count Summaries

Interval Start	Park Blvd Eastbound UT	LT	TH	RT	San Diego Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	1	0	0	19	0	0	1	2	2	19	332	2	1	2	293	6	680	0
4:15 PM	0	1	0	26	0	0	0	3	4	15	314	1	1	3	266	7	641	0
4:30 PM	1	1	0	24	0	0	0	1	3	15	325	3	2	2	311	8	696	0
4:45 PM	0	0	0	16	0	0	0	1	7	18	336	3	6	3	330	7	727	2,744
5:00 PM	**0**	**4**	**1**	**24**	**0**	**2**	**0**	**3**	**2**	**12**	**394**	**3**	**3**	**3**	**343**	**5**	**799**	2,863
5:15 PM	**0**	**4**	**0**	**32**	**0**	**0**	**0**	**4**	**4**	**19**	**432**	**2**	**3**	**4**	**346**	**18**	**868**	3,090
5:30 PM	**0**	**3**	**0**	**30**	**0**	**0**	**0**	**2**	**6**	**23**	**444**	**7**	**5**	**6**	**293**	**19**	**838**	3,232
5:45 PM	**0**	**1**	**0**	**26**	**0**	**0**	**0**	**9**	**2**	**29**	**380**	**8**	**2**	**10**	**314**	**17**	**798**	**3,303**
Count Total	2	14	1	197	0	2	1	25	30	150	2,957	29	23	33	2,496	87	6,047	0
Peak Hour All	**0**	**12**	**1**	**112**	**0**	**2**	**0**	**18**	**14**	**83**	**1,650**	**20**	**13**	**23**	**1,296**	**59**	**3,303**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**10**	**0**	**30**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**1%**	**0%**	**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 EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	4	6	*10*	0	0	0	0	*0*	0	8	2	0	*10*
4:15 PM	0	0	3	5	*8*	0	0	0	0	*0*	4	7	0	0	*11*
4:30 PM	0	0	6	4	*10*	0	0	0	0	*0*	4	19	8	0	*31*
4:45 PM	0	0	4	8	*12*	0	0	1	0	*1*	2	8	5	1	*16*
5:00 PM	**0**	**0**	**8**	**3**	***11***	**0**	**0**	**0**	**0**	***0***	**3**	**3**	**1**	**0**	*7*
5:15 PM	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**7**	**2**	**0**	*9*
5:30 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**1**	**0**	***1***	**3**	**7**	**4**	**0**	***14***
5:45 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**10**	**12**	**4**	**0**	***26***
Count Total	0	0	37	33	*70*	0	0	2	0	*2*	26	71	26	1	*124*
Peak Hour	**0**	**0**	**20**	**10**	***30***	**0**	**0**	**1**	**0**	***1***	**16**	**29**	**11**	**0**	***56***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Park Blvd Eastbound UT	LT	TH	RT	San Diego Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	10	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	2	0	0	0	5	0	8	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	12	40
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**3**	**0**	**11**	41
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**7**	40
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	36
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	**30**
Count Total	0	0	0	0	0	0	0	0	0	1	36	0	0	0	33	0	70	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**10**	**0**	**30**	**0**

Two-Hour Count Summaries - Bikes

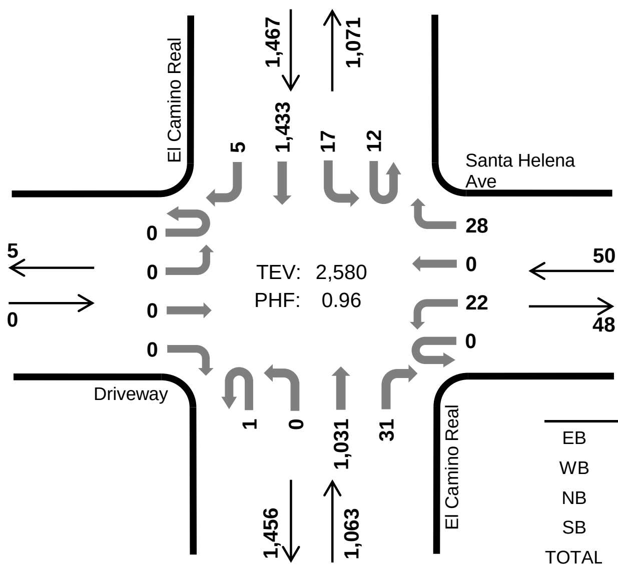
Interval Start	Park Blvd Eastbound LT	TH	RT	San Diego Ave Westbound LT	TH	RT	El Camino Real Northbound LT	TH	RT	El Camino Real Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
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	2	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

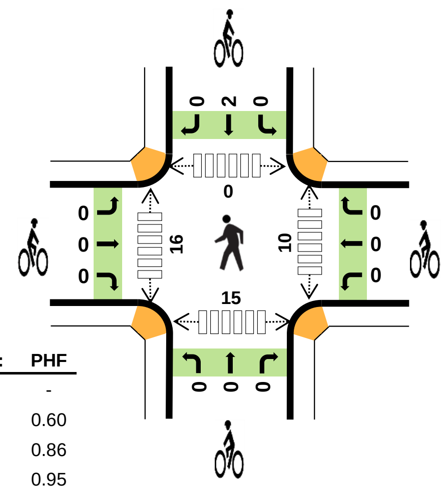
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Santa Helena Ave

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	-	-
WB	4.0%	0.60
NB	2.4%	0.86
SB	1.6%	0.95
TOTAL	2.0%	0.96

Two-Hour Count Summaries

Interval Start		Driveway Eastbound UT	LT	TH	RT	Santa Helena Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	0	0	0	0	4	0	0	0	0	151	2	1	1	218	1	378	0
7:15 AM		0	0	0	0	0	0	0	2	0	0	156	4	3	5	229	0	399	0
7:30 AM		**0**	**0**	**0**	**0**	**0**	**3**	**0**	**5**	**0**	**0**	**182**	**7**	**5**	**4**	**369**	**1**	**576**	0
7:45 AM		**0**	**0**	**0**	**0**	**0**	**5**	**0**	**5**	**1**	**0**	**257**	**7**	**4**	**3**	**381**	**0**	**663**	2,016
8:00 AM		**0**	**0**	**0**	**0**	**0**	**6**	**0**	**5**	**0**	**0**	**292**	**9**	**2**	**6**	**349**	**1**	**670**	2,308
8:15 AM		**0**	**0**	**0**	**0**	**0**	**8**	**0**	**13**	**0**	**0**	**300**	**8**	**1**	**4**	**334**	**3**	**671**	**2,580**
8:30 AM		0	0	0	0	0	3	0	1	0	0	251	4	1	3	302	0	565	2,569
8:45 AM		0	0	0	0	0	3	0	1	0	0	212	2	2	3	286	2	511	2,417
Count Total		0	0	0	0	0	32	0	32	1	0	1,801	43	19	29	2,468	8	4,433	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**22**	**0**	**28**	**1**	**0**	**1,031**	**31**	**12**	**17**	**1,433**	**5**	**2,580**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**24**	**1**	**0**	**0**	**24**	**0**	**51**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**7%**	**0%**	**-**	**2%**	**3%**	**0%**	**0%**	**2%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	3	4	*7*	0	0	1	0	*1*	2	0	0	1	*3*
7:15 AM	0	0	4	10	*14*	0	0	0	0	*0*	3	1	0	0	*4*
7:30 AM	**0**	**0**	**3**	**7**	***10***	**0**	**0**	**0**	**0**	***0***	**2**	**3**	**0**	**3**	*8*
7:45 AM	**0**	**0**	**6**	**6**	***12***	**0**	**0**	**0**	**2**	***2***	**1**	**3**	**0**	**4**	*8*
8:00 AM	**0**	**1**	**5**	**6**	***12***	**0**	**0**	**0**	**0**	***0***	**5**	**6**	**0**	**5**	*16*
8:15 AM	**0**	**1**	**11**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**2**	**4**	**0**	**3**	***9***
8:30 AM	0	0	4	6	*10*	0	0	0	1	*1*	2	1	0	0	*3*
8:45 AM	0	0	7	5	*12*	0	0	0	0	*0*	5	1	0	2	*8*
Count Total	0	2	43	49	*94*	0	0	1	3	*4*	22	19	0	18	*59*
Peak Hour	**0**	**2**	**25**	**24**	***51***	**0**	**0**	**0**	**2**	***2***	**10**	**16**	**0**	**15**	***41***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Santa Helena Ave				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	0	0	0	0	0	3	0	1	0	3	0	7	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	14	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**7**	**0**	**10**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**6**	**0**	**12**	43
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**6**	**0**	**12**	48
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	**1**	**0**	**0**	**5**	**0**	**17**	**51**
8:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	10	51
8:45 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	12	51
Count Total	0	0	0	0	0	0	0	2	0	0	42	1	1	0	48	0	94	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**24**	**1**	**0**	**0**	**24**	**0**	**51**	**0**

Two-Hour Count Summaries - Bikes

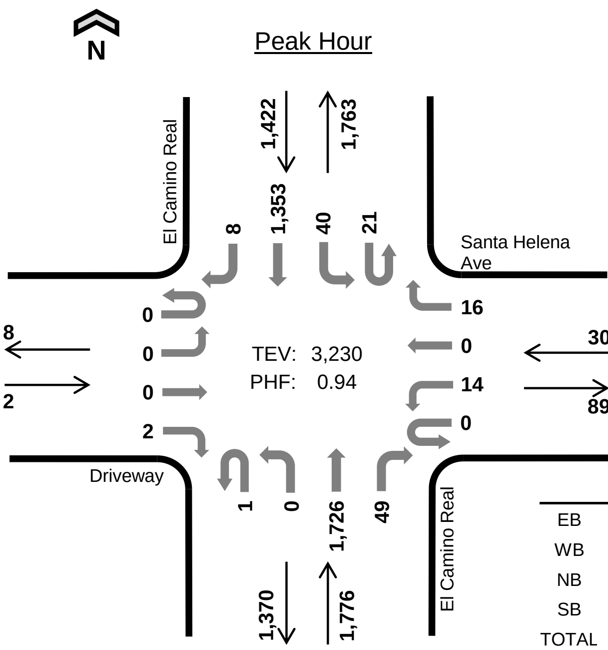
Interval Start	Driveway			Santa Helena Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	1	0	0	3	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**

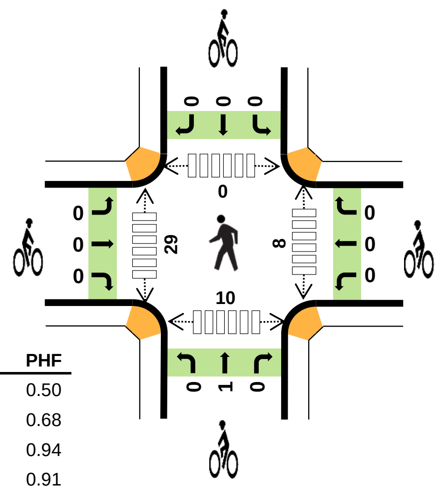
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Santa Helena Ave

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.50
WB	0.0%	0.68
NB	1.1%	0.94
SB	0.6%	0.91
TOTAL	0.9%	0.94

Two-Hour Count Summaries

Interval Start		Driveway				Santa Helena Ave				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	1	0	2	1	0	342	4	3	5	286	2	646	0
4:15 PM		0	0	0	0	0	2	0	4	0	0	323	10	4	5	278	2	628	0
4:30 PM		0	0	0	0	0	3	0	4	0	1	334	8	3	6	325	2	686	0
4:45 PM		0	0	0	0	0	1	0	4	0	0	354	7	5	7	355	5	738	2,698
5:00 PM		**0**	**0**	**0**	**0**	**0**	**4**	**0**	**4**	**1**	**0**	**406**	**7**	**2**	**9**	**350**	**4**	**787**	2,839
5:15 PM		**0**	**0**	**0**	**1**	**0**	**2**	**0**	**2**	**0**	**0**	**447**	**15**	**7**	**11**	**370**	**1**	**856**	3,067
5:30 PM		**0**	**0**	**0**	**1**	**0**	**3**	**0**	**8**	**0**	**0**	**460**	**13**	**7**	**11**	**295**	**3**	**801**	3,182
5:45 PM		**0**	**0**	**0**	**0**	**0**	**5**	**0**	**2**	**0**	**0**	**413**	**14**	**5**	**9**	**338**	**0**	**786**	**3,230**
Count Total		0	0	0	2	0	21	0	30	2	1	3,079	78	36	63	2,597	19	5,928	0
Peak Hour	**All**	**0**	**0**	**0**	**2**	**0**	**14**	**0**	**16**	**1**	**0**	**1,726**	**49**	**21**	**40**	**1,353**	**8**	**3,230**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**1**	**8**	**0**	**29**	**0**
	HV%	**-**	**-**	**-**	**0%**	**-**	**0%**	**-**	**0%**	**0%**	**-**	**1%**	**0%**	**0%**	**3%**	**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
4:00 PM	0	0	4	5	*9*	0	0	0	0	*0*	1	6	0	1	*8*
4:15 PM	0	0	4	6	*10*	0	0	0	0	*0*	6	11	0	2	*19*
4:30 PM	0	0	6	4	*10*	0	0	0	0	*0*	9	9	0	7	*25*
4:45 PM	0	1	3	9	*13*	0	0	1	0	*1*	3	3	0	1	*7*
5:00 PM	**0**	**0**	**8**	**3**	***11***	**0**	**0**	**0**	**0**	***0***	**2**	**7**	**0**	**3**	*12*
5:15 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**8**	**0**	**1**	*10*
5:30 PM	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**1**	**0**	***1***	**3**	**5**	**0**	**0**	*8*
5:45 PM	**0**	**0**	**4**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**2**	**9**	**0**	**6**	*17*
Count Total	0	1	37	33	*71*	0	0	2	0	*2*	27	58	0	21	*106*
Peak Hour	**0**	**0**	**20**	**9**	***29***	**0**	**0**	**1**	**0**	***1***	**8**	**29**	**0**	**10**	***47***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Santa Helena Ave				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	4	0	0	0	5	0	9	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	10	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	3	0	0	0	9	0	13	42
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**1**	**2**	**0**	**11**	44
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	40
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**7**	37
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**5**	**29**
Count Total	0	0	0	0	0	0	0	1	0	0	37	0	0	1	32	0	71	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**1**	**8**	**0**	**29**	**0**

Two-Hour Count Summaries - Bikes

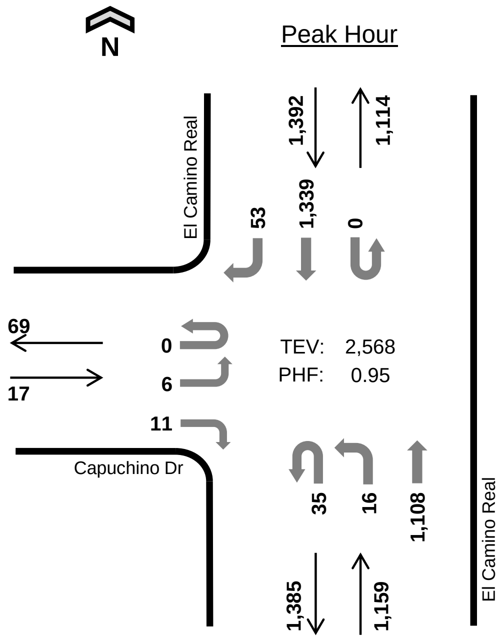
Interval Start	Driveway			Santa Helena Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
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	2	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

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

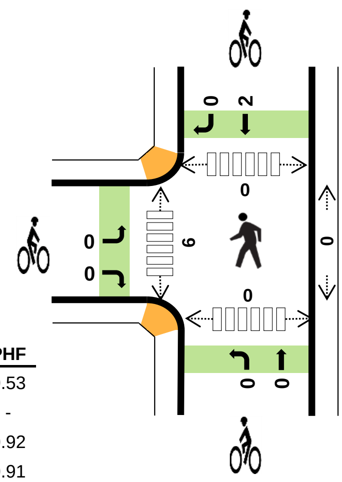
El Camino Real
Capuchino Dr

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour



	HV %:	PHF
EB	0.0%	0.53
WB	-	-
NB	2.0%	0.92
SB	1.7%	0.91
TOTAL	1.8%	0.95



Two-Hour Count Summaries

Interval Start		Capuchino Dr Eastbound UT	LT	TH	RT	n/a Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	0	0	3	0	0	0	0	4	0	154	0	0	0	222	0	383	0
7:15 AM		0	1	0	0	0	0	0	0	3	2	162	0	0	0	231	0	399	0
7:30 AM		0	2	0	1	0	0	0	0	2	1	185	0	0	0	367	8	566	0
7:45 AM		**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**11**	**5**	**265**	**0**	**0**	**0**	**349**	**33**	**665**	2,013
8:00 AM		**0**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**10**	**4**	**301**	**0**	**0**	**0**	**355**	**4**	**679**	2,309
8:15 AM		**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**3**	**293**	**0**	**0**	**0**	**334**	**8**	**648**	2,558
8:30 AM		**0**	**2**	**0**	**6**	**0**	**0**	**0**	**0**	**6**	**4**	**249**	**0**	**0**	**0**	**301**	**8**	**576**	**2,568**
8:45 AM		0	2	0	4	0	0	0	0	9	2	211	0	0	0	271	14	513	2,416
Count Total		0	11	0	19	0	0	0	0	53	21	1,820	0	0	0	2,430	75	4,429	0
Peak Hour	**All**	**0**	**6**	**0**	**11**	**0**	**0**	**0**	**0**	**35**	**16**	**1,108**	**0**	**0**	**0**	**1,339**	**53**	**2,568**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**0**	**0**	**23**	**0**	**46**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**0%**	**2%**	**-**	**-**	**-**	**2%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	1	0	3	3	*7*	0	0	1	0	*1*	0	2	0	0	*2*
7:15 AM	0	0	4	10	*14*	0	0	0	0	*0*	0	2	0	0	*2*
7:30 AM	1	0	3	7	*11*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	**0**	**0**	**4**	**6**	***10***	**0**	**0**	**0**	**2**	***2***	**0**	**1**	**0**	**0**	*1*
8:00 AM	**0**	**0**	**4**	**6**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
8:15 AM	**0**	**0**	**11**	**5**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**0**	*3*
8:30 AM	**0**	**0**	**4**	**6**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:45 AM	0	0	10	5	*15*	0	0	0	1	*1*	0	1	0	0	*1*
Count Total	2	0	43	48	*93*	0	0	1	3	*4*	0	11	0	0	*11*
Peak Hr	**0**	**0**	**23**	**23**	***46***	**0**	**0**	**0**	**2**	***2***	**0**	**6**	**0**	**0**	*6*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Capuchino Dr				n/a				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	1	0	0	0	0	0	0	3	0	0	0	3	0	7	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	14	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	3	0	0	0	7	0	11	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**10**	42
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**10**	45
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**5**	**0**	**16**	47
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**10**	**46**
8:45 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	5	0	15	51
Count Total	0	1	0	1	0	0	0	0	0	0	43	0	0	0	48	0	93	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**0**	**0**	**0**	**23**	**0**	**46**	**0**

Two-Hour Count Summaries - Bikes

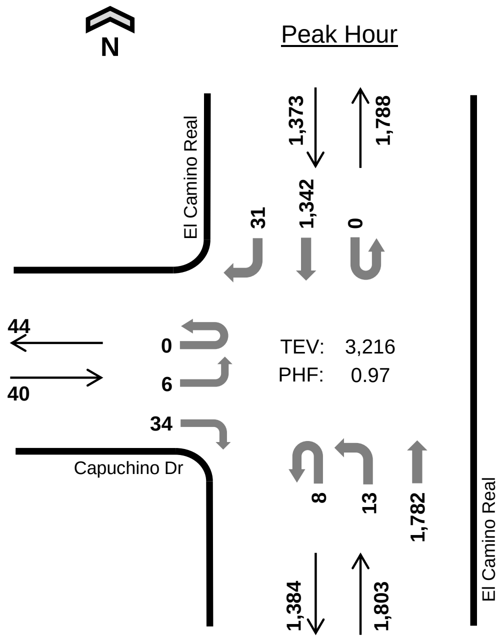
Interval Start	Capuchino Dr			n/a			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Count Total	0	0	0	0	0	0	0	1	0	0	3	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**

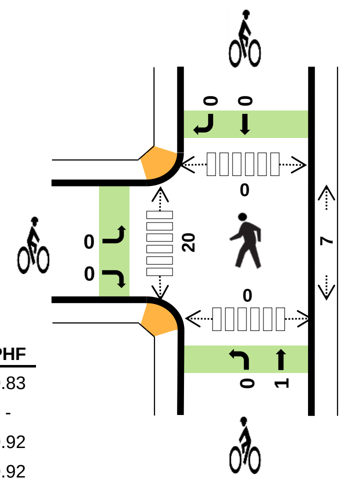
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Capuchino Dr

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.83
WB	-	-
NB	1.1%	0.92
SB	0.6%	0.92
TOTAL	0.8%	0.97

Two-Hour Count Summaries

Interval Start		Capuchino Dr				n/a				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	2	0	10	0	0	0	0	0	2	333	0	0	0	287	7	641	0
4:15 PM		0	3	0	5	0	0	0	0	2	3	346	0	0	0	276	9	644	0
4:30 PM		0	3	0	5	0	0	0	0	2	2	348	0	0	0	319	6	685	0
4:45 PM		0	3	0	7	0	0	0	0	1	0	350	0	0	0	348	7	716	2,686
5:00 PM		**0**	**2**	**0**	**6**	**0**	**0**	**0**	**0**	**1**	**4**	**428**	**0**	**0**	**0**	**342**	**10**	**793**	2,838
5:15 PM		**0**	**1**	**0**	**9**	**0**	**0**	**0**	**0**	**5**	**4**	**438**	**0**	**0**	**0**	**368**	**4**	**829**	3,023
5:30 PM		**0**	**1**	**0**	**9**	**0**	**0**	**0**	**0**	**2**	**4**	**482**	**0**	**0**	**0**	**294**	**8**	**800**	3,138
5:45 PM		**0**	**2**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**1**	**434**	**0**	**0**	**0**	**338**	**9**	**794**	**3,216**
Count Total		0	17	0	61	0	0	0	0	13	20	3,159	0	0	0	2,572	60	5,902	0
Peak Hour	**All**	**0**	**6**	**0**	**34**	**0**	**0**	**0**	**0**	**8**	**13**	**1,782**	**0**	**0**	**0**	**1,342**	**31**	**3,216**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**8**	**0**	**27**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**0%**	**0%**	**1%**	**-**	**-**	**-**	**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
4:00 PM	0	0	4	5	*9*	0	0	0	0	*0*	3	6	0	0	*9*
4:15 PM	0	0	5	6	*11*	0	0	0	0	*0*	8	8	0	0	*16*
4:30 PM	0	0	6	4	*10*	0	0	0	0	*0*	3	9	0	0	*12*
4:45 PM	0	0	3	9	*12*	0	0	1	0	*1*	1	2	0	0	*3*
5:00 PM	**0**	**0**	**8**	**2**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**0**	**0**	*5*
5:15 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**0**	**0**	*8*
5:30 PM	**0**	**0**	**3**	**2**	***5***	**0**	**0**	**1**	**0**	***1***	**1**	**4**	**0**	**0**	*5*
5:45 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**6**	**3**	**0**	**0**	***9***
Count Total	0	0	37	32	*69*	0	0	2	0	*2*	22	45	0	0	*67*
Peak Hr	**0**	**0**	**19**	**8**	***27***	**0**	**0**	**1**	**0**	***1***	**7**	**20**	**0**	**0**	***27***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Capuchino Dr				n/a				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	4	0	0	0	5	0	9	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6	0	11	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	9	0	12	42
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**2**	**0**	**10**	43
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	38
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**5**	33
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	**27**
Count Total	0	0	0	0	0	0	0	0	0	0	37	0	0	0	32	0	69	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**8**	**0**	**27**	**0**

Two-Hour Count Summaries - Bikes

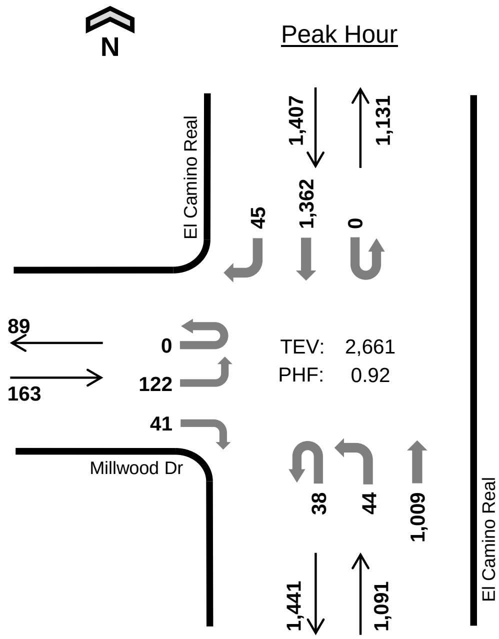
Interval Start	Capuchino Dr			n/a			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
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	2	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

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

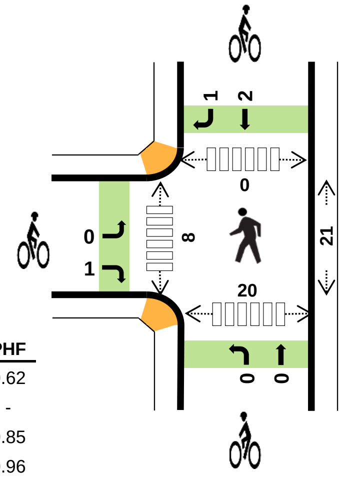
El Camino Real
Millwood Dr

Date: 09-12-2019
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%	0.62
WB	-	-
NB	2.7%	0.85
SB	1.6%	0.96
TOTAL	2.1%	0.92



Two-Hour Count Summaries

Interval Start		Millwood Dr Eastbound				n/a 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	10	0	6	0	0	0	0	9	6	142	0	0	0	224	3	400	0
7:15 AM		0	10	0	3	0	0	0	0	6	4	145	0	0	0	229	5	402	0
7:30 AM		0	27	0	7	0	0	0	0	8	12	162	0	0	0	346	5	567	0
7:45 AM		**0**	**49**	**0**	**17**	**0**	**0**	**0**	**0**	**14**	**13**	**219**	**0**	**0**	**0**	**355**	**11**	**678**	2,047
8:00 AM		**0**	**28**	**0**	**10**	**0**	**0**	**0**	**0**	**7**	**11**	**303**	**0**	**0**	**0**	**349**	**15**	**723**	2,370
8:15 AM		**0**	**27**	**0**	**7**	**0**	**0**	**0**	**0**	**12**	**13**	**259**	**0**	**0**	**0**	**342**	**10**	**670**	2,638
8:30 AM		**0**	**18**	**0**	**7**	**0**	**0**	**0**	**0**	**5**	**7**	**228**	**0**	**0**	**0**	**316**	**9**	**590**	**2,661**
8:45 AM		0	15	0	4	0	0	0	0	4	8	202	0	0	0	272	15	520	2,503
Count Total		0	184	0	61	0	0	0	0	65	74	1,660	0	0	0	2,433	73	4,550	0
Peak Hour	**All**	**0**	**122**	**0**	**41**	**0**	**0**	**0**	**0**	**38**	**44**	**1,009**	**0**	**0**	**0**	**1,362**	**45**	**2,661**	**0**
	HV	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**3**	**25**	**0**	**0**	**0**	**23**	**0**	**55**	**0**
	HV%	**-**	**0%**	**-**	**5%**	**-**	**-**	**-**	**-**	**5%**	**7%**	**2%**	**-**	**-**	**-**	**2%**	**0%**	**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	0	4	3	*7*	0	0	1	0	*1*	2	0	0	2	*4*
7:15 AM	0	0	7	10	*17*	0	0	0	0	*0*	5	0	0	6	*11*
7:30 AM	0	0	5	6	*11*	0	0	1	0	*1*	1	0	0	3	*4*
7:45 AM	**0**	**0**	**5**	**6**	***11***	**1**	**0**	**0**	**2**	***3***	**2**	**1**	**0**	**5**	*8*
8:00 AM	**0**	**0**	**7**	**6**	***13***	**0**	**0**	**0**	**0**	***0***	**10**	**3**	**0**	**9**	*22*
8:15 AM	**1**	**0**	**13**	**5**	***19***	**0**	**0**	**0**	**0**	***0***	**7**	**3**	**0**	**4**	*14*
8:30 AM	**1**	**0**	**5**	**6**	***12***	**0**	**0**	**0**	**1**	***1***	**2**	**1**	**0**	**2**	***5***
8:45 AM	1	0	8	5	*14*	0	0	0	0	*0*	0	2	0	3	*5*
Count Total	3	0	54	47	*104*	1	0	2	3	*6*	29	10	0	34	*73*
Peak Hr	**2**	**0**	**30**	**23**	***55***	**1**	**0**	**0**	**3**	***4***	**21**	**8**	**0**	**20**	***49***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millwood Dr				n/a				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	0	0	0	1	0	3	0	0	0	2	1	7	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	9	1	17	0
7:30 AM	0	0	0	0	0	0	0	0	2	0	3	0	0	0	6	0	11	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**6**	**0**	**11**	46
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**5**	**0**	**0**	**0**	**6**	**0**	**13**	52
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**11**	**0**	**0**	**0**	**5**	**0**	**19**	54
8:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**12**	**55**
8:45 AM	0	0	0	1	0	0	0	0	0	0	8	0	0	0	5	0	14	58
Count Total	0	0	0	3	0	0	0	0	5	3	46	0	0	0	45	2	104	0
Peak Hour	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**3**	**25**	**0**	**0**	**0**	**23**	**0**	**55**	**0**

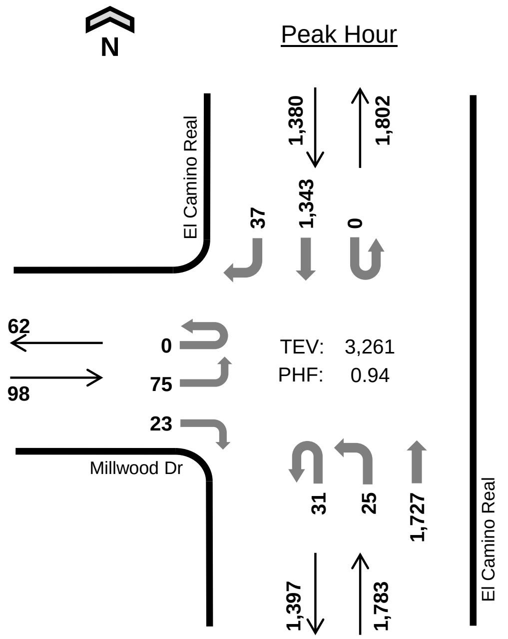
Two-Hour Count Summaries - Bikes

Interval Start	Millwood Dr			n/a			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	1	0	0	0	0	1	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	1	0	0	0	0	1	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**3**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**4**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	1	0	0	0	0	2	0	0	2	1	6	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**4**	**0**

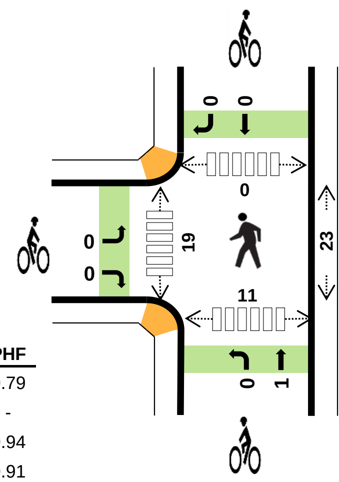
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Millwood Dr

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	4.1%	0.79
WB	-	-
NB	0.9%	0.94
SB	0.8%	0.91
TOTAL	1.0%	0.94



Two-Hour Count Summaries

Interval Start	Millwood Dr Eastbound UT	LT	TH	RT	n/a Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	15	0	5	0	0	0	0	2	12	310	0	1	0	287	12	644	0
4:15 PM	0	10	0	5	0	0	0	0	8	7	343	0	0	0	258	12	643	0
4:30 PM	0	22	0	3	0	0	0	0	3	12	322	0	0	0	323	6	691	0
4:45 PM	0	12	0	4	0	0	0	0	7	11	328	0	0	0	328	14	704	2,682
5:00 PM	**0**	**18**	**0**	**3**	**0**	**0**	**0**	**0**	**8**	**8**	**405**	**0**	**0**	**0**	**347**	**12**	**801**	2,839
5:15 PM	**0**	**19**	**0**	**1**	**0**	**0**	**0**	**0**	**7**	**7**	**458**	**0**	**0**	**0**	**369**	**9**	**870**	3,066
5:30 PM	**0**	**17**	**0**	**9**	**0**	**0**	**0**	**0**	**5**	**2**	**463**	**0**	**0**	**0**	**300**	**9**	**805**	3,180
5:45 PM	**0**	**21**	**0**	**10**	**0**	**0**	**0**	**0**	**11**	**8**	**401**	**0**	**0**	**0**	**327**	**7**	**785**	**3,261**
Count Total	0	134	0	40	0	0	0	0	51	67	3,030	0	1	0	2,539	81	5,943	0
Peak Hour All	**0**	**75**	**0**	**23**	**0**	**0**	**0**	**0**	**31**	**25**	**1,727**	**0**	**0**	**0**	**1,343**	**37**	**3,261**	**0**
Peak Hour HV	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**11**	**0**	**31**	**0**
Peak Hour HV%	**-**	**1%**	**-**	**13%**	**-**	**-**	**-**	**-**	**0%**	**0%**	**1%**	**-**	**-**	**-**	**1%**	**0%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	4	5	*9*	0	0	0	0	*0*	3	4	0	2	*9*
4:15 PM	0	0	6	5	*11*	0	0	0	0	*0*	6	9	0	1	*16*
4:30 PM	1	0	5	4	*10*	0	0	1	0	*1*	7	4	0	0	*11*
4:45 PM	0	0	3	7	*10*	0	0	0	0	*0*	3	6	0	0	*9*
5:00 PM	**0**	**0**	**7**	**4**	***11***	**0**	**0**	**0**	**0**	***0***	**2**	**3**	**0**	**0**	*5*
5:15 PM	**0**	**0**	**3**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**4**	**6**	**0**	**5**	*15*
5:30 PM	**3**	**0**	**3**	**2**	***8***	**0**	**0**	**1**	**0**	***1***	**6**	**6**	**0**	**4**	*16*
5:45 PM	**1**	**0**	**3**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**11**	**4**	**0**	**2**	*17*
Count Total	5	0	34	32	*71*	0	0	2	0	*2*	42	42	0	14	*98*
Peak Hr	**4**	**0**	**16**	**11**	***31***	**0**	**0**	**1**	**0**	***1***	**23**	**19**	**0**	**11**	***53***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millwood Dr				n/a				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	4	0	0	0	5	0	9	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	5	0	11	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	5	0	0	0	4	0	10	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	7	0	10	40
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**4**	**0**	**11**	42
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**6**	37
5:30 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**8**	35
5:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**6**	**31**
Count Total	0	2	0	3	0	0	0	0	0	0	34	0	0	0	32	0	71	0
Peak Hour	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**11**	**0**	**31**	**0**

Two-Hour Count Summaries - Bikes

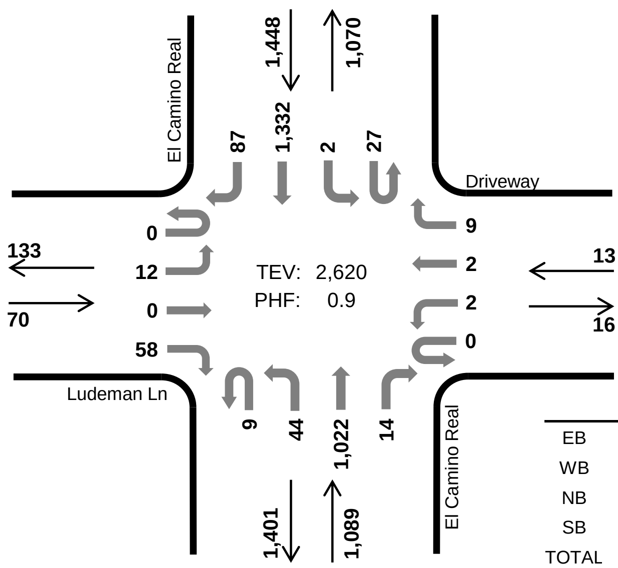
Interval Start	Millwood Dr			n/a			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**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	2	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

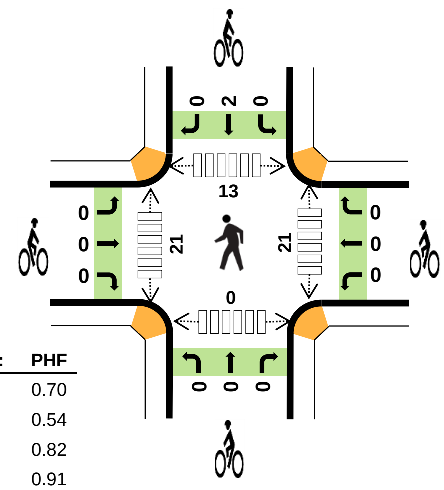
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Ludeman Ln

Peak Hour

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	1.4%	0.70
WB	0.0%	0.54
NB	3.0%	0.82
SB	1.9%	0.91
TOTAL	2.3%	0.90

Two-Hour Count Summaries

Interval Start		Ludeman Ln				Driveway				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	8	0	1	0	0	2	7	137	1	5	0	232	6	399	0
7:15 AM		0	1	0	3	0	0	0	1	2	7	146	0	3	0	235	7	405	0
7:30 AM		0	1	0	6	0	0	0	2	3	9	173	0	0	0	348	23	565	0
7:45 AM		**0**	**2**	**0**	**10**	**0**	**1**	**1**	**3**	**4**	**10**	**233**	**4**	**0**	**0**	**347**	**50**	**665**	2,034
8:00 AM		**0**	**2**	**0**	**20**	**0**	**1**	**0**	**5**	**1**	**17**	**308**	**5**	**4**	**1**	**336**	**28**	**728**	2,363
8:15 AM		**0**	**7**	**0**	**18**	**0**	**0**	**1**	**0**	**4**	**4**	**254**	**2**	**15**	**1**	**348**	**6**	**660**	2,618
8:30 AM		**0**	**1**	**0**	**10**	**0**	**0**	**0**	**1**	**0**	**13**	**227**	**3**	**8**	**0**	**301**	**3**	**567**	**2,620**
8:45 AM		0	1	0	7	0	0	0	1	2	8	210	1	5	1	272	15	523	2,478
Count Total		0	15	0	82	0	3	2	13	18	75	1,688	16	40	3	2,419	138	4,512	0
Peak Hour	**All**	**0**	**12**	**0**	**58**	**0**	**2**	**2**	**9**	**9**	**44**	**1,022**	**14**	**27**	**2**	**1,332**	**87**	**2,620**	**0**
	HV	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**31**	**0**	**0**	**0**	**26**	**1**	**61**	**0**
	HV%	**-**	**0%**	**-**	**2%**	**-**	**0%**	**0%**	**0%**	**0%**	**5%**	**3%**	**0%**	**0%**	**0%**	**2%**	**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	0	4	3	*7*	0	0	1	0	*1*	1	2	3	0	*6*
7:15 AM	0	0	6	10	*16*	0	0	0	0	*0*	8	4	5	1	*18*
7:30 AM	0	0	5	8	*13*	0	0	1	0	*1*	8	6	6	0	*20*
7:45 AM	**0**	**0**	**7**	**6**	***13***	**0**	**0**	**0**	**2**	***2***	**7**	**2**	**4**	**0**	*13*
8:00 AM	**0**	**0**	**8**	**7**	***15***	**0**	**0**	**0**	**0**	***0***	**4**	**6**	**4**	**0**	*14*
8:15 AM	**1**	**0**	**12**	**6**	***19***	**0**	**0**	**0**	**0**	***0***	**6**	**8**	**3**	**0**	*17*
8:30 AM	**0**	**0**	**6**	**8**	***14***	**0**	**0**	**0**	**0**	***0***	**4**	**5**	**2**	**0**	***11***
8:45 AM	0	0	7	6	*13*	0	0	0	0	*0*	5	1	1	0	*7*
Count Total	1	0	55	54	*110*	0	0	2	2	*4*	43	34	28	1	*106*
Peak Hour	**1**	**0**	**33**	**27**	***61***	**0**	**0**	**0**	**2**	***2***	**21**	**21**	**13**	**0**	***55***

Project Manager: (415) 310-6469

project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Ludeman Ln				Driveway				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	0	0	0	0	0	4	0	0	0	3	0	7	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	6	0	1	0	9	0	16	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	8	0	13	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	**0**	**0**	**0**	**6**	**0**	**13**	49
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**7**	**0**	**15**	57
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**6**	**0**	**19**	60
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**1**	**14**	**61**
8:45 AM	0	0	0	0	0	0	0	0	0	1	6	0	0	0	6	0	13	61
Count Total	0	0	0	1	0	0	0	0	0	3	52	0	1	0	52	1	110	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**31**	**0**	**0**	**0**	**26**	**1**	**61**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Ludeman Ln			Driveway			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	1	0	0	0	0	1	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	1	0	0	0	0	1	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	4
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
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	2	0	0	2	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**

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

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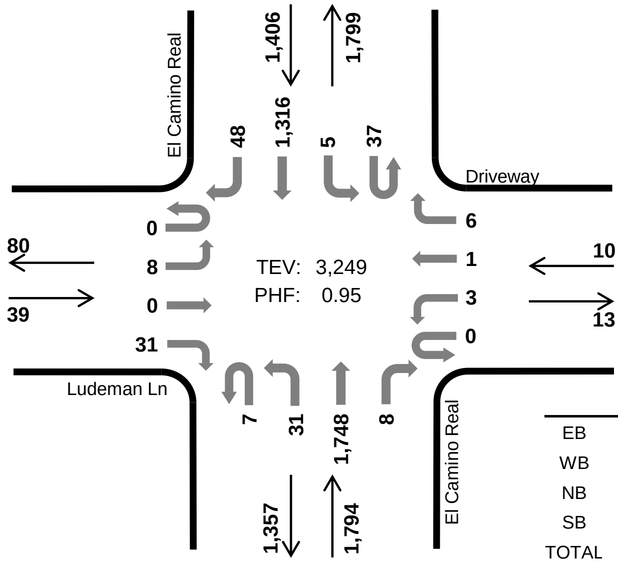
El Camino Real
Ludeman Ln

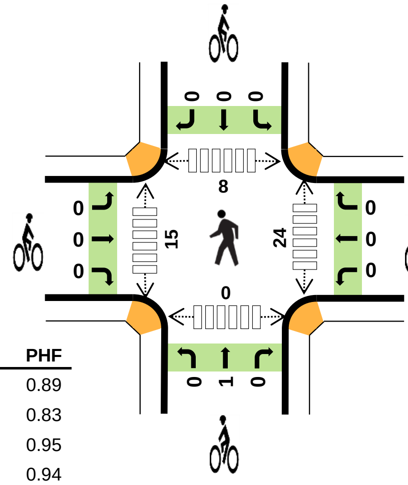
idax

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

N

Peak Hour





	HV %:	PHF
EB	0.0%	0.89
WB	0.0%	0.83
NB	0.9%	0.95
SB	0.9%	0.94
TOTAL	0.9%	0.95

Two-Hour Count Summaries

Interval Start		Ludeman Ln Eastbound UT	LT	TH	RT	Driveway Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	5	1	14	0	1	0	1	1	8	318	1	7	1	277	15	650	0
4:15 PM		0	1	0	8	0	1	0	1	0	16	346	2	7	3	259	14	658	0
4:30 PM		0	3	0	13	0	3	0	0	2	9	327	1	6	1	321	12	698	0
4:45 PM		0	2	0	11	0	1	0	3	1	6	352	1	6	0	316	9	708	2,714
5:00 PM		**0**	**1**	**0**	**7**	**0**	**0**	**0**	**1**	**2**	**7**	**419**	**2**	**10**	**3**	**339**	**14**	**805**	2,869
5:15 PM		**0**	**2**	**0**	**9**	**0**	**0**	**0**	**3**	**1**	**4**	**456**	**2**	**5**	**0**	**361**	**8**	**851**	3,062
5:30 PM		**0**	**3**	**0**	**8**	**0**	**1**	**0**	**2**	**2**	**7**	**464**	**1**	**11**	**0**	**287**	**12**	**798**	3,162
5:45 PM		**0**	**2**	**0**	**7**	**0**	**2**	**1**	**0**	**2**	**13**	**409**	**3**	**11**	**2**	**329**	**14**	**795**	**3,249**
Count Total		0	19	1	77	0	9	1	11	11	70	3,091	13	63	10	2,489	98	5,963	0
Peak Hour	**All**	**0**	**8**	**0**	**31**	**0**	**3**	**1**	**6**	**7**	**31**	**1,748**	**8**	**37**	**5**	**1,316**	**48**	**3,249**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**12**	**0**	**28**	**0**
	HV%	**-**	**0%**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0%**	**1%**	**0%**	**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 EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	1	0	2	5	*8*	0	0	0	0	*0*	5	7	0	0	*12*
4:15 PM	0	0	7	5	*12*	0	0	0	0	*0*	9	8	4	0	*21*
4:30 PM	0	0	4	4	*8*	0	0	1	0	*1*	11	3	2	0	*16*
4:45 PM	0	0	3	7	*10*	0	0	1	0	*1*	6	5	2	0	*13*
5:00 PM	**0**	**0**	**7**	**4**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**2**	**0**	*5*
5:15 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**7**	**5**	**2**	**0**	*14*
5:30 PM	**0**	**0**	**2**	**4**	***6***	**0**	**0**	**1**	**0**	***1***	**9**	**5**	**3**	**0**	*17*
5:45 PM	**0**	**0**	**3**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**7**	**3**	**1**	**0**	***11***
Count Total	1	0	32	33	*66*	0	0	3	0	*3*	55	38	16	0	*109*
Peak Hour	**0**	**0**	**16**	**12**	***28***	**0**	**0**	**1**	**0**	***1***	**24**	**15**	**8**	**0**	***47***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Ludeman Ln				Driveway				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	1	0	0	0	0	0	0	0	2	0	0	0	4	1	8	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	12	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	8	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	7	0	10	38
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**4**	**0**	**11**	41
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	35
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**0**	**6**	33
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**5**	**28**
Count Total	0	0	1	0	0	0	0	0	0	0	32	0	0	0	32	1	66	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**12**	**0**	**28**	**0**

Two-Hour Count Summaries - Bikes

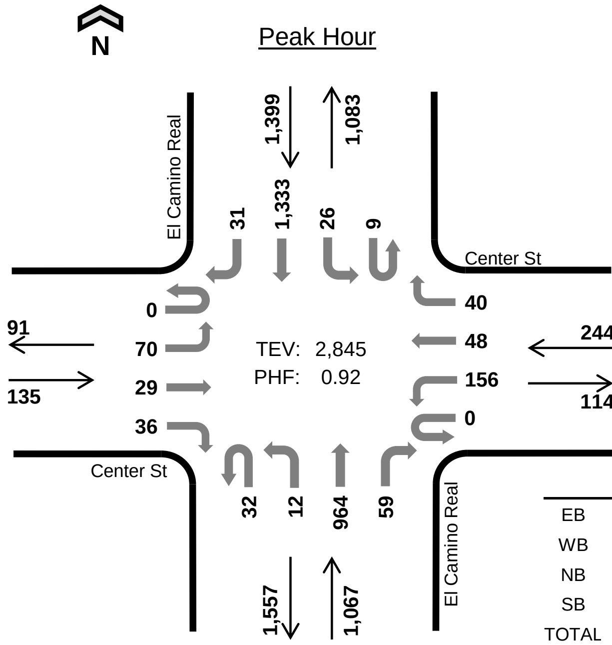
Interval Start	Ludeman Ln			Driveway			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	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**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
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	3	0	0	0	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

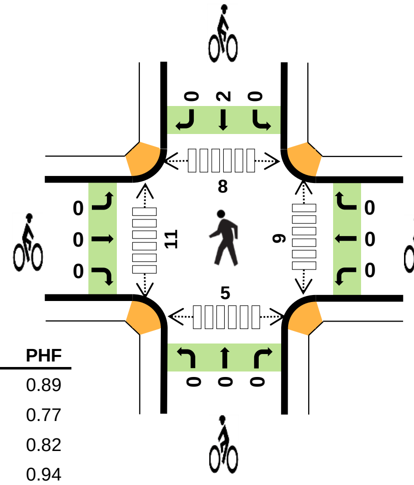
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Center St

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	0.7%	0.89
WB	1.2%	0.77
NB	2.6%	0.82
SB	1.9%	0.94
TOTAL	2.1%	0.92

Two-Hour Count Summaries

Interval Start		Center St				Center St				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	10	3	9	0	33	2	5	11	3	127	11	2	3	249	1	469	0
7:15 AM		0	5	0	12	0	24	2	5	12	1	138	6	0	5	222	1	433	0
7:30 AM		0	6	5	20	0	29	10	14	12	3	157	9	0	5	348	3	621	0
7:45 AM		**0**	**22**	**4**	**12**	**0**	**51**	**18**	**10**	**5**	**4**	**214**	**14**	**0**	**4**	**359**	**9**	**726**	2,249
8:00 AM		**0**	**20**	**8**	**4**	**0**	**34**	**15**	**10**	**7**	**2**	**292**	**23**	**4**	**6**	**340**	**4**	**769**	2,549
8:15 AM		**0**	**12**	**12**	**9**	**0**	**40**	**12**	**10**	**9**	**4**	**238**	**11**	**2**	**6**	**318**	**10**	**693**	2,809
8:30 AM		**0**	**16**	**5**	**11**	**0**	**31**	**3**	**10**	**11**	**2**	**220**	**11**	**3**	**10**	**316**	**8**	**657**	**2,845**
8:45 AM		0	12	2	8	0	23	3	2	7	0	200	15	3	5	260	7	547	2,666
Count Total		0	103	39	85	0	265	65	66	74	19	1,586	100	14	44	2,412	43	4,915	0
Peak Hour	**All**	**0**	**70**	**29**	**36**	**0**	**156**	**48**	**40**	**32**	**12**	**964**	**59**	**9**	**26**	**1,333**	**31**	**2,845**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**28**	**0**	**0**	**0**	**27**	**0**	**59**	**0**
	HV%	**-**	**1%**	**0%**	**0%**	**-**	**1%**	**0%**	**5%**	**0%**	**0%**	**3%**	**0%**	**0%**	**0%**	**2%**	**0%**	**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	0	4	5	*9*	0	0	0	0	*0*	3	0	1	5	*9*
7:15 AM	1	0	8	8	*17*	0	0	0	0	*0*	3	2	1	2	*8*
7:30 AM	0	2	6	7	*15*	0	0	0	0	*0*	3	6	2	3	*14*
7:45 AM	**0**	**0**	**6**	**6**	***12***	**0**	**0**	**0**	**2**	***2***	**3**	**2**	**3**	**0**	*8*
8:00 AM	**0**	**2**	**5**	**7**	***14***	**0**	**0**	**0**	**0**	***0***	**2**	**1**	**3**	**0**	*6*
8:15 AM	**1**	**0**	**12**	**7**	***20***	**0**	**0**	**0**	**0**	***0***	**3**	**5**	**0**	**1**	*9*
8:30 AM	**0**	**1**	**5**	**7**	***13***	**0**	**0**	**0**	**0**	***0***	**1**	**3**	**2**	**4**	***10***
8:45 AM	1	1	7	5	*14*	0	0	0	0	*0*	0	1	2	2	*5*
Count Total	3	6	53	52	*114*	0	0	0	2	*2*	18	20	14	17	*69*
Peak Hour	**1**	**3**	**28**	**27**	***59***	**0**	**0**	**0**	**2**	***2***	**9**	**11**	**8**	**5**	***33***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Center St Eastbound UT	LT	TH	RT	Center St Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	9	0
7:15 AM	0	0	0	1	0	0	0	0	1	0	7	0	0	0	8	0	17	0
7:30 AM	0	0	0	0	0	0	1	1	0	0	5	1	0	0	7	0	15	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**6**	**0**	**12**	53
8:00 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**0**	**14**	58
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**7**	**0**	**20**	61
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**0**	**13**	**59**
8:45 AM	0	1	0	0	0	1	0	0	0	0	7	0	0	0	5	0	14	61
Count Total	0	2	0	1	0	2	1	3	1	0	51	1	0	0	52	0	114	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**28**	**0**	**0**	**0**	**27**	**0**	**59**	**0**

Two-Hour Count Summaries - Bikes

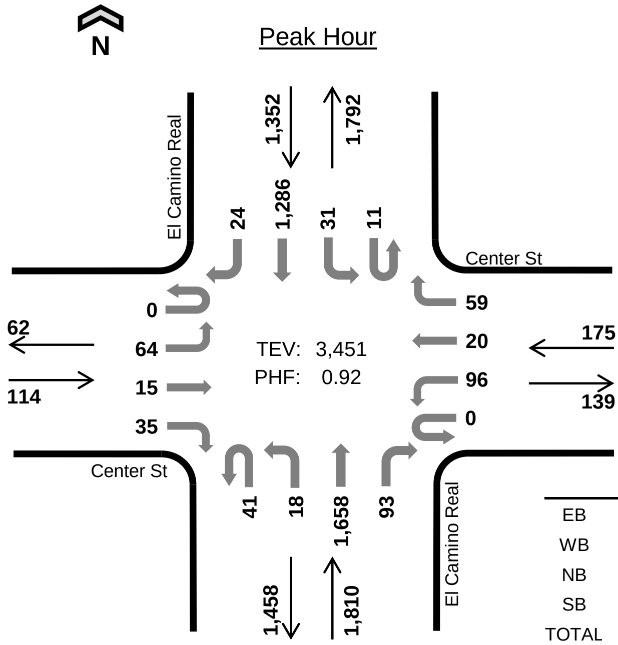
Interval Start	Center St Eastbound LT	TH	RT	Center St Westbound LT	TH	RT	El Camino Real Northbound LT	TH	RT	El Camino Real Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**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

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

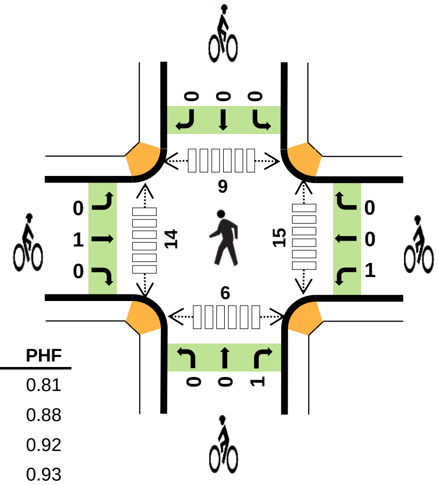
El Camino Real
Center St

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour



	HV %:	PHF
EB	0.0%	0.81
WB	1.7%	0.88
NB	1.2%	0.92
SB	1.0%	0.93
TOTAL	1.1%	0.92



Two-Hour Count Summaries

Interval Start	Center St Eastbound UT	LT	TH	RT	Center St Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	11	1	6	0	21	4	6	18	2	308	19	1	5	270	8	680	0
4:15 PM	0	10	2	9	0	20	6	16	15	8	331	20	2	6	268	6	719	0
4:30 PM	0	10	2	9	0	25	2	11	12	3	316	18	3	4	316	13	744	0
4:45 PM	0	13	5	13	0	32	5	9	18	6	336	18	6	10	297	6	774	2,917
5:00 PM	**0**	**15**	**5**	**8**	**0**	**18**	**5**	**17**	**12**	**6**	**397**	**26**	**2**	**11**	**330**	**5**	**857**	3,094
5:15 PM	**0**	**13**	**2**	**12**	**0**	**33**	**5**	**12**	**9**	**5**	**452**	**28**	**3**	**5**	**353**	**3**	**935**	3,310
5:30 PM	**0**	**23**	**7**	**5**	**0**	**28**	**4**	**16**	**12**	**2**	**428**	**24**	**4**	**8**	**299**	**7**	**867**	3,433
5:45 PM	**0**	**13**	**1**	**10**	**0**	**17**	**6**	**14**	**8**	**5**	**381**	**15**	**2**	**7**	**304**	**9**	**792**	**3,451**
Count Total	0	108	25	72	0	194	37	101	104	37	2,949	168	23	56	2,437	57	6,368	0
Peak Hour All	**0**	**64**	**15**	**35**	**0**	**96**	**20**	**59**	**41**	**18**	**1,658**	**93**	**11**	**31**	**1,286**	**24**	**3,451**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**19**	**1**	**0**	**0**	**13**	**0**	**37**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**3%**	**0%**	**0%**	**2%**	**0%**	**1%**	**1%**	**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 EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	1	3	4	*8*	0	0	0	0	*0*	2	9	5	1	*17*
4:15 PM	0	1	6	6	*13*	0	0	0	0	*0*	7	9	8	3	*27*
4:30 PM	0	3	4	4	*11*	0	1	1	0	*2*	3	2	4	3	*12*
4:45 PM	1	0	3	6	*10*	0	1	1	0	*2*	7	5	0	4	*16*
5:00 PM	**0**	**1**	**10**	**5**	***16***	**0**	**0**	**1**	**0**	***1***	**2**	**2**	**4**	**0**	*8*
5:15 PM	**0**	**1**	**5**	**2**	***8***	**0**	**0**	**0**	**0**	***0***	**3**	**4**	**4**	**1**	*12*
5:30 PM	**0**	**1**	**2**	**4**	***7***	**1**	**1**	**0**	**0**	***2***	**6**	**3**	**1**	**2**	*12*
5:45 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**4**	**5**	**0**	**3**	***12***
Count Total	1	8	37	33	*79*	1	3	3	0	*7*	34	39	26	17	*116*
Peak Hour	**0**	**3**	**21**	**13**	***37***	**1**	**1**	**1**	**0**	***3***	**15**	**14**	**9**	**6**	***44***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Center St				Center St				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	1	0	0	0	0	3	0	0	0	4	0	8	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	5	1	0	0	6	0	13	0
4:30 PM	0	0	0	0	0	2	0	1	0	0	4	0	0	0	4	0	11	0
4:45 PM	0	1	0	0	0	0	0	0	1	0	2	0	0	0	6	0	10	42
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**8**	**1**	**0**	**0**	**5**	**0**	**16**	50
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**8**	45
5:30 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**0**	**7**	41
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	**37**
Count Total	0	1	0	0	0	6	0	2	2	0	33	2	0	0	33	0	79	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**19**	**1**	**0**	**0**	**13**	**0**	**37**	**0**

Two-Hour Count Summaries - Bikes

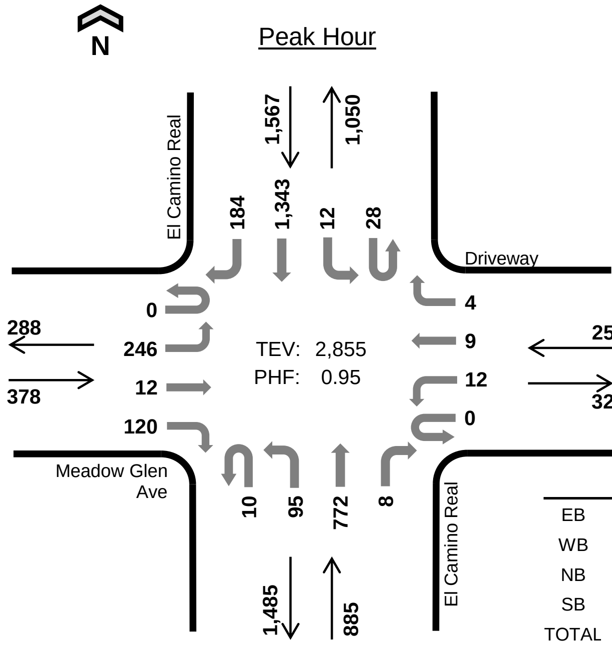
Interval Start	Center St			Center St			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	2	0
4:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	2	4
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:30 PM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	5
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Count Total	0	1	0	1	2	0	0	2	1	0	0	0	7	0
Peak Hour	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**

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

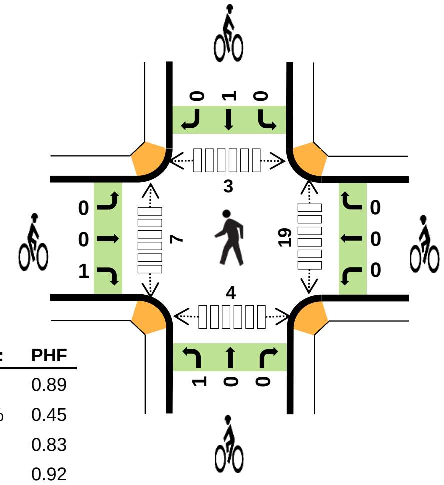
El Camino Real
Meadow Glen Ave

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour



	HV %:	PHF
EB	0.8%	0.89
WB	16.0%	0.45
NB	3.7%	0.83
SB	2.0%	0.92
TOTAL	2.5%	0.95



Two-Hour Count Summaries

Interval Start	Meadow Glen Ave Eastbound UT	LT	TH	RT	Driveway Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	31	2	23	0	3	0	1	1	13	110	6	1	8	261	24	484	0
7:15 AM	0	17	1	16	0	8	2	1	3	18	135	3	6	1	238	26	475	0
7:30 AM	0	27	3	35	0	11	2	0	0	19	154	1	4	2	369	25	652	0
7:45 AM	**0**	**48**	**1**	**26**	**0**	**10**	**3**	**1**	**1**	**24**	**171**	**0**	**8**	**4**	**370**	**45**	**712**	2,323
8:00 AM	**0**	**61**	**4**	**34**	**0**	**0**	**1**	**1**	**3**	**18**	**245**	**2**	**6**	**2**	**321**	**51**	**749**	2,588
8:15 AM	**0**	**66**	**4**	**36**	**0**	**1**	**3**	**2**	**2**	**21**	**182**	**4**	**6**	**3**	**326**	**50**	**706**	2,819
8:30 AM	**0**	**71**	**3**	**24**	**0**	**1**	**2**	**0**	**4**	**32**	**174**	**2**	**8**	**3**	**326**	**38**	**688**	**2,855**
8:45 AM	0	39	0	26	0	4	3	2	3	22	164	0	6	3	249	43	564	2,707
Count Total	0	360	18	220	0	38	16	8	17	167	1,335	18	45	26	2,460	302	5,030	0
Peak Hour All	**0**	**246**	**12**	**120**	**0**	**12**	**9**	**4**	**10**	**95**	**772**	**8**	**28**	**12**	**1,343**	**184**	**2,855**	**0**
Peak Hour HV	**0**	**0**	**0**	**3**	**0**	**3**	**1**	**0**	**1**	**5**	**27**	**0**	**2**	**0**	**29**	**1**	**72**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**3%**	**-**	**25%**	**11%**	**0%**	**10%**	**5%**	**3%**	**0%**	**7%**	**0%**	**2%**	**1%**	**3%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	5	4	*9*	0	0	0	0	*0*	2	0	2	1	*5*
7:15 AM	1	1	8	10	*20*	0	0	0	0	*0*	3	1	0	2	*6*
7:30 AM	0	3	6	7	*16*	0	0	0	0	*0*	3	3	1	2	*9*
7:45 AM	**0**	**4**	**8**	**9**	***21***	**0**	**0**	**1**	**1**	***2***	**4**	**2**	**0**	**0**	*6*
8:00 AM	**0**	**0**	**8**	**9**	***17***	**0**	**0**	**0**	**0**	***0***	**11**	**1**	**0**	**1**	*13*
8:15 AM	**1**	**0**	**12**	**7**	***20***	**1**	**0**	**0**	**0**	***1***	**3**	**3**	**1**	**1**	*8*
8:30 AM	**2**	**0**	**5**	**7**	***14***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**2**	**2**	***6***
8:45 AM	1	2	7	6	*16*	0	0	0	0	*0*	2	0	3	1	*6*
Count Total	5	10	59	59	*133*	1	0	1	1	*3*	29	11	9	10	*59*
Peak Hour	**3**	**4**	**33**	**32**	***72***	**1**	**0**	**1**	**1**	***3***	**19**	**7**	**3**	**4**	***33***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Meadow Glen Ave				Driveway				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	0	0	0	0	0	5	0	0	0	2	2	9	0
7:15 AM	0	0	0	1	0	0	1	0	0	1	6	1	0	1	9	0	20	0
7:30 AM	0	0	0	0	0	2	1	0	0	0	6	0	0	1	6	0	16	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**9**	**0**	**21**	66
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**6**	**0**	**1**	**0**	**8**	**0**	**17**	74
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**2**	**9**	**0**	**1**	**0**	**6**	**0**	**20**	74
8:30 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**6**	**1**	**14**	**72**
8:45 AM	0	0	0	1	0	1	1	0	0	0	7	0	0	0	6	0	16	67
Count Total	0	0	0	5	0	6	4	0	1	6	51	1	2	2	52	3	133	0
Peak Hour	**0**	**0**	**0**	**3**	**0**	**3**	**1**	**0**	**1**	**5**	**27**	**0**	**2**	**0**	**29**	**1**	**72**	**0**

Two-Hour Count Summaries - Bikes

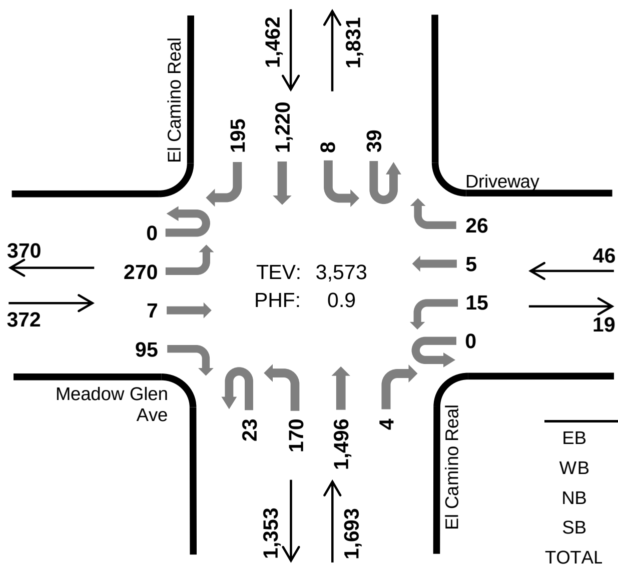
Interval Start	Meadow Glen Ave			Driveway			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	1	0	0	0	1	0	0	0	1	0	3	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**3**	**0**

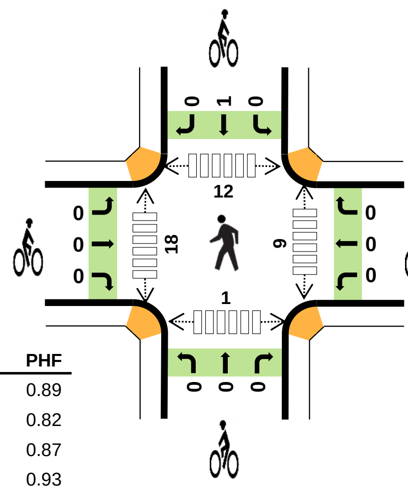
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Meadow Glen Ave

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.8%	0.89
WB	0.0%	0.82
NB	1.2%	0.87
SB	1.2%	0.93
TOTAL	1.2%	0.90

Two-Hour Count Summaries

Interval Start		Meadow Glen Ave Eastbound				Driveway 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	50	3	30	0	6	3	3	15	42	275	3	4	2	263	42	741	0
4:15 PM		0	66	1	27	0	4	2	4	8	37	312	2	4	3	259	34	763	0
4:30 PM		0	45	4	23	0	5	1	8	8	47	299	2	7	2	297	52	800	0
4:45 PM		0	56	3	19	0	8	3	8	10	48	289	3	9	4	290	57	807	3,111
5:00 PM		**0**	**61**	**1**	**20**	**0**	**0**	**2**	**8**	**6**	**42**	**364**	**0**	**6**	**2**	**312**	**53**	**877**	3,247
5:15 PM		**0**	**67**	**4**	**27**	**0**	**6**	**1**	**4**	**12**	**43**	**430**	**1**	**9**	**3**	**330**	**51**	**988**	3,472
5:30 PM		**0**	**79**	**0**	**26**	**0**	**3**	**2**	**6**	**2**	**46**	**373**	**1**	**14**	**2**	**275**	**43**	**872**	3,544
5:45 PM		**0**	**63**	**2**	**22**	**0**	**6**	**0**	**8**	**3**	**39**	**329**	**2**	**10**	**1**	**303**	**48**	**836**	**3,573**
Count Total		0	487	18	194	0	38	14	49	64	344	2,671	14	63	19	2,329	380	6,684	0
Peak Hour	**All**	**0**	**270**	**7**	**95**	**0**	**15**	**5**	**26**	**23**	**170**	**1,496**	**4**	**39**	**8**	**1,220**	**195**	**3,573**	**0**
	HV	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**20**	**0**	**1**	**0**	**14**	**3**	**42**	**0**
	HV%	**-**	**0%**	**0%**	**2%**	**-**	**0%**	**0%**	**0%**	**0%**	**1%**	**1%**	**0%**	**3%**	**0%**	**1%**	**2%**	**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	1	0	3	4	*8*	0	0	0	0	*0*	6	4	0	0	*10*
4:15 PM	0	0	6	8	*14*	0	0	0	0	*0*	3	3	2	2	*10*
4:30 PM	0	0	4	5	*9*	0	0	0	0	*0*	3	0	3	2	*8*
4:45 PM	1	0	3	5	*9*	0	0	0	0	*0*	3	4	1	2	*10*
5:00 PM	**1**	**0**	**8**	**7**	***16***	**0**	**0**	**0**	**0**	***0***	**3**	**5**	**4**	**1**	*13*
5:15 PM	**0**	**0**	**6**	**5**	***11***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**0**	*3*
5:30 PM	**2**	**0**	**3**	**4**	***9***	**0**	**0**	**0**	**1**	***1***	**4**	**8**	**5**	**0**	*17*
5:45 PM	**0**	**0**	**4**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**5**	**2**	**0**	*7*
Count Total	5	0	37	40	*82*	0	0	0	1	*1*	24	29	18	7	*78*
Peak Hour	**3**	**0**	**21**	**18**	***42***	**0**	**0**	**0**	**1**	***1***	**9**	**18**	**12**	**1**	***40***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Meadow Glen Ave				Driveway				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	1	0	0	0	0	0	0	0	0	3	0	0	0	4	0	8	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0	14	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	9	0
4:45 PM	0	1	0	0	0	0	0	0	0	1	2	0	0	0	5	0	9	40
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**0**	**1**	**0**	**5**	**1**	**16**	48
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**3**	**2**	**11**	45
5:30 PM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**9**	45
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**6**	**42**
Count Total	0	3	0	2	0	0	0	0	0	2	35	0	1	0	36	3	82	0
Peak Hour	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**20**	**0**	**1**	**0**	**14**	**3**	**42**	**0**

Two-Hour Count Summaries - Bikes

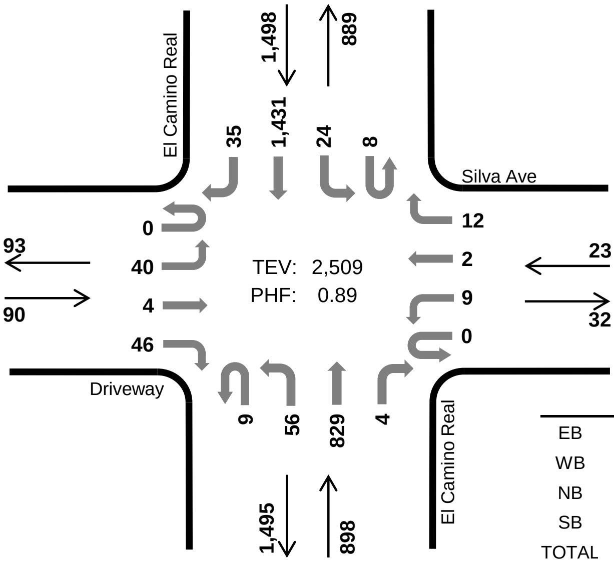
Interval Start	Meadow Glen Ave			Driveway			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	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.

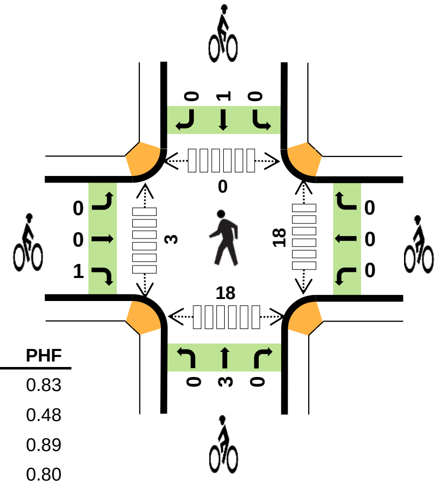
El Camino Real
Silva Ave

Date: 09-17-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour



	HV %:	PHF
EB	0.0%	0.83
WB	4.3%	0.48
NB	3.5%	0.89
SB	1.9%	0.80
TOTAL	2.4%	0.89



Two-Hour Count Summaries

Interval Start		Driveway Eastbound UT	LT	TH	RT	Silva Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	7	0	13	0	2	2	5	0	5	130	1	1	1	219	5	391	0
7:15 AM		0	5	0	8	0	1	0	1	0	10	129	0	2	2	282	12	452	0
7:30 AM		0	7	1	7	0	5	2	1	1	8	140	0	0	0	351	11	534	0
7:45 AM		**0**	**12**	**2**	**4**	**0**	**3**	**0**	**2**	**2**	**6**	**206**	**0**	**1**	**5**	**455**	**6**	**704**	2,081
8:00 AM		**0**	**6**	**0**	**15**	**0**	**4**	**1**	**7**	**2**	**14**	**233**	**4**	**0**	**3**	**331**	**15**	**635**	2,325
8:15 AM		**0**	**13**	**1**	**10**	**0**	**0**	**1**	**1**	**2**	**15**	**198**	**0**	**0**	**11**	**361**	**6**	**619**	2,492
8:30 AM		**0**	**9**	**1**	**17**	**0**	**2**	**0**	**2**	**3**	**21**	**192**	**0**	**7**	**5**	**284**	**8**	**551**	**2,509**
8:45 AM		0	9	2	18	0	3	2	2	0	17	187	4	1	1	283	15	544	2,349
Count Total		0	68	7	92	0	20	8	21	10	96	1,415	9	12	28	2,566	78	4,430	0
Peak Hour	**All**	**0**	**40**	**4**	**46**	**0**	**9**	**2**	**12**	**9**	**56**	**829**	**4**	**8**	**24**	**1,431**	**35**	**2,509**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**31**	**0**	**0**	**1**	**27**	**0**	**60**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**8%**	**0%**	**0%**	**4%**	**0%**	**0%**	**4%**	**2%**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	1	3	8	*12*	0	0	0	1	*1*	9	0	0	5	*14*
7:15 AM	1	0	8	15	*24*	0	0	0	1	*1*	4	0	0	4	*8*
7:30 AM	1	0	8	7	*16*	0	0	0	0	*0*	8	4	0	5	*17*
7:45 AM	**0**	**0**	**8**	**6**	***14***	**0**	**0**	**1**	**0**	***1***	**3**	**0**	**0**	**4**	*7*
8:00 AM	**0**	**0**	**6**	**7**	***13***	**0**	**0**	**1**	**0**	***1***	**4**	**0**	**0**	**6**	*10*
8:15 AM	**0**	**0**	**6**	**6**	***12***	**1**	**0**	**0**	**1**	***2***	**5**	**1**	**0**	**3**	*9*
8:30 AM	**0**	**1**	**11**	**9**	***21***	**0**	**0**	**1**	**0**	***1***	**6**	**2**	**0**	**5**	*13*
8:45 AM	0	0	5	7	*12*	0	0	0	0	*0*	3	1	0	6	*10*
Count Total	2	2	55	65	*124*	1	0	3	3	*7*	42	8	0	38	*88*
Peak Hour	**0**	**1**	**31**	**28**	***60***	**1**	**0**	**3**	**1**	***5***	**18**	**3**	**0**	**18**	***39***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway Eastbound UT	LT	TH	RT	Silva Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	1	0	0	2	1	0	0	8	0	12	0
7:15 AM	0	0	0	1	0	0	0	0	0	0	8	0	0	0	14	1	24	0
7:30 AM	0	0	1	0	0	0	0	0	0	0	8	0	0	0	7	0	16	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**6**	**0**	**14**	66
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**0**	**13**	67
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**5**	**0**	**12**	55
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**11**	**0**	**0**	**0**	**9**	**0**	**21**	**60**
8:45 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	12	58
Count Total	0	0	1	1	0	0	0	2	0	0	54	1	0	1	63	1	124	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**31**	**0**	**0**	**1**	**27**	**0**	**60**	**0**

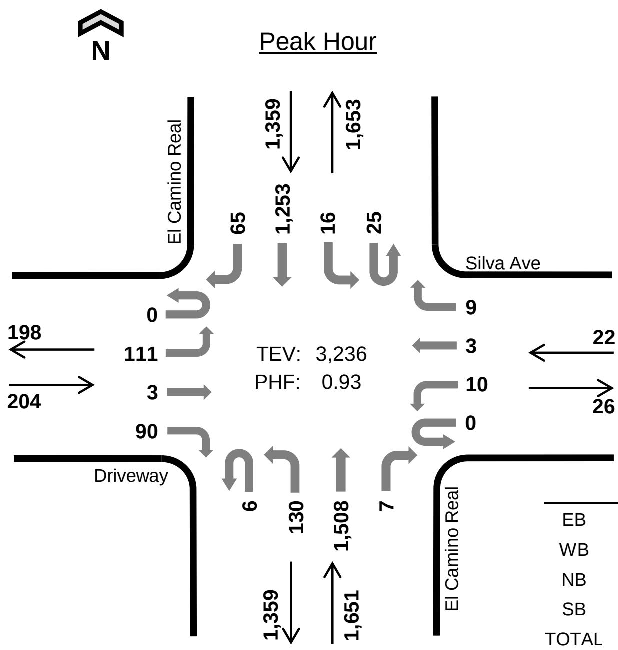
Two-Hour Count Summaries - Bikes

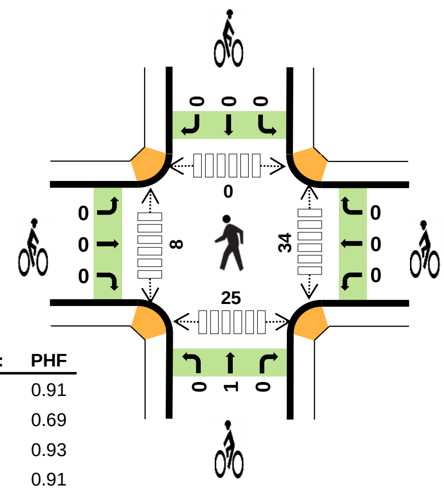
Interval Start	Driveway Eastbound LT	TH	RT	Silva Ave Westbound LT	TH	RT	El Camino Real Northbound LT	TH	RT	El Camino Real Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	3
8:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	4
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**5**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	1	0	0	0	0	3	0	0	3	0	7	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**5**	**0**

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

El Camino Real
Silva Ave

Date: 09-17-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	0.0%	0.91
WB	0.0%	0.69
NB	0.7%	0.93
SB	1.0%	0.91
TOTAL	0.8%	0.93

Two-Hour Count Summaries

Interval Start	Driveway Eastbound UT	LT	TH	RT	Silva Ave Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	21	2	18	0	3	2	4	3	36	277	5	3	5	269	12	660	0
4:15 PM	0	21	1	31	0	4	0	1	2	33	323	1	3	7	285	17	729	0
4:30 PM	0	16	2	25	0	3	0	4	3	31	313	2	7	3	300	11	720	0
4:45 PM	0	27	0	25	0	3	4	3	4	38	335	4	4	2	290	16	755	2,864
5:00 PM	**0**	**28**	**1**	**18**	**0**	**4**	**1**	**3**	**3**	**27**	**385**	**2**	**4**	**4**	**305**	**15**	**800**	3,004
5:15 PM	**0**	**33**	**0**	**23**	**0**	**3**	**0**	**4**	**1**	**29**	**415**	**1**	**8**	**6**	**327**	**19**	**869**	3,144
5:30 PM	**0**	**27**	**1**	**21**	**0**	**2**	**1**	**1**	**0**	**33**	**390**	**4**	**2**	**3**	**283**	**10**	**778**	3,202
5:45 PM	**0**	**23**	**1**	**28**	**0**	**1**	**1**	**1**	**2**	**41**	**318**	**0**	**11**	**3**	**338**	**21**	**789**	**3,236**
Count Total	0	196	8	189	0	23	9	21	18	268	2,756	19	42	33	2,397	121	6,100	0
Peak Hour All	**0**	**111**	**3**	**90**	**0**	**10**	**3**	**9**	**6**	**130**	**1,508**	**7**	**25**	**16**	**1,253**	**65**	**3,236**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**14**	**0**	**26**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0%**	**1%**	**0%**	**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 EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	6	11	*17*	0	0	0	0	*0*	9	1	0	20	*30*
4:15 PM	0	0	8	5	*13*	0	0	0	1	*1*	14	4	0	15	*33*
4:30 PM	0	1	4	5	*10*	0	0	1	1	*2*	16	8	0	14	*38*
4:45 PM	0	0	3	3	*6*	0	0	0	0	*0*	12	6	0	14	*32*
5:00 PM	**0**	**0**	**3**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**13**	**3**	**0**	**6**	*22*
5:15 PM	**0**	**0**	**3**	**4**	***7***	**0**	**0**	**1**	**0**	***1***	**8**	**2**	**0**	**8**	*18*
5:30 PM	**0**	**0**	**4**	**4**	***8***	**0**	**0**	**0**	**0**	***0***	**6**	**3**	**0**	**9**	*18*
5:45 PM	**0**	**0**	**2**	**3**	***5***	**0**	**0**	**0**	**0**	***0***	**7**	**0**	**0**	**2**	***9***
Count Total	0	1	33	38	*72*	0	0	2	2	*4*	85	27	0	88	*200*
Peak Hour	**0**	**0**	**12**	**14**	***26***	**0**	**0**	**1**	**0**	***1***	**34**	**8**	**0**	**25**	***67***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Silva Ave				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	1	5	0	0	0	10	1	17	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	7	0	0	0	5	0	13	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	4	0	0	0	5	0	10	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6	46
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**6**	35
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**7**	29
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**8**	27
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**5**	**26**
Count Total	0	0	0	0	0	0	0	1	0	2	31	0	0	0	37	1	72	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**14**	**0**	**26**	**0**

Two-Hour Count Summaries - Bikes

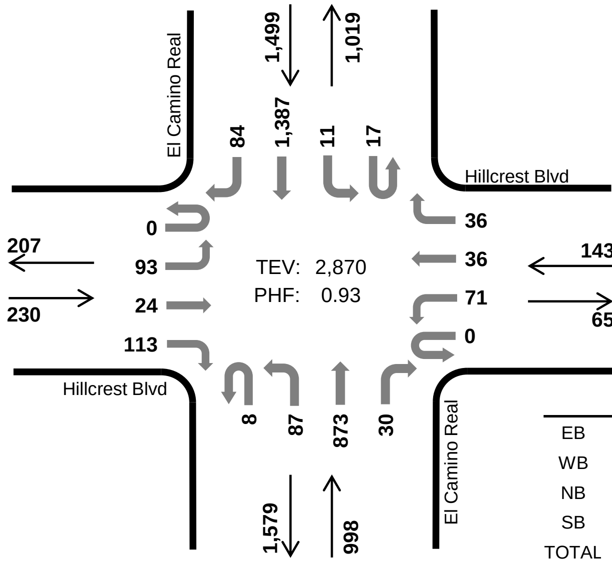
Interval Start	Driveway			Silva Ave			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	3
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	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	2	0	0	2	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

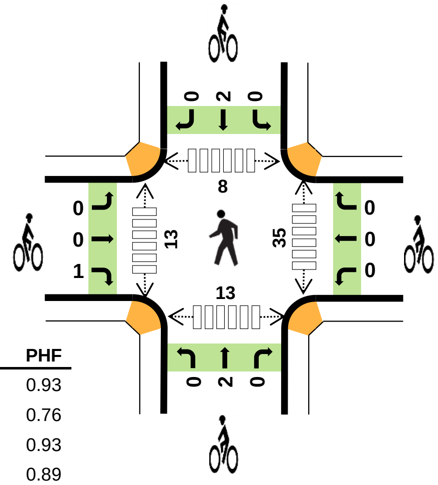
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Hillcrest Blvd

Date:	09-12-2019
Count Period:	7:00 AM to 9:00 AM
Peak Hour:	7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	2.2%	0.93
WB	0.0%	0.76
NB	4.0%	0.93
SB	2.1%	0.89
TOTAL	2.7%	0.93

Two-Hour Count Summaries

Interval Start		Hillcrest Blvd Eastbound				Hillcrest Blvd 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	10	2	20	0	15	4	4	0	17	147	10	1	4	264	10	508	0
7:15 AM		0	11	2	17	0	12	5	4	1	11	155	9	2	3	276	14	522	0
7:30 AM		0	7	0	16	0	25	6	4	1	21	176	2	1	1	393	17	670	0
7:45 AM		**0**	**26**	**6**	**28**	**0**	**26**	**12**	**9**	**1**	**18**	**224**	**5**	**4**	**1**	**393**	**22**	**775**	2,475
8:00 AM		**0**	**30**	**3**	**29**	**0**	**21**	**12**	**14**	**2**	**21**	**237**	**7**	**4**	**4**	**308**	**12**	**704**	2,671
8:15 AM		**0**	**19**	**11**	**26**	**0**	**9**	**8**	**5**	**5**	**20**	**213**	**9**	**6**	**2**	**367**	**20**	**720**	2,869
8:30 AM		**0**	**18**	**4**	**30**	**0**	**15**	**4**	**8**	**0**	**28**	**199**	**9**	**3**	**4**	**319**	**30**	**671**	**2,870**
8:45 AM		0	12	5	18	0	20	6	6	0	16	215	12	2	3	277	19	611	2,706
Count Total		0	133	33	184	0	143	57	54	10	152	1,566	63	23	22	2,597	144	5,181	0
Peak Hour	**All**	**0**	**93**	**24**	**113**	**0**	**71**	**36**	**36**	**8**	**87**	**873**	**30**	**17**	**11**	**1,387**	**84**	**2,870**	**0**
	HV	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**37**	**0**	**0**	**0**	**29**	**3**	**77**	**0**
	HV%	**-**	**3%**	**0%**	**2%**	**-**	**0%**	**0%**	**0%**	**0%**	**3%**	**4%**	**0%**	**0%**	**0%**	**2%**	**4%**	**3%**	**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	1	0	8	3	*12*	1	0	1	0	*2*	8	2	4	2	*16*
7:15 AM	0	2	7	13	*22*	0	0	1	0	*1*	8	8	1	8	*25*
7:30 AM	0	0	10	8	*18*	0	0	0	0	*0*	5	3	4	1	*13*
7:45 AM	**2**	**0**	**10**	**9**	***21***	**1**	**0**	**1**	**1**	***3***	**8**	**1**	**1**	**1**	*11*
8:00 AM	**1**	**0**	**8**	**7**	***16***	**0**	**0**	**0**	**0**	***0***	**9**	**5**	**1**	**10**	*25*
8:15 AM	**1**	**0**	**14**	**10**	***25***	**0**	**0**	**0**	**1**	***1***	**10**	**4**	**4**	**0**	*18*
8:30 AM	**1**	**0**	**8**	**6**	***15***	**0**	**0**	**1**	**0**	***1***	**8**	**3**	**2**	**2**	*15*
8:45 AM	1	1	13	5	*20*	0	0	0	0	*0*	3	0	0	1	*4*
Count Total	7	3	78	61	*149*	2	0	4	2	*8*	59	26	17	25	*127*
Peak Hour	**5**	**0**	**40**	**32**	***77***	**1**	**0**	**2**	**2**	***5***	**35**	**13**	**8**	**13**	***69***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hillcrest Blvd				Hillcrest Blvd				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	1	0	0	0	0	0	0	0	0	7	1	0	0	3	0	12	0
7:15 AM	0	0	0	0	0	1	0	1	0	0	7	0	0	0	12	1	22	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	9	0	0	0	8	0	18	0
7:45 AM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**9**	**0**	**21**	73
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**7**	**0**	**16**	77
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**12**	**0**	**0**	**0**	**7**	**3**	**25**	80
8:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**6**	**0**	**15**	**77**
8:45 AM	0	0	0	1	0	0	1	0	0	2	10	1	0	0	5	0	20	76
Count Total	0	4	0	3	0	1	1	1	0	6	70	2	0	0	57	4	149	0
Peak Hour	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	**37**	**0**	**0**	**0**	**29**	**3**	**77**	**0**

Two-Hour Count Summaries - Bikes

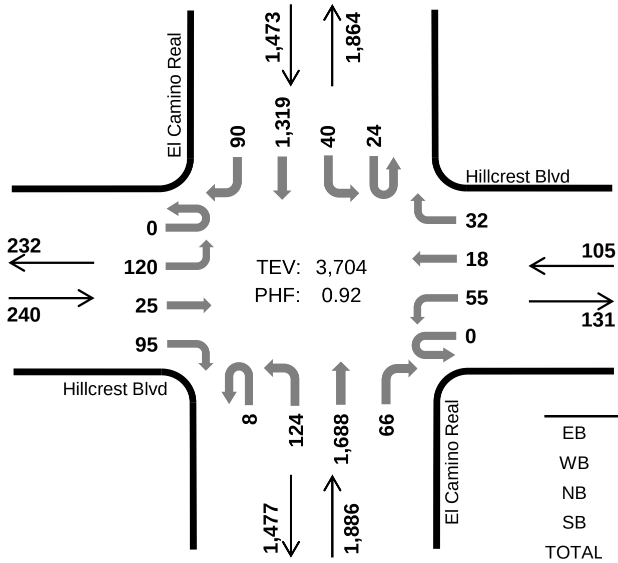
Interval Start	Hillcrest Blvd			Hillcrest Blvd			El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	6
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	4
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**5**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	1	1	0	0	0	0	4	0	0	2	0	8	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**5**	**0**

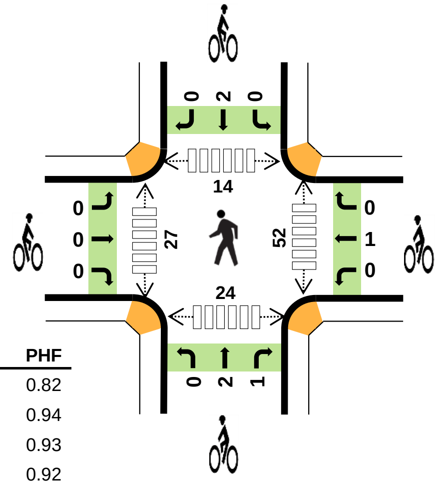
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Hillcrest Blvd

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour





	HV %:	PHF
EB	0.8%	0.82
WB	1.0%	0.94
NB	1.2%	0.93
SB	1.7%	0.92
TOTAL	1.3%	0.92

Two-Hour Count Summaries

Interval Start		Hillcrest Blvd Eastbound UT	LT	TH	RT	Hillcrest Blvd Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	28	4	31	0	13	5	8	1	28	349	12	4	7	310	18	818	0
4:15 PM		0	21	5	26	0	11	7	4	2	36	374	12	6	7	307	14	832	0
4:30 PM		0	28	5	24	0	12	4	12	3	24	342	14	2	10	303	24	807	0
4:45 PM		**0**	**23**	**10**	**16**	**0**	**12**	**4**	**9**	**4**	**28**	**375**	**9**	**7**	**8**	**337**	**20**	**862**	3,319
5:00 PM		**0**	**37**	**2**	**28**	**0**	**16**	**5**	**7**	**2**	**34**	**416**	**23**	**3**	**12**	**317**	**29**	**931**	3,432
5:15 PM		**0**	**37**	**5**	**31**	**0**	**12**	**4**	**10**	**1**	**36**	**452**	**20**	**5**	**12**	**363**	**20**	**1,008**	3,608
5:30 PM		**0**	**23**	**8**	**20**	**0**	**15**	**5**	**6**	**1**	**26**	**445**	**14**	**9**	**8**	**302**	**21**	**903**	**3,704**
5:45 PM		0	36	11	19	0	10	6	4	1	24	370	15	12	14	301	28	851	3,693
Count Total		0	233	50	195	0	101	40	60	15	236	3,123	119	48	78	2,540	174	7,012	0
Peak Hour	**All**	**0**	**120**	**25**	**95**	**0**	**55**	**18**	**32**	**8**	**124**	**1,688**	**66**	**24**	**40**	**1,319**	**90**	**3,704**	**0**
	HV	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**20**	**1**	**0**	**0**	**24**	**1**	**50**	**0**
	HV%	**-**	**0%**	**4%**	**1%**	**-**	**0%**	**0%**	**3%**	**0%**	**1%**	**1%**	**2%**	**0%**	**0%**	**2%**	**1%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	1	1	5	6	*13*	0	0	0	0	*0*	12	5	8	4	*29*
4:15 PM	1	0	5	6	*12*	0	1	0	0	*1*	9	8	5	1	*23*
4:30 PM	0	0	5	5	*10*	0	0	0	0	*0*	12	4	3	2	*21*
4:45 PM	**1**	**0**	**7**	**7**	***15***	**0**	**0**	**2**	**1**	***3***	**12**	**7**	**1**	**7**	*27*
5:00 PM	**0**	**1**	**6**	**6**	***13***	**0**	**1**	**0**	**0**	***1***	**10**	**5**	**4**	**5**	*24*
5:15 PM	**0**	**0**	**6**	**3**	***9***	**0**	**0**	**0**	**0**	***0***	**9**	**7**	**7**	**3**	*26*
5:30 PM	**1**	**0**	**3**	**9**	***13***	**0**	**0**	**1**	**1**	***2***	**21**	**8**	**2**	**9**	*40*
5:45 PM	0	0	4	2	*6*	0	0	4	0	*4*	15	11	2	2	*30*
Count Total	4	2	41	44	*91*	0	2	7	2	*11*	100	55	32	33	*220*
Peak Hour	**2**	**1**	**22**	**25**	***50***	**0**	**1**	**3**	**2**	***6***	**52**	**27**	**14**	**24**	***117***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hillcrest Blvd Eastbound UT	LT	TH	RT	Hillcrest Blvd Westbound UT	LT	TH	RT	El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	1	0	0	0	1	0	0	4	1	0	0	6	0	13	0
4:15 PM	0	1	0	0	0	0	0	0	0	1	3	1	0	0	6	0	12	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	10	0
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**7**	**0**	**15**	50
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**1**	**0**	**0**	**5**	**1**	**13**	50
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**3**	**0**	**9**	47
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**9**	**0**	**13**	**50**
5:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	6	41
Count Total	0	1	1	2	0	0	0	2	0	2	36	3	0	0	43	1	91	0
Peak Hour	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**20**	**1**	**0**	**0**	**24**	**1**	**50**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hillcrest Blvd Eastbound LT	TH	RT	Hillcrest Blvd Westbound LT	TH	RT	El Camino Real Northbound LT	TH	RT	El Camino Real Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	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**	**1**	**1**	**0**	**1**	**0**	**3**	4
5:00 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	**6**
5:45 PM	0	0	0	0	0	0	0	3	1	0	0	0	4	7
Count Total	0	0	0	0	2	0	0	5	2	0	2	0	11	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**1**	**0**	**2**	**0**	**6**	**0**

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

PM Peak-Hour Volume Count Worksheet

AUTO-CENSUS
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1625

Date: Thursday May 25
Counter: Patti and Huy
Intersection Name: Milbrae Driveways
Weather: Clear

	DWY 1		DWY 2		DWY 3 (Hotel Lot)		N/A		
Start Time	In	Out	In	Out	In	Out	In	Out	
7:00	0	0	0	0	0	0	0	0	
7:15	3	8	0	0	1	1	0	0	
7:30	4	14	0	0	4	4	0	0	
7:45	7	16	0	0	10	11	0	0	
8:00	14	20	0	0	14	15	0	0	
8:15	16	23	1	0	16	20	0	0	
8:30	18	24	1	0	17	20	0	0	
8:45	22	31	1	0	17	24	0	0	
9:00	27	34	1	0	18	25	0	0	
Peak Hour									Hourly Totals
7:00 - 8:00	14	20	0	0	14	15	0	0	63
7:15 - 8:15	13	15	1	0	15	19	0	0	63
7:30 - 8:30	14	10	1	0	13	16	0	0	54
7:45 - 8:45	15	15	1	0	7	13	0	0	51
8:00 - 9:00	13	14	1	0	4	10	0	0	42
Peak Volumes:	**14**	**20**	**0**	**0**	**14**	**15**	**0**	**0**	**63**

PM Peak-Hour Volume Count Worksheet

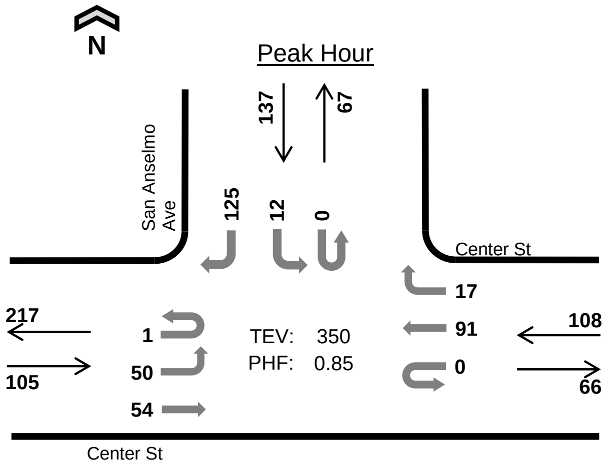
AUTO-CENSUS
Traffic Monitoring and Analysis
870 Castlewood Dr. #1
Los Gatos, CA 95032
Phone 408-826-9673 Fax 408-877-1625

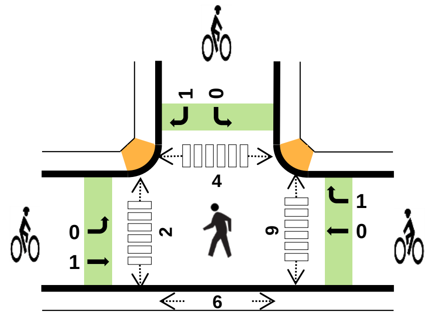
Date:	Thursday May 25
Counter:	Patti and Kilbee
Intersection Name:	Milbrae Driveways
Weather:	Clear

	DWY 1		DWY 2		DWY 3		N/A		
Start Time	In	Out	In	Out	In	Out	In	Out	
4:00	0	0	0	0	0	0	0	0	
4:15	9	7	0	0	4	3	0	0	
4:30	16	8	0	0	4	7	0	0	
4:45	23	9	0	0	5	9	0	0	
5:00	27	11	0	0	6	10	0	0	
5:15	31	12	2	1	6	12	0	0	
5:30	35	15	4	1	8	12	0	0	
5:45	48	15	5	1	8	18	0	0	
6:00	49	17	6	1	9	21	0	0	
Peak Hour									Hourly Totals
4:00 - 5:00	27	11	0	0	6	10	0	0	54
4:15 - 5:15	22	5	2	1	2	9	0	0	41
4:30 - 5:30	19	7	4	1	4	5	0	0	40
4:45 - 5:45	25	6	5	1	3	9	0	0	49
5:00 - 6:00	22	6	6	1	3	11	0	0	49
Peak Volumes:	**27**	**11**	**0**	**0**	**6**	**10**	**0**	**0**	**54**

San Anselmo Ave
Center St

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	1.0%	0.80
WB	0.0%	0.71
NB	-	-
SB	0.0%	0.74
TOTAL	0.3%	0.85

Two-Hour Count Summaries

Interval Start		Center St Eastbound UT	LT	TH	RT	Center St Westbound UT	LT	TH	RT	n/a Northbound UT	LT	TH	RT	San Anselmo Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	6	6	0	0	0	21	1	0	0	0	0	0	0	0	15	49	0
7:15 AM		1	3	4	0	0	0	20	1	0	0	0	0	0	1	0	13	43	0
7:30 AM		1	5	6	0	0	0	30	1	0	0	0	0	0	1	0	22	66	0
7:45 AM		**0**	**9**	**10**	**0**	**0**	**0**	**25**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**39**	**84**	242
8:00 AM		**0**	**22**	**11**	**0**	**0**	**0**	**25**	**13**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**31**	**103**	296
8:15 AM		**0**	**14**	**14**	**0**	**0**	**0**	**20**	**2**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**38**	**96**	349
8:30 AM		**1**	**5**	**19**	**0**	**0**	**0**	**21**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**17**	**67**	**350**
8:45 AM		0	6	14	0	0	0	15	0	0	0	0	0	0	1	0	8	44	310
Count Total		3	70	84	0	0	0	177	20	0	0	0	0	0	15	0	183	552	0
Peak Hour	**All**	**1**	**50**	**54**	**0**	**0**	**0**	**91**	**17**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**125**	**350**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**
	HV%	**0%**	**2%**	**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 EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	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	1	*1*	0	0	1	1	*2*
7:30 AM	2	0	0	1	*3*	0	0	0	3	*3*	0	0	1	4	*5*
7:45 AM	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**2**	**1**	*4*
8:00 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**1**	*1*
8:15 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	*2*
8:30 AM	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	***1***	**6**	**2**	**2**	**4**	***14***
8:45 AM	0	1	0	0	*1*	0	0	0	0	*0*	2	0	0	0	*2*
Count Total	3	1	0	1	*5*	1	1	0	5	*7*	11	2	6	11	*30*
Peak Hr	**1**	**0**	**0**	**0**	***1***	**1**	**1**	**0**	**1**	***3***	**9**	**2**	**4**	**6**	***21***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Center St				Center St				n/a				San Anselmo 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	0	0	0	0
7:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2
Count Total	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	1	5	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

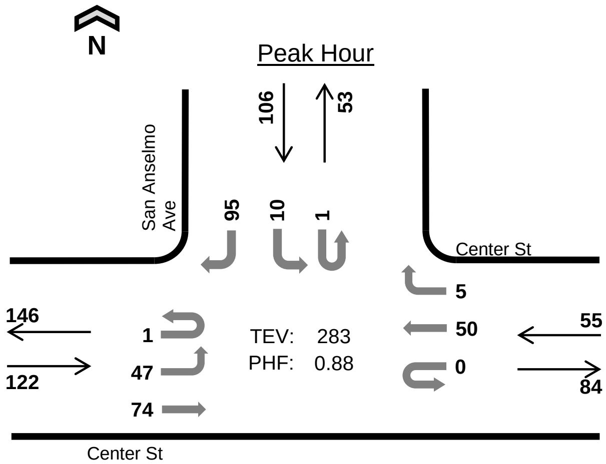
Two-Hour Count Summaries - Bikes

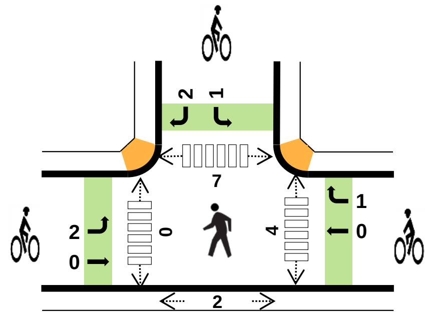
Interval Start	Center St			Center St			n/a			San Anselmo Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	2	3	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	6
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
8:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	0	1	0	0	0	1	0	0	0	1	0	4	7	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**

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

San Anselmo Ave
Center St

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	1.6%	0.87
WB	3.6%	0.76
NB	-	-
SB	0.9%	0.80
TOTAL	1.8%	0.88

Two-Hour Count Summaries

Interval Start	Center St Eastbound UT	LT	TH	RT	Center St Westbound UT	LT	TH	RT	n/a Northbound UT	LT	TH	RT	San Anselmo Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	1	11	17	0	0	0	6	1	0	0	0	0	0	5	0	14	55	0
4:15 PM	0	12	13	0	0	0	12	1	0	0	0	0	0	3	0	15	56	0
4:30 PM	0	10	9	0	0	0	14	0	0	0	0	0	0	2	0	15	50	0
4:45 PM	**0**	**12**	**15**	**0**	**0**	**0**	**12**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**28**	**71**	232
5:00 PM	**0**	**12**	**23**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**17**	**65**	242
5:15 PM	**0**	**16**	**13**	**0**	**0**	**0**	**16**	**2**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**27**	**80**	266
5:30 PM	**1**	**7**	**23**	**0**	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**67**	**283**
5:45 PM	0	9	12	0	0	0	14	1	0	0	0	0	0	4	0	17	57	269
Count Total	2	89	125	0	0	0	96	8	0	0	0	0	1	24	0	156	501	0
Peak Hour All	**1**	**47**	**74**	**0**	**0**	**0**	**50**	**5**	**0**	**0**	**0**	**0**	**1**	**10**	**0**	**95**	**283**	**0**
Peak Hour HV	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**0**
Peak Hour HV%	**0%**	**2%**	**1%**	**-**	**-**	**-**	**4%**	**0%**	**-**	**-**	**-**	**-**	**0%**	**10%**	**-**	**0%**	**2%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	1	0	0	0	*1*	0	0	0	0	*0*	0	0	1	0	*1*
4:15 PM	0	0	0	0	*0*	1	0	0	0	*1*	1	1	0	0	*2*
4:30 PM	0	1	0	1	*2*	0	0	0	1	*1*	0	0	4	0	*4*
4:45 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**1**	**0**	*1*
5:00 PM	**1**	**1**	**0**	**0**	***2***	**1**	**0**	**0**	**0**	***1***	**3**	**0**	**2**	**0**	*5*
5:15 PM	**0**	**1**	**0**	**0**	***1***	**0**	**1**	**0**	**1**	***2***	**1**	**0**	**3**	**2**	*6*
5:30 PM	**1**	**0**	**0**	**0**	***1***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**1**	**0**	***1***
5:45 PM	0	0	0	1	*1*	0	1	0	1	*2*	0	0	0	0	*0*
Count Total	3	3	0	3	*9*	3	2	0	5	*10*	5	1	12	2	*20*
Peak Hr	**2**	**2**	**0**	**1**	***5***	**2**	**1**	**0**	**3**	***6***	**4**	**0**	**7**	**2**	***13***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Center St				Center St				n/a				San Anselmo 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	1	2	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	4
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	6
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5
Count Total	0	2	1	0	0	0	3	0	0	0	0	0	0	1	0	2	9	0
Peak Hour	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

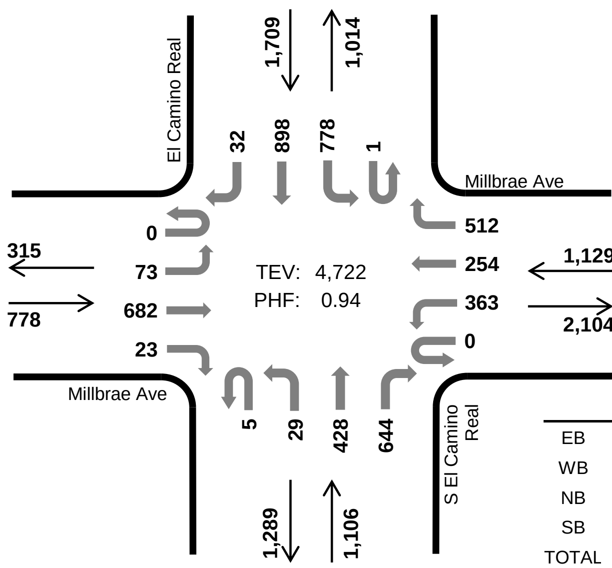
Interval Start	Center St			Center St			n/a			San Anselmo Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**2**	4
5:00 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	6
5:30 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**
5:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	2	6
Count Total	3	0	0	0	0	2	0	0	0	2	0	3	10	0
Peak Hour	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**6**	**0**

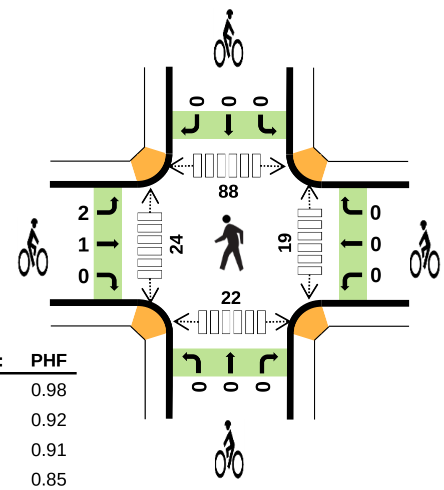
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Millbrae Ave

Date: 09-12-2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM

Peak Hour





	HV %:	PHF
EB	0.8%	0.98
WB	4.7%	0.92
NB	2.4%	0.91
SB	2.0%	0.85
TOTAL	2.5%	0.94

Two-Hour Count Summaries

Interval Start		Millbrae Ave Eastbound				Millbrae Ave Westbound				S 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	10	108	2	0	66	27	107	0	3	56	116	0	172	132	4	803	0
7:15 AM		0	13	130	1	0	78	47	110	0	4	66	135	1	160	157	8	910	0
7:30 AM		0	19	146	1	1	96	50	127	0	4	61	171	1	163	196	4	1,040	0
7:45 AM		**0**	**18**	**161**	**8**	**0**	**89**	**67**	**125**	**0**	**8**	**113**	**157**	**0**	**199**	**292**	**14**	**1,251**	4,004
8:00 AM		**0**	**27**	**169**	**3**	**0**	**107**	**63**	**136**	**1**	**7**	**127**	**168**	**1**	**189**	**211**	**5**	**1,214**	4,415
8:15 AM		**0**	**17**	**174**	**2**	**0**	**89**	**63**	**120**	**3**	**8**	**107**	**163**	**0**	**193**	**201**	**5**	**1,145**	4,650
8:30 AM		**0**	**11**	**178**	**10**	**0**	**78**	**61**	**131**	**1**	**6**	**81**	**156**	**0**	**197**	**194**	**8**	**1,112**	**4,722**
8:45 AM		0	14	160	8	0	93	72	121	1	6	122	157	1	143	161	7	1,066	4,537
Count Total		0	129	1,226	35	1	696	450	977	6	46	733	1,223	4	1,416	1,544	55	8,541	0
Peak Hour	**All**	**0**	**73**	**682**	**23**	**0**	**363**	**254**	**512**	**5**	**29**	**428**	**644**	**1**	**778**	**898**	**32**	**4,722**	**0**
	HV	**0**	**1**	**5**	**0**	**0**	**14**	**10**	**29**	**0**	**2**	**12**	**13**	**0**	**15**	**18**	**1**	**120**	**0**
	HV%	**-**	**1%**	**1%**	**0%**	**-**	**4%**	**4%**	**6%**	**0%**	**7%**	**3%**	**2%**	**0%**	**2%**	**2%**	**3%**	**3%**	**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	8	5	4	*17*	0	0	0	0	*0*	1	3	22	0	*26*
7:15 AM	0	6	10	12	*28*	0	0	0	0	*0*	0	5	14	0	*19*
7:30 AM	0	16	6	6	*28*	0	0	0	0	*0*	5	4	28	6	*43*
7:45 AM	**2**	**16**	**5**	**11**	***34***	**1**	**0**	**0**	**0**	***1***	**0**	**8**	**31**	**4**	*43*
8:00 AM	**1**	**17**	**5**	**8**	***31***	**1**	**0**	**0**	**0**	***1***	**6**	**9**	**19**	**6**	*40*
8:15 AM	**2**	**9**	**10**	**8**	***29***	**0**	**0**	**0**	**0**	***0***	**5**	**2**	**14**	**5**	*26*
8:30 AM	**1**	**11**	**7**	**7**	***26***	**1**	**0**	**0**	**0**	***1***	**8**	**5**	**24**	**7**	***44***
8:45 AM	5	10	11	6	*32*	0	0	0	0	*0*	4	3	30	4	*41*
Count Total	11	93	59	62	*225*	3	0	0	0	*3*	29	39	182	32	*282*
Peak Hour	**6**	**53**	**27**	**34**	***120***	**3**	**0**	**0**	**0**	***3***	**19**	**24**	**88**	**22**	***153***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave				Millbrae Ave				S 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	3	0	5	0	0	3	2	0	0	4	0	17	0
7:15 AM	0	0	0	0	0	2	0	4	0	0	6	4	0	5	6	1	28	0
7:30 AM	0	0	0	0	0	7	2	7	0	0	3	3	0	1	5	0	28	0
7:45 AM	**0**	**0**	**2**	**0**	**0**	**3**	**3**	**10**	**0**	**1**	**1**	**3**	**0**	**4**	**6**	**1**	**34**	107
8:00 AM	**0**	**0**	**1**	**0**	**0**	**4**	**4**	**9**	**0**	**0**	**1**	**4**	**0**	**3**	**5**	**0**	**31**	121
8:15 AM	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**7**	**0**	**1**	**5**	**4**	**0**	**5**	**3**	**0**	**29**	122
8:30 AM	**0**	**0**	**1**	**0**	**0**	**7**	**1**	**3**	**0**	**0**	**5**	**2**	**0**	**3**	**4**	**0**	**26**	**120**
8:45 AM	0	1	4	0	0	2	3	5	0	0	7	4	0	3	2	1	32	118
Count Total	0	2	9	0	0	28	15	50	0	2	31	26	0	24	35	3	225	0
Peak Hour	**0**	**1**	**5**	**0**	**0**	**14**	**10**	**29**	**0**	**2**	**12**	**13**	**0**	**15**	**18**	**1**	**120**	**0**

Two-Hour Count Summaries - Bikes

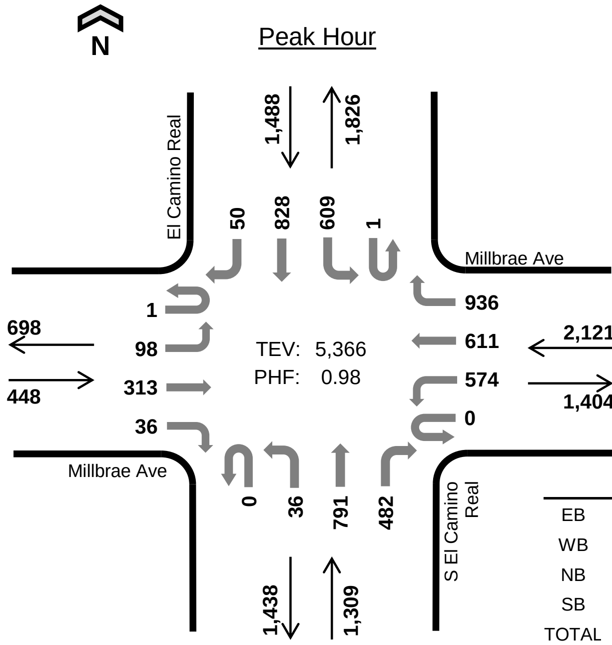
Interval Start	Millbrae Ave			Millbrae Ave			S El Camino Real			El Camino Real			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
8:00 AM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
8:30 AM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Count Total	2	1	0	0	0	0	0	0	0	0	0	0	3	0
Peak Hour	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

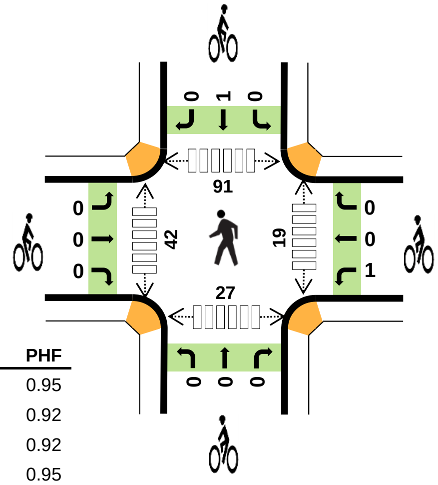
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

El Camino Real
Millbrae Ave

Date: 09-12-2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	1.1%	0.95
WB	0.8%	0.92
NB	1.5%	0.92
SB	1.5%	0.95
TOTAL	1.2%	0.98

Two-Hour Count Summaries

Interval Start		Millbrae Ave Eastbound UT	LT	TH	RT	Millbrae Ave Westbound UT	LT	TH	RT	S El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	17	68	7	0	87	116	214	2	5	173	122	0	165	185	14	1,175	0
4:15 PM		0	23	83	9	0	120	119	213	1	11	162	117	0	169	169	10	1,206	0
4:30 PM		0	21	71	6	0	115	95	203	1	11	165	116	1	164	174	9	1,152	0
4:45 PM		0	30	75	4	0	138	118	242	2	8	145	103	0	169	211	19	1,264	4,797
5:00 PM		**0**	**21**	**79**	**8**	**0**	**122**	**143**	**236**	**0**	**7**	**191**	**145**	**0**	**166**	**205**	**11**	**1,334**	4,956
5:15 PM		**1**	**28**	**70**	**7**	**0**	**161**	**149**	**218**	**0**	**7**	**226**	**123**	**0**	**147**	**226**	**9**	**1,372**	5,122
5:30 PM		**0**	**28**	**76**	**12**	**0**	**158**	**175**	**241**	**0**	**12**	**195**	**106**	**1**	**136**	**179**	**16**	**1,335**	5,305
5:45 PM		**0**	**21**	**88**	**9**	**0**	**133**	**144**	**241**	**0**	**10**	**179**	**108**	**0**	**160**	**218**	**14**	**1,325**	**5,366**
Count Total		1	189	610	62	0	1,034	1,059	1,808	6	71	1,436	940	2	1,276	1,567	102	10,163	0
Peak Hour	**All**	**1**	**98**	**313**	**36**	**0**	**574**	**611**	**936**	**0**	**36**	**791**	**482**	**1**	**609**	**828**	**50**	**5,366**	**0**
	HV	**0**	**0**	**5**	**0**	**0**	**4**	**0**	**13**	**0**	**0**	**11**	**9**	**0**	**12**	**10**	**0**	**64**	**0**
	HV%	**0%**	**0%**	**2%**	**0%**	**-**	**1%**	**0%**	**1%**	**-**	**0%**	**1%**	**2%**	**0%**	**2%**	**1%**	**0%**	**1%**	**0**

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

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	7	7	7	*21*	0	0	0	0	*0*	2	5	14	6	*27*
4:15 PM	2	4	4	8	*18*	0	0	0	0	*0*	1	6	9	4	*20*
4:30 PM	0	3	4	2	*9*	0	0	0	0	*0*	5	5	9	0	*19*
4:45 PM	3	4	5	10	*22*	0	0	1	0	*1*	1	6	24	3	*34*
5:00 PM	**1**	**5**	**6**	**7**	***19***	**0**	**1**	**0**	**0**	***1***	**9**	**7**	**17**	**9**	*42*
5:15 PM	**0**	**6**	**5**	**3**	***14***	**0**	**0**	**0**	**0**	***0***	**4**	**16**	**27**	**9**	*56*
5:30 PM	**1**	**4**	**2**	**7**	***14***	**0**	**0**	**0**	**1**	***1***	**5**	**12**	**31**	**5**	*53*
5:45 PM	**3**	**2**	**7**	**5**	***17***	**0**	**0**	**0**	**0**	***0***	**1**	**7**	**16**	**4**	***28***
Count Total	10	35	40	49	*134*	0	1	1	1	*3*	28	64	147	40	*279*
Peak Hour	**5**	**17**	**20**	**22**	***64***	**0**	**1**	**0**	**1**	***2***	**19**	**42**	**91**	**27**	***179***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Millbrae Ave Eastbound UT	LT	TH	RT	Millbrae Ave Westbound UT	LT	TH	RT	S El Camino Real Northbound UT	LT	TH	RT	El Camino Real Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	2	1	4	0	0	3	4	0	4	3	0	21	0
4:15 PM	0	1	1	0	0	0	0	4	0	0	3	1	0	3	5	0	18	0
4:30 PM	0	0	0	0	0	0	1	2	0	0	3	1	0	1	1	0	9	0
4:45 PM	0	2	1	0	0	1	0	3	0	0	4	1	0	5	5	0	22	70
5:00 PM	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**4**	**0**	**0**	**3**	**3**	**0**	**2**	**5**	**0**	**19**	68
5:15 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**4**	**0**	**0**	**3**	**2**	**0**	**1**	**2**	**0**	**14**	64
5:30 PM	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**1**	**1**	**0**	**6**	**1**	**0**	**14**	69
5:45 PM	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**4**	**3**	**0**	**3**	**2**	**0**	**17**	**64**
Count Total	0	3	7	0	0	7	2	26	0	0	24	16	0	25	24	0	134	0
Peak Hour	**0**	**0**	**5**	**0**	**0**	**4**	**0**	**13**	**0**	**0**	**11**	**9**	**0**	**12**	**10**	**0**	**64**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Millbrae Ave Eastbound LT	TH	RT	Millbrae Ave Westbound LT	TH	RT	S El Camino Real Northbound LT	TH	RT	El Camino Real Southbound LT	TH	RT	15-min Total	Rolling One Hour
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	1	0	0	0	0	1	1
5:00 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	3
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Count Total	0	0	0	1	0	0	0	1	0	0	1	0	3	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**

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

Appendix B
Level of Service Calculations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	31	50	9	60	19	1108	28	46	1117	13
Future Volume (veh/h)	35	9	31	50	9	60	19	1108	28	46	1117	13
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)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.99
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	9	31	50	9	60	19	1108	28	46	1117	13
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	161	51	112	143	39	133	36	3329	84	64	3465	40
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.65	0.65	0.04	0.67	0.67
Sat Flow, veh/h	616	288	637	524	223	759	1774	5096	129	1774	5181	60
Grp Volume(v), veh/h	75	0	0	119	0	0	19	737	399	46	731	399
Grp Sat Flow(s),veh/h/ln	1542	0	0	1506	0	0	1774	1695	1835	1774	1695	1852
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	1.1	9.6	9.6	2.6	9.1	9.1
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.6	0.0	0.0	1.1	9.6	9.6	2.6	9.1	9.1
Prop In Lane	0.47		0.41	0.42		0.50	1.00		0.07	1.00		0.03
Lane Grp Cap(c), veh/h	324	0	0	316	0	0	36	2214	1198	64	2267	1238
V/C Ratio(X)	0.23	0.00	0.00	0.38	0.00	0.00	0.52	0.33	0.33	0.72	0.32	0.32
Avail Cap(c_a), veh/h	581	0	0	576	0	0	115	2214	1198	133	2267	1238
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	36.6	0.0	0.0	48.5	7.7	7.7	47.7	7.0	7.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	0.0	11.1	0.4	0.7	14.0	0.4	0.7
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	1.8	0.0	0.0	3.0	0.0	0.0	0.6	4.6	5.1	1.5	4.4	4.9
LnGrp Delay(d),s/veh	35.9	0.0	0.0	37.3	0.0	0.0	59.6	8.1	8.4	61.7	7.4	7.7
LnGrp LOS	D			D			E	A	A	E	A	A
Approach Vol, veh/h		75			119			1155			1176	
Approach Delay, s/veh		35.9			37.3			9.1			9.6	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	69.8		22.1	6.6	71.4		22.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	43.5		35.5	6.5	44.5		35.5				
Max Q Clear Time (g_c+I1), s	4.6	11.6		5.8	3.1	11.1		8.6				
Green Ext Time (p_c), s	0.0	9.3		0.4	0.0	9.3		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			11.4									
HCM 2010 LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	16	16	131	8	36	8	1009	56	65	1138	75
Future Volume (veh/h)	117	16	16	131	8	36	8	1009	56	65	1138	75
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)	0.98		0.96	0.98		0.97	1.00		0.97	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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	117	16	16	131	8	36	8	1009	56	65	1138	75
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	140	140	220	15	45	18	3200	177	85	3353	221
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	1.00	1.00	0.05	0.69	0.69
Sat Flow, veh/h	1336	836	836	942	92	268	1774	4922	273	1774	4874	321
Grp Volume(v), veh/h	117	0	32	175	0	0	8	695	370	65	791	422
Grp Sat Flow(s),veh/h/ln	1336	0	1672	1301	0	0	1774	1695	1804	1774	1695	1805
Q Serve(g_s), s	0.0	0.0	1.6	11.6	0.0	0.0	0.4	0.0	0.0	3.6	9.5	9.5
Cycle Q Clear(g_c), s	7.7	0.0	1.6	13.2	0.0	0.0	0.4	0.0	0.0	3.6	9.5	9.5
Prop In Lane	1.00		0.50	0.75		0.21	1.00		0.15	1.00		0.18
Lane Grp Cap(c), veh/h	301	0	279	280	0	0	18	2204	1173	85	2333	1242
V/C Ratio(X)	0.39	0.00	0.11	0.62	0.00	0.00	0.45	0.32	0.32	0.77	0.34	0.34
Avail Cap(c_a), veh/h	472	0	493	459	0	0	151	2204	1173	381	2333	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	35.4	40.7	0.0	0.0	48.7	0.0	0.0	47.1	6.3	6.3
Incr Delay (d2), s/veh	0.8	0.0	0.2	2.3	0.0	0.0	17.0	0.4	0.7	13.3	0.4	0.7
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	3.0	0.0	0.8	4.8	0.0	0.0	0.3	0.1	0.2	2.1	4.5	4.9
LnGrp Delay(d),s/veh	38.7	0.0	35.6	43.0	0.0	0.0	65.8	0.4	0.7	60.3	6.7	7.1
LnGrp LOS	D		D	D			E	A	A	E	A	A
Approach Vol, veh/h		149			175			1073			1278	
Approach Delay, s/veh		38.0			43.0			1.0			9.6	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	69.5		21.2	5.5	73.3		21.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	35.5		29.5	8.5	48.5		29.5
Max Q Clear Time (g_c+I1), s	5.6	2.0		9.7	2.4	11.5		15.2
Green Ext Time (p_c), s	0.1	8.7		0.4	0.0	10.6		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	108	8	0	16	77	1007	9	10	1327	14
Future Vol, veh/h	5	0	108	8	0	16	77	1007	9	10	1327	14
Conflicting Peds, #/hr	22	0	12	16	0	26	12	0	16	26	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	108	8	0	16	77	1007	9	10	1327	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1959	2572	709	1759	2575	560	1363	0	0	1042	0	0
Stage 1	1376	1376	-	1192	1192	-	-	-	-	-	-	-
Stage 2	583	1196	-	567	1383	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*76	28	323	103	28	*698	260	-	-	*877	-	-
Stage 1	*108	211	-	570	587	-	-	-	-	-	-	-
Stage 2	*716	583	-	434	209	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*54	18	311	49	18	*663	255	-	-	*855	-	-
Mov Cap-2 Maneuver	*54	18	-	49	18	-	-	-	-	-	-	-
Stage 1	*74	204	-	388	399	-	-	-	-	-	-	-
Stage 2	*476	397	-	276	202	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.6	39.5	1.8	0.1
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	255	-	-	257	128	* 855	-	-
HCM Lane V/C Ratio	0.302	-	-	0.44	0.188	0.012	-	-
HCM Control Delay (s)	25.1	-	-	29.6	39.5	9.3	-	-
HCM Lane LOS	D	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	1.2	-	-	2.1	0.7	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	22	0	28	1	1031	31	29	1433	5
Future Vol, veh/h	0	0	0	22	0	28	1	1031	31	29	1433	5
Conflicting Peds, #/hr	16	0	31	25	0	10	31	0	25	10	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	22	0	28	1	1031	31	29	1433	5

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1730	2601	566	1469	0	0	1087	0	0
Stage 1	1074	1074	-	-	-	-	-	-	-
Stage 2	656	1527	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*315	*50	*671	231	-	-	*844	-	-
Stage 1	*689	*655	-	-	-	-	-	-	-
Stage 2	*435	*178	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*286	*0	*649	231	-	-	*824	-	-
Mov Cap-2 Maneuver	*286	*0	-	-	-	-	-	-	-
Stage 1	*665	*0	-	-	-	-	-	-	-
Stage 2	*410	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	231	-	-	416	* 824	-	-
HCM Lane V/C Ratio	0.004	-	-	0.12	0.035	-	-
HCM Control Delay (s)	20.7	-	-	14.8	9.5	-	-
HCM Lane LOS	C	-	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	51	1108	1339	53
Future Vol, veh/h	6	11	51	1108	1339	53
Conflicting Peds, #/hr	6	6	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	11	51	1108	1339	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1923	708	1398	0	-	0
Stage 1	1372	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*233	324	250	-	-	-
Stage 1	*142	-	-	-	-	-
Stage 2	*689	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*183	320	249	-	-	-
Mov Cap-2 Maneuver	*183	-	-	-	-	-
Stage 1	*112	-	-	-	-	-
Stage 2	*685	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.3	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	249	-	253	-	-
HCM Lane V/C Ratio	0.205	-	0.067	-	-
HCM Control Delay (s)	23.1	-	20.3	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	122	41	82	1009	1362	45		
Future Volume (veh/h)	122	41	82	1009	1362	45		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	122	5	82	1009	1362	45		
Adj No. of Lanes	1	1	1	3	3	0		
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	156	139	105	4182	3628	120		
Arrive On Green	0.09	0.09	0.12	1.00	0.72	0.72		
Sat Flow, veh/h	1774	1583	1774	5253	5219	167		
Grp Volume(v), veh/h	122	5	82	1009	914	493		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1828		
Q Serve(g_s), s	6.7	0.3	4.5	0.0	10.4	10.4		
Cycle Q Clear(g_c), s	6.7	0.3	4.5	0.0	10.4	10.4		
Prop In Lane	1.00	1.00	1.00			0.09		
Lane Grp Cap(c), veh/h	156	139	105	4182	2435	1313		
V/C Ratio(X)	0.78	0.04	0.78	0.24	0.38	0.38		
Avail Cap(c_a), veh/h	506	451	239	4182	2435	1313		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	44.7	41.7	43.5	0.0	5.4	5.4		
Incr Delay (d2), s/veh	8.4	0.1	12.0	0.1	0.4	0.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.6	0.3	2.5	0.1	5.0	5.5		
LnGrp Delay(d),s/veh	53.1	41.9	55.4	0.1	5.9	6.3		
LnGrp LOS	D	D	E	A	A	A		
Approach Vol, veh/h	127			1091	1407			
Approach Delay, s/veh	52.6			4.3	6.0			
Approach LOS	D			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		86.7		13.3	10.4	76.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.5		28.5	13.5	44.5		
Max Q Clear Time (g_c+I1), s		2.0		8.7	6.5	12.4		
Green Ext Time (p_c), s		9.4		0.3	0.1	12.5		
Intersection Summary								
HCM 2010 Ctrl Delay			7.6					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	58	2	2	9	53	1022	14	29	1332	87
Future Vol, veh/h	12	0	58	2	2	9	53	1022	14	29	1332	87
Conflicting Peds, #/hr	34	0	21	21	0	34	21	0	21	34	0	34
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	58	2	2	9	53	1022	14	29	1332	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2018	2644	765	1781	2680	586	1453	0	0	1070	0	0
Stage 1	1468	1468	-	1169	1169	-	-	-	-	-	-	-
Stage 2	550	1176	-	612	1511	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*409	290	*618	*409	261	*698	*777	-	-	*877	-	-
Stage 1	*633	602	-	*596	604	-	-	-	-	-	-	-
Stage 2	*716	599	-	*634	566	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*346	244	*586	*322	220	*653	*752	-	-	*849	-	-
Mov Cap-2 Maneuver	*346	244	-	*322	220	-	-	-	-	-	-	-
Stage 1	*569	563	-	*536	544	-	-	-	-	-	-	-
Stage 2	*633	539	-	*541	529	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	13.3	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 752	-	-	524	447	* 849	-	-
HCM Lane V/C Ratio	0.07	-	-	0.134	0.029	0.034	-	-
HCM Control Delay (s)	10.2	-	-	12.9	13.3	9.4	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.1	0.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	29	36	156	48	40	44	964	59	35	1333	31
Future Volume (veh/h)	70	29	36	156	48	40	44	964	59	35	1333	31
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)	0.99		0.98	0.99		0.99	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	70	29	36	156	48	40	44	964	59	35	1333	31
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	363	178	222	251	70	51	63	2914	178	55	3019	70
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.07	1.00	1.00	0.06	1.00	1.00
Sat Flow, veh/h	1297	746	926	802	294	215	1774	4898	299	1774	5112	119
Grp Volume(v), veh/h	70	0	65	244	0	0	44	667	356	35	884	480
Grp Sat Flow(s),veh/h/ln	1297	0	1673	1311	0	0	1774	1695	1807	1774	1695	1840
Q Serve(g_s), s	0.0	0.0	3.1	15.0	0.0	0.0	2.4	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear(g_c), s	4.7	0.0	3.1	18.1	0.0	0.0	2.4	0.0	0.0	1.9	0.0	0.0
Prop In Lane	1.00		0.55	0.64		0.16	1.00		0.17	1.00		0.06
Lane Grp Cap(c), veh/h	363	0	400	372	0	0	63	2017	1075	55	2002	1087
V/C Ratio(X)	0.19	0.00	0.16	0.66	0.00	0.00	0.70	0.33	0.33	0.63	0.44	0.44
Avail Cap(c_a), veh/h	513	0	594	539	0	0	186	2017	1075	115	2002	1087
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	30.1	36.7	0.0	0.0	46.0	0.0	0.0	46.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.2	2.0	0.0	0.0	13.4	0.4	0.8	11.5	0.7	1.3
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	1.6	0.0	1.4	6.5	0.0	0.0	1.4	0.1	0.2	1.1	0.2	0.4
LnGrp Delay(d),s/veh	31.0	0.0	30.3	38.7	0.0	0.0	59.3	0.4	0.8	57.8	0.7	1.3
LnGrp LOS	C		C	D			E	A	A	E	A	A
Approach Vol, veh/h		135			244			1067			1399	
Approach Delay, s/veh		30.7			38.7			3.0			2.3	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	64.0		28.4	8.0	63.6		28.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	44.5		35.5	10.5	40.5		35.5
Max Q Clear Time (g_c+I1), s	3.9	2.0		6.7	4.4	2.0		20.1
Green Ext Time (p_c), s	0.0	8.6		0.6	0.0	12.6		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	12	120	12	9	4	105	772	8	40	1343	184
Future Volume (veh/h)	246	12	120	12	9	4	105	772	8	40	1343	184
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)	0.99		0.98	0.99		0.99	1.00		0.98	1.00		0.97
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	246	12	28	12	9	4	105	772	8	40	1343	184
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	366	406	338	360	266	118	132	3184	33	60	2581	354
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.07	0.61	0.61	0.07	1.00	1.00
Sat Flow, veh/h	1388	1863	1553	1355	1221	543	1774	5189	54	1774	4507	617
Grp Volume(v), veh/h	246	12	28	12	0	13	105	504	276	40	1010	517
Grp Sat Flow(s),veh/h/ln	1388	1863	1553	1355	0	1763	1774	1695	1852	1774	1695	1734
Q Serve(g_s), s	17.0	0.5	1.4	0.7	0.0	0.6	5.8	6.7	6.8	2.2	0.0	0.0
Cycle Q Clear(g_c), s	17.6	0.5	1.4	1.2	0.0	0.6	5.8	6.7	6.8	2.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.03	1.00		0.36
Lane Grp Cap(c), veh/h	366	406	338	360	0	384	132	2081	1137	60	1942	993
V/C Ratio(X)	0.67	0.03	0.08	0.03	0.00	0.03	0.79	0.24	0.24	0.67	0.52	0.52
Avail Cap(c_a), veh/h	540	639	533	530	0	605	186	2081	1137	165	1942	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	30.8	31.2	31.3	0.0	30.8	45.5	8.8	8.8	46.1	0.0	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.1	0.0	0.0	0.0	14.2	0.3	0.5	12.4	1.0	1.9
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	6.7	0.3	0.6	0.3	0.0	0.3	3.4	3.2	3.6	1.3	0.3	0.5
LnGrp Delay(d),s/veh	39.9	30.8	31.3	31.3	0.0	30.9	59.7	9.0	9.3	58.5	1.0	1.9
LnGrp LOS	D	C	C	C		C	E	A	A	E	A	A
Approach Vol, veh/h		286			25			885			1567	
Approach Delay, s/veh		38.7			31.1			15.1			2.8	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	65.9		26.3	11.9	61.8		26.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	9.3	42.9		34.3	10.5	41.7		34.3
Max Q Clear Time (g_c+I1), s	4.2	8.8		19.6	7.8	2.0		3.2
Green Ext Time (p_c), s	0.0	5.8		0.7	0.1	15.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	4	46	9	2	12	65	829	4	32	1431	35
Future Volume (veh/h)	40	4	46	9	2	12	65	829	4	32	1431	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)	0.97		0.96	0.97		0.95	1.00		0.99	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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	40	4	4	9	2	12	65	829	4	32	1431	35
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	299	26	267	138	45	139	83	3358	16	54	3199	78
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.64	0.64	0.03	0.63	0.63
Sat Flow, veh/h	1263	150	1513	465	256	787	1774	5223	25	1774	5106	125
Grp Volume(v), veh/h	44	0	4	23	0	0	65	538	295	32	950	516
Grp Sat Flow(s),veh/h/ln	1412	0	1513	1509	0	0	1774	1695	1858	1774	1695	1840
Q Serve(g_s), s	1.1	0.0	0.2	0.0	0.0	0.0	3.3	6.1	6.1	1.6	13.1	13.1
Cycle Q Clear(g_c), s	2.1	0.0	0.2	1.0	0.0	0.0	3.3	6.1	6.1	1.6	13.1	13.1
Prop In Lane	0.91		1.00	0.39		0.52	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	325	0	267	322	0	0	83	2180	1195	54	2124	1153
V/C Ratio(X)	0.14	0.00	0.01	0.07	0.00	0.00	0.78	0.25	0.25	0.59	0.45	0.45
Avail Cap(c_a), veh/h	636	0	605	651	0	0	108	2180	1195	108	2124	1153
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	0.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	31.3	0.0	30.6	31.0	0.0	0.0	42.4	6.8	6.8	43.1	8.7	8.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	23.1	0.3	0.5	8.2	0.6	1.0
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	0.9	0.0	0.1	0.5	0.0	0.0	2.1	2.9	3.3	0.9	6.2	6.9
LnGrp Delay(d),s/veh	31.5	0.0	30.6	31.0	0.0	0.0	65.5	7.1	7.3	51.3	9.3	9.8
LnGrp LOS	C		C	C			E	A	A	D	A	A
Approach Vol, veh/h		48			23			898			1498	
Approach Delay, s/veh		31.5			31.0			11.4			10.3	
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	7.3	62.4		20.4	8.7	60.9		20.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	35.0		36.0	5.5	35.0		36.0
Max Q Clear Time (g_c+I1), s	3.6	8.1		4.1	5.3	15.1		3.0
Green Ext Time (p_c), s	0.0	6.0		0.2	0.0	10.4		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		11.3
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	24	113	71	36	36	95	873	30	28	1387	84
Future Volume (veh/h)	93	24	113	71	36	36	95	873	30	28	1387	84
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)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	93	24	113	71	36	36	95	873	30	28	1387	84
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	309	59	277	154	78	59	121	3116	107	49	2827	171
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.07	0.62	0.62	0.03	0.58	0.58
Sat Flow, veh/h	1308	277	1304	458	365	277	1774	5043	173	1774	4900	297
Grp Volume(v), veh/h	93	0	137	143	0	0	95	586	317	28	960	511
Grp Sat Flow(s),veh/h/ln	1308	0	1580	1100	0	0	1774	1695	1826	1774	1695	1806
Q Serve(g_s), s	0.0	0.0	7.1	6.4	0.0	0.0	5.0	7.6	7.6	1.5	15.9	15.9
Cycle Q Clear(g_c), s	7.7	0.0	7.1	13.5	0.0	0.0	5.0	7.6	7.6	1.5	15.9	15.9
Prop In Lane	1.00		0.82	0.50		0.25	1.00		0.09	1.00		0.16
Lane Grp Cap(c), veh/h	309	0	336	291	0	0	121	2094	1128	49	1956	1042
V/C Ratio(X)	0.30	0.00	0.41	0.49	0.00	0.00	0.78	0.28	0.28	0.57	0.49	0.49
Avail Cap(c_a), veh/h	448	0	504	442	0	0	196	2094	1128	110	1956	1042
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	32.2	35.6	0.0	0.0	43.6	8.4	8.4	45.6	11.9	11.9
Incr Delay (d2), s/veh	0.5	0.0	0.8	1.3	0.0	0.0	10.5	0.3	0.6	10.2	0.9	1.7
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	2.2	0.0	3.2	3.6	0.0	0.0	2.8	3.6	4.0	0.9	7.6	8.3
LnGrp Delay(d),s/veh	33.0	0.0	33.0	36.9	0.0	0.0	54.1	8.7	9.0	55.8	12.7	13.5
LnGrp LOS	C		C	D			D	A	A	E	B	B
Approach Vol, veh/h		230			143			998			1499	
Approach Delay, s/veh		33.0			36.9			13.1			13.8	
Approach LOS		C			D			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	7.1	63.2		24.7	11.0	59.3		24.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.9	45.3		30.3	10.5	40.7		30.3
Max Q Clear Time (g_c+I1), s	3.5	9.6		9.7	7.0	17.9		15.5
Green Ext Time (p_c), s	0.0	7.1		1.1	0.1	11.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	20	1047	14	0	1567
Future Vol, veh/h	0	20	1047	14	0	1567
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	20	1047	14	0	1567

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	531	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	422	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	422	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	422	-
HCM Lane V/C Ratio	-	-	0.047	-
HCM Control Delay (s)	-	-	14	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection						
Int Delay, s/veh	4.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	54	91	17	12	125
Future Vol, veh/h	51	54	91	17	12	125
Conflicting Peds, #/hr	6	0	0	13	13	6
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	51	54	91	17	12	125

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	121	0	-	0	282	119
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	169	-
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	1467	-	-	-	708	933
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1449	-	-	-	666	916
Mov Cap-2 Maneuver	-	-	-	-	666	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	851	-

Approach	EB	WB	SB
HCM Control Delay, s	3.7	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1449	-	-	-	887
HCM Lane V/C Ratio	0.035	-	-	-	0.154
HCM Control Delay (s)	7.6	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	109	14	0	229	15	0
Future Vol, veh/h	109	14	0	229	15	0
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	109	14	0	229	15	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	123	0	345	116
Stage 1	-	-	-	-	116	-
Stage 2	-	-	-	-	229	-
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	-	-	1464	-	652	936
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	809	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1464	-	652	936
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	809	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	652	-	-	1464	-
HCM Lane V/C Ratio	0.023	-	-	-	-
HCM Control Delay (s)	10.7	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	0	0	108	0	0
Future Vol, veh/h	66	0	0	108	0	0
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	66	0	0	108	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	66	0	174	66
Stage 1	-	-	-	-	66	-
Stage 2	-	-	-	-	108	-
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	-	-	1536	-	816	998
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1536	-	816	998
Mov Cap-2 Maneuver	-	-	-	-	816	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	916	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		0		0	
HCM LOS					A	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1536	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	682	23	363	254	512	34	428	644	779	898	32
Future Volume (veh/h)	73	682	23	363	254	512	34	428	644	779	898	32
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		0.98	1.00		0.90	1.00		0.97	1.00		0.99
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	73	682	23	363	254	424	34	428	519	779	898	32
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	97	946	32	442	1077	773	44	1581	477	735	2518	90
Arrive On Green	0.05	0.27	0.27	0.09	0.30	0.30	0.02	0.31	0.31	0.21	0.50	0.50
Sat Flow, veh/h	1774	3490	118	5003	3539	1428	1774	5085	1535	3442	5039	179
Grp Volume(v), veh/h	73	346	359	363	254	424	34	428	519	779	604	326
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1668	1770	1428	1774	1695	1535	1721	1695	1828
Q Serve(g_s), s	6.3	27.4	27.5	11.1	8.3	31.6	3.0	9.8	48.2	33.1	16.8	16.8
Cycle Q Clear(g_c), s	6.3	27.4	27.5	11.1	8.3	31.6	3.0	9.8	48.2	33.1	16.8	16.8
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	97	480	498	442	1077	773	44	1581	477	735	1694	914
V/C Ratio(X)	0.75	0.72	0.72	0.82	0.24	0.55	0.77	0.27	1.09	1.06	0.36	0.36
Avail Cap(c_a), veh/h	149	480	498	442	1077	773	66	1581	477	735	1694	914
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	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	51.2	51.2	69.4	40.4	25.6	75.1	40.2	53.4	61.0	23.6	23.6
Incr Delay (d2), s/veh	10.9	9.0	8.7	11.1	0.5	2.6	26.1	0.4	66.9	50.2	0.6	1.1
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	3.4	14.6	15.2	5.6	4.2	13.0	1.8	4.7	29.3	20.8	8.0	8.8
LnGrp Delay(d),s/veh	83.0	60.2	59.9	80.6	40.9	28.3	101.2	40.6	120.3	111.2	24.2	24.7
LnGrp LOS	F	E	E	F	D	C	F	D	F	F	C	C
Approach Vol, veh/h		778			1041			981			1709	
Approach Delay, s/veh		62.2			49.6			84.9			63.9	
Approach LOS		E			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	52.7	18.2	46.5	8.3	82.0	13.0	51.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.1	48.2	13.7	42.0	5.8	75.5	13.0	42.7
Max Q Clear Time (g_c+I1), s	35.1	50.2	13.1	29.5	5.0	18.8	8.3	33.6
Green Ext Time (p_c), s	0.0	0.0	0.1	3.6	0.0	7.7	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	64.9
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	7	20	55	17	44	39	1707	60	89	1449	70
Future Volume (veh/h)	38	7	20	55	17	44	39	1707	60	89	1449	70
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)	0.97		0.96	0.96		0.95	1.00		0.99	1.00		0.98
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	7	20	55	17	44	39	1707	60	89	1449	70
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	206	44	88	172	59	112	56	3113	109	113	3225	156
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	787	224	450	629	303	570	1774	5042	177	1774	4965	240
Grp Volume(v), veh/h	65	0	0	116	0	0	39	1147	620	89	989	530
Grp Sat Flow(s),veh/h/ln	1462	0	0	1502	0	0	1774	1695	1829	1774	1695	1814
Q Serve(g_s), s	0.0	0.0	0.0	3.2	0.0	0.0	2.4	21.5	21.6	5.4	15.9	15.9
Cycle Q Clear(g_c), s	3.7	0.0	0.0	6.9	0.0	0.0	2.4	21.5	21.6	5.4	15.9	15.9
Prop In Lane	0.58		0.31	0.47		0.38	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	338	0	0	343	0	0	56	2093	1129	113	2202	1179
V/C Ratio(X)	0.19	0.00	0.00	0.34	0.00	0.00	0.69	0.55	0.55	0.79	0.45	0.45
Avail Cap(c_a), veh/h	486	0	0	495	0	0	116	2093	1129	202	2202	1179
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	38.2	0.0	0.0	52.7	12.2	12.2	50.8	9.5	9.5
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	14.3	1.0	1.9	11.3	0.7	1.2
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	1.7	0.0	0.0	3.1	0.0	0.0	1.4	10.3	11.4	3.0	7.6	8.3
LnGrp Delay(d),s/veh	37.3	0.0	0.0	38.8	0.0	0.0	67.0	13.2	14.1	62.1	10.2	10.8
LnGrp LOS	D			D			E	B	B	E	B	B
Approach Vol, veh/h		65			116			1806			1608	
Approach Delay, s/veh		37.3			38.8			14.7			13.3	
Approach LOS		D			D			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	11.5	72.4		26.1	8.0	75.9		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	12.5	50.9		33.1	7.2	56.2		33.1
Max Q Clear Time (g_c+I1), s	7.4	23.6		5.7	4.4	17.9		8.9
Green Ext Time (p_c), s	0.1	15.5		0.3	0.0	14.9		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	20	18	80	17	41	38	1611	63	108	1267	110
Future Volume (veh/h)	132	20	18	80	17	41	38	1611	63	108	1267	110
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)	0.99		0.96	0.98		0.98	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	132	20	18	80	17	41	38	1611	63	108	1267	110
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	233	123	111	152	37	58	55	3324	130	135	3369	293
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.02	0.44	0.44	0.08	0.71	0.71
Sat Flow, veh/h	1324	888	799	720	264	416	1774	5020	196	1774	4763	414
Grp Volume(v), veh/h	132	0	38	138	0	0	38	1088	586	108	902	475
Grp Sat Flow(s),veh/h/ln	1324	0	1687	1400	0	0	1774	1695	1826	1774	1695	1787
Q Serve(g_s), s	1.4	0.0	2.2	8.4	0.0	0.0	2.3	25.0	25.0	6.6	11.7	11.7
Cycle Q Clear(g_c), s	12.0	0.0	2.2	10.5	0.0	0.0	2.3	25.0	25.0	6.6	11.7	11.7
Prop In Lane	1.00		0.47	0.58		0.30	1.00		0.11	1.00		0.23
Lane Grp Cap(c), veh/h	233	0	234	246	0	0	55	2245	1209	135	2398	1264
V/C Ratio(X)	0.57	0.00	0.16	0.56	0.00	0.00	0.69	0.48	0.48	0.80	0.38	0.38
Avail Cap(c_a), veh/h	357	0	391	381	0	0	106	2245	1209	266	2398	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	41.7	45.5	0.0	0.0	53.3	17.3	17.3	50.0	6.4	6.4
Incr Delay (d2), s/veh	2.2	0.0	0.3	2.0	0.0	0.0	14.0	0.8	1.4	10.1	0.5	0.9
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	4.0	0.0	1.0	4.2	0.0	0.0	1.4	11.9	13.0	3.6	5.5	6.0
LnGrp Delay(d),s/veh	48.2	0.0	42.1	47.5	0.0	0.0	67.3	18.0	18.7	60.1	6.9	7.3
LnGrp LOS	D		D	D			E	B	B	E	A	A
Approach Vol, veh/h		170			138			1712			1485	
Approach Delay, s/veh		46.8			47.5			19.4			10.9	
Approach LOS		D			D			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	12.9	77.3		19.8	7.9	82.3		19.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	16.5	54.5		25.5	6.6	64.4		25.5				
Max Q Clear Time (g_c+I1), s	8.6	27.0		14.0	4.3	13.7		12.5				
Green Ext Time (p_c), s	0.1	14.6		0.4	0.0	13.8		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1	112	2	0	18	97	1650	20	36	1296	59
Future Vol, veh/h	12	1	112	2	0	18	97	1650	20	36	1296	59
Conflicting Peds, #/hr	40	0	29	16	0	27	29	0	16	27	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	112	2	0	18	97	1650	20	36	1296	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2332	3329	747	2501	3348	902	1395	0	0	1697	0	0
Stage 1	1438	1438	-	1881	1881	-	-	-	-	-	-	-
Stage 2	894	1891	-	620	1467	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*215	*17	305	*145	*17	*525	251	-	-	*660	-	-
Stage 1	*98	*197	-	*539	*512	-	-	-	-	-	-	-
Stage 2	*539	*512	-	*403	*190	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*126	*9	285	*51	*9	*492	241	-	-	*643	-	-
Mov Cap-2 Maneuver	*126	*9	-	*51	*9	-	-	-	-	-	-	-
Stage 1	*56	*179	-	*314	*298	-	-	-	-	-	-	-
Stage 2	*298	*298	-	*223	*173	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45	19.8	1.6	0.3
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	241	-	-	209	264	* 643	-	-
HCM Lane V/C Ratio	0.402	-	-	0.598	0.076	0.056	-	-
HCM Control Delay (s)	29.6	-	-	45	19.8	10.9	-	-
HCM Lane LOS	D	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	1.8	-	-	3.4	0.2	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	14	0	16	1	1738	49	61	1353	8
Future Vol, veh/h	0	0	0	14	0	16	1	1738	49	61	1353	8
Conflicting Peds, #/hr	29	0	39	18	0	8	39	0	18	8	0	29
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	14	0	16	1	1738	49	61	1353	8

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	2464	3305	920	1400	0	0	1805	0	0
Stage 1	1783	1783	-	-	-	-	-	-	-
Stage 2	681	1522	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*220	*20	*501	250	-	-	*630	-	-
Stage 1	*514	*489	-	-	-	-	-	-	-
Stage 2	*422	*179	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*0	*0	*489	250	-	-	*619	-	-
Mov Cap-2 Maneuver	*0	*0	-	-	-	-	-	-	-
Stage 1	*0	*0	-	-	-	-	-	-	-
Stage 2	*374	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	250	-	-	489	* 619	-	-
HCM Lane V/C Ratio	0.004	-	-	0.061	0.099	-	-
HCM Control Delay (s)	19.5	-	-	12.8	11.5	-	-
HCM Lane LOS	C	-	-	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	34	21	1782	1342	31
Future Vol, veh/h	6	34	21	1782	1342	31
Conflicting Peds, #/hr	20	20	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	34	21	1782	1342	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2153	727	1393	0	-	0
Stage 1	1378	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*414	314	252	-	-	-
Stage 1	*141	-	-	-	-	-
Stage 2	*514	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*364	302	247	-	-	-
Mov Cap-2 Maneuver	*364	-	-	-	-	-
Stage 1	*127	-	-	-	-	-
Stage 2	*504	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	247	-	310	-	-
HCM Lane V/C Ratio	0.085	-	0.129	-	-
HCM Control Delay (s)	20.9	-	18.3	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	75	23	56	1727	1343	37		
Future Volume (veh/h)	75	23	56	1727	1343	37		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	75	-25	56	1727	1343	37		
Adj No. of Lanes	1	1	1	3	3	0		
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	86	76	73	4424	4008	110		
Arrive On Green	0.05	0.00	0.04	0.87	0.79	0.79		
Sat Flow, veh/h	1774	1583	1774	5253	5254	140		
Grp Volume(v), veh/h	75	-25	56	1727	895	485		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1836		
Q Serve(g_s), s	4.6	0.0	3.4	7.4	8.4	8.4		
Cycle Q Clear(g_c), s	4.6	0.0	3.4	7.4	8.4	8.4		
Prop In Lane	1.00	1.00	1.00			0.08		
Lane Grp Cap(c), veh/h	86	76	73	4424	2672	1447		
V/C Ratio(X)	0.88	-0.33	0.77	0.39	0.34	0.34		
Avail Cap(c_a), veh/h	460	410	250	4424	2672	1447		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	52.0	0.0	52.2	1.4	3.4	3.4		
Incr Delay (d2), s/veh	22.8	0.0	15.6	0.3	0.3	0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.0	3.5	4.0	4.4		
LnGrp Delay(d),s/veh	74.9	0.0	67.8	1.7	3.7	4.0		
LnGrp LOS	E		E	A	A	A		
Approach Vol, veh/h	50			1783	1380			
Approach Delay, s/veh	112.3			3.7	3.8			
Approach LOS	F			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		100.2		9.8	9.0	91.2		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		72.5		28.5	15.5	52.5		
Max Q Clear Time (g_c+I1), s		9.4		6.6	5.4	10.4		
Green Ext Time (p_c), s		22.9		0.2	0.1	13.2		
Intersection Summary								
HCM 2010 Ctrl Delay			5.5					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	31	3	1	6	38	1748	8	42	1316	48
Future Vol, veh/h	8	0	31	3	1	6	38	1748	8	42	1316	48
Conflicting Peds, #/hr	23	0	15	24	0	32	15	0	24	32	0	23
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	31	3	1	6	38	1748	8	42	1316	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2255	3311	729	2494	3331	942	1387	0	0	1788	0	0
Stage 1	1447	1447	-	1860	1860	-	-	-	-	-	-	-
Stage 2	808	1864	-	634	1471	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*44	*8	*621	*31	*8	*509	*781	-	-	*639	-	-
Stage 1	*638	*606	-	*522	*496	-	-	-	-	-	-	-
Stage 2	*522	*496	-	*638	*589	-	-	-	-	-	-	-
Platoon blocked, %			1			1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*34	*7	*594	*25	*7	*478	*764	-	-	*620	-	-
Mov Cap-2 Maneuver	*34	*7	-	*25	*7	-	-	-	-	-	-	-
Stage 1	*592	*552	-	*481	*458	-	-	-	-	-	-	-
Stage 2	*474	*458	-	*550	*537	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	41.8	139.7	0.2	0.3
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 764	-	-	136	36	* 620	-	-
HCM Lane V/C Ratio	0.05	-	-	0.287	0.278	0.068	-	-
HCM Control Delay (s)	10	-	-	41.8	139.7	11.2	-	-
HCM Lane LOS	A	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	0.9	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	15	35	96	20	59	59	1658	93	42	1286	24
Future Volume (veh/h)	64	15	35	96	20	59	59	1658	93	42	1286	24
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)	0.99		0.97	0.99		0.99	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	15	35	96	20	59	59	1658	93	42	1286	24
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	262	88	206	168	41	84	76	3344	187	54	3431	64
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.04	0.68	0.68	0.03	0.67	0.67
Sat Flow, veh/h	1303	487	1137	682	225	461	1774	4918	276	1774	5139	96
Grp Volume(v), veh/h	64	0	50	175	0	0	59	1142	609	42	848	462
Grp Sat Flow(s),veh/h/ln	1303	0	1624	1368	0	0	1774	1695	1803	1774	1695	1845
Q Serve(g_s), s	0.0	0.0	3.3	12.3	0.0	0.0	4.1	20.3	20.4	2.9	13.9	13.9
Cycle Q Clear(g_c), s	6.7	0.0	3.3	15.5	0.0	0.0	4.1	20.3	20.4	2.9	13.9	13.9
Prop In Lane	1.00		0.70	0.55		0.34	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	262	0	294	293	0	0	76	2305	1226	54	2264	1232
V/C Ratio(X)	0.24	0.00	0.17	0.60	0.00	0.00	0.77	0.50	0.50	0.77	0.37	0.37
Avail Cap(c_a), veh/h	396	0	461	442	0	0	192	2305	1226	149	2264	1232
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	43.2	48.7	0.0	0.0	59.2	9.7	9.7	60.1	9.2	9.2
Incr Delay (d2), s/veh	0.5	0.0	0.3	2.0	0.0	0.0	15.2	0.8	1.4	20.1	0.5	0.9
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	2.0	0.0	1.5	5.8	0.0	0.0	2.3	9.6	10.6	1.8	6.6	7.4
LnGrp Delay(d),s/veh	45.1	0.0	43.5	50.6	0.0	0.0	74.4	10.4	11.1	80.3	9.7	10.1
LnGrp LOS	D		D	D			E	B	B	F	A	B
Approach Vol, veh/h		114			175			1810			1352	
Approach Delay, s/veh		44.4			50.6			12.7			12.0	
Approach LOS		D			D			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	8.3	89.5		27.2	9.9	88.0		27.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	10.5	65.5		35.5	13.5	62.5		35.5
Max Q Clear Time (g_c+I1), s	4.9	22.4		8.7	6.1	15.9		17.5
Green Ext Time (p_c), s	0.0	19.3		0.4	0.1	12.4		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	7	95	15	5	26	193	1496	4	47	1220	195
Future Volume (veh/h)	270	7	95	15	5	26	193	1496	4	47	1220	195
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)	0.99		0.97	0.99		0.99	1.00		0.99	1.00		0.98
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	270	7	36	15	5	26	193	1496	4	47	1220	195
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	407	488	404	419	68	352	224	2967	8	65	2100	336
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.13	0.57	0.57	0.04	0.48	0.48
Sat Flow, veh/h	1355	1863	1542	1340	259	1345	1774	5236	14	1774	4408	705
Grp Volume(v), veh/h	270	7	36	15	0	31	193	969	531	47	938	477
Grp Sat Flow(s),veh/h/ln	1355	1863	1542	1340	0	1603	1774	1695	1860	1774	1695	1722
Q Serve(g_s), s	18.7	0.3	1.8	0.8	0.0	1.5	10.7	17.3	17.3	2.6	20.0	20.0
Cycle Q Clear(g_c), s	20.2	0.3	1.8	1.1	0.0	1.5	10.7	17.3	17.3	2.6	20.0	20.0
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.01	1.00		0.41
Lane Grp Cap(c), veh/h	407	488	404	419	0	420	224	1921	1054	65	1615	821
V/C Ratio(X)	0.66	0.01	0.09	0.04	0.00	0.07	0.86	0.50	0.50	0.73	0.58	0.58
Avail Cap(c_a), veh/h	560	699	578	571	0	601	239	1921	1054	98	1615	821
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	1.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	27.3	27.9	27.7	0.0	27.8	42.8	13.2	13.2	47.7	18.9	18.9
Incr Delay (d2), s/veh	1.9	0.0	0.1	0.0	0.0	0.1	22.8	0.9	1.6	14.3	1.5	3.0
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	7.2	0.1	0.8	0.3	0.0	0.7	6.6	8.3	9.3	1.5	9.7	10.2
LnGrp Delay(d),s/veh	37.2	27.3	28.0	27.8	0.0	27.8	65.6	14.0	14.7	62.0	20.5	21.9
LnGrp LOS	D	C	C	C		C	E	B	B	E	C	C
Approach Vol, veh/h		313			46			1693			1462	
Approach Delay, s/veh		35.9			27.8			20.1			22.3	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	61.2		30.7	17.1	52.2		30.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	43.5		37.5	13.5	35.5		37.5
Max Q Clear Time (g_c+I1), s	4.6	19.3		22.2	12.7	22.0		3.5
Green Ext Time (p_c), s	0.0	11.9		0.9	0.0	7.9		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	3	90	10	3	9	136	1508	7	41	1253	65
Future Volume (veh/h)	111	3	90	10	3	9	136	1508	7	41	1253	65
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)	0.97		0.97	0.97		0.95	1.00		0.97	1.00		0.99
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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	111	3	16	10	3	9	136	1508	7	41	1253	65
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	342	8	346	141	51	96	167	3161	15	60	2696	140
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.09	0.61	0.61	0.01	0.18	0.18
Sat Flow, veh/h	1200	37	1531	390	224	425	1774	5224	24	1774	4949	257
Grp Volume(v), veh/h	114	0	16	22	0	0	136	979	536	41	858	460
Grp Sat Flow(s),veh/h/ln	1237	0	1531	1040	0	0	1774	1695	1858	1774	1695	1815
Q Serve(g_s), s	0.0	0.0	0.8	0.1	0.0	0.0	7.5	16.0	16.0	2.3	22.7	22.7
Cycle Q Clear(g_c), s	9.4	0.0	0.8	9.5	0.0	0.0	7.5	16.0	16.0	2.3	22.7	22.7
Prop In Lane	0.97		1.00	0.45		0.41	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	350	0	346	287	0	0	167	2052	1124	60	1847	989
V/C Ratio(X)	0.33	0.00	0.05	0.08	0.00	0.00	0.81	0.48	0.48	0.68	0.46	0.46
Avail Cap(c_a), veh/h	541	0	559	492	0	0	257	2052	1124	257	1847	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	33.6	0.0	30.3	30.6	0.0	0.0	44.4	11.0	11.0	48.9	28.0	28.0
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.0	10.8	0.8	1.5	9.9	0.7	1.2
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	2.8	0.0	0.3	0.5	0.0	0.0	4.2	7.7	8.6	1.3	10.8	11.8
LnGrp Delay(d),s/veh	34.1	0.0	30.3	30.7	0.0	0.0	55.2	11.8	12.4	58.8	28.6	29.2
LnGrp LOS	C		C	C			E	B	B	E	C	C
Approach Vol, veh/h		130			22			1651			1359	
Approach Delay, s/veh		33.7			30.7			15.5			29.7	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	65.0		27.1	13.9	59.0		27.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	35.5		36.5	14.5	35.5		36.5
Max Q Clear Time (g_c+I1), s	4.3	18.0		11.4	9.5	24.7		11.5
Green Ext Time (p_c), s	0.0	9.9		0.6	0.1	6.3		0.1

Intersection Summary			
HCM 2010 Ctrl Delay			22.5
HCM 2010 LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	25	95	55	18	32	132	1688	66	64	1319	90
Future Volume (veh/h)	120	25	95	55	18	32	132	1688	66	64	1319	90
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)	0.98		0.95	0.98		0.95	1.00		0.94	1.00		0.96
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	120	25	95	55	18	32	132	1688	66	64	1319	90
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	329	71	269	165	58	74	98	3018	118	82	2879	196
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.60	0.60	0.05	0.59	0.59
Sat Flow, veh/h	1318	327	1244	511	269	342	1774	5007	196	1774	4846	331
Grp Volume(v), veh/h	120	0	120	105	0	0	132	1142	612	64	923	486
Grp Sat Flow(s),veh/h/ln	1318	0	1572	1122	0	0	1774	1695	1813	1774	1695	1787
Q Serve(g_s), s	0.0	0.0	6.5	4.5	0.0	0.0	5.5	20.2	20.2	3.6	15.2	15.2
Cycle Q Clear(g_c), s	10.0	0.0	6.5	10.9	0.0	0.0	5.5	20.2	20.2	3.6	15.2	15.2
Prop In Lane	1.00		0.79	0.52		0.30	1.00		0.11	1.00		0.19
Lane Grp Cap(c), veh/h	329	0	339	297	0	0	98	2043	1093	82	2014	1061
V/C Ratio(X)	0.36	0.00	0.35	0.35	0.00	0.00	1.35	0.56	0.56	0.78	0.46	0.46
Avail Cap(c_a), veh/h	446	0	479	421	0	0	98	2043	1093	98	2014	1061
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	0.0	33.3	35.6	0.0	0.0	47.3	11.9	11.9	47.2	11.3	11.3
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.7	0.0	0.0	211.8	1.1	2.1	27.9	0.8	1.4
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	3.0	0.0	2.9	2.7	0.0	0.0	8.4	9.7	10.7	2.4	7.3	7.9
LnGrp Delay(d),s/veh	35.3	0.0	33.9	36.3	0.0	0.0	259.1	13.0	14.0	75.0	12.1	12.7
LnGrp LOS	D		C	D			F	B	B	E	B	B
Approach Vol, veh/h		240			105			1886			1473	
Approach Delay, s/veh		34.6			36.3			30.5			15.0	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	64.8		26.1	10.0	63.9		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	50.5		30.5	5.5	50.5		30.5
Max Q Clear Time (g_c+I1), s	5.6	22.2		12.0	7.5	17.2		12.9
Green Ext Time (p_c), s	0.0	15.7		1.0	0.0	12.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	1799	27	0	1462
Future Vol, veh/h	0	11	1799	27	0	1462
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	11	1799	27	0	1462

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	913	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	237	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	237	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	237	-
HCM Lane V/C Ratio	-	-	0.046	-
HCM Control Delay (s)	-	-	20.9	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Intersection						
Int Delay, s/veh	4.7					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	74	50	5	11	95
Future Vol, veh/h	48	74	50	5	11	95
Conflicting Peds, #/hr	7	0	0	11	11	7
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	48	74	50	5	11	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	66	0	-	0	245	71
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	181	-
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	1536	-	-	-	743	991
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	704	974
Mov Cap-2 Maneuver	-	-	-	-	704	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	842	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	937
HCM Lane V/C Ratio	0.032	-	-	-	0.113
HCM Control Delay (s)	7.4	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	144	6	0	165	10	0
Future Vol, veh/h	144	6	0	165	10	0
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	144	6	0	165	10	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	150	0	312	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	165	-
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	-	-	1431	-	681	900
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1431	-	681	900
Mov Cap-2 Maneuver	-	-	-	-	681	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	864	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	681	-	-	1431	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	10.4	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	0					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	0	0	55	0	0
Future Vol, veh/h	85	0	0	55	0	0
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	85	0	0	55	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	85	0	140	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	55	-
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	-	-	1512	-	853	974
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1512	-	853	974
Mov Cap-2 Maneuver	-	-	-	-	853	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1512	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	313	36	574	611	936	36	791	482	610	828	50
Future Volume (veh/h)	99	313	36	574	611	936	36	791	482	610	828	50
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		0.96	1.00		0.91	1.00		0.97	1.00		0.96
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	99	313	36	574	611	892	36	791	294	610	828	50
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	119	836	95	578	1100	762	46	1584	477	681	2364	142
Arrive On Green	0.07	0.26	0.26	0.12	0.31	0.31	0.03	0.31	0.31	0.20	0.48	0.48
Sat Flow, veh/h	1774	3186	363	5003	3539	1444	1774	5085	1533	3442	4893	294
Grp Volume(v), veh/h	99	172	177	574	611	892	36	791	294	610	573	305
Grp Sat Flow(s),veh/h/ln	1774	1770	1779	1668	1770	1444	1774	1695	1533	1721	1695	1797
Q Serve(g_s), s	8.8	12.7	13.0	18.3	23.0	49.7	3.2	20.3	26.1	27.6	16.8	16.9
Cycle Q Clear(g_c), s	8.8	12.7	13.0	18.3	23.0	49.7	3.2	20.3	26.1	27.6	16.8	16.9
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	119	465	467	578	1100	762	46	1584	477	681	1638	868
V/C Ratio(X)	0.83	0.37	0.38	0.99	0.56	1.17	0.78	0.50	0.62	0.90	0.35	0.35
Avail Cap(c_a), veh/h	167	465	467	578	1100	762	102	1584	477	940	1638	868
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	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	48.2	48.3	70.7	45.9	40.2	77.4	44.9	46.9	62.6	25.7	25.7
Incr Delay (d2), s/veh	20.8	2.3	2.3	32.1	1.7	88.2	23.6	1.1	5.8	8.6	0.6	1.1
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	5.0	6.5	6.7	10.2	11.5	52.3	1.9	9.7	11.8	13.9	8.0	8.7
LnGrp Delay(d),s/veh	94.5	50.5	50.6	102.7	47.6	128.4	101.0	46.0	52.8	71.2	26.3	26.9
LnGrp LOS	F	D	D	F	D	F	F	D	D	E	C	C
Approach Vol, veh/h		448			2077			1121			1488	
Approach Delay, s/veh		60.3			97.5			49.6			44.8	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.2	54.3	23.0	46.5	8.7	81.8	15.3	54.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	43.7	37.8	18.5	42.0	9.2	72.3	15.1	45.4
Max Q Clear Time (g_c+I1), s	29.6	28.1	20.3	15.0	5.2	18.9	10.8	51.7
Green Ext Time (p_c), s	2.0	4.5	0.0	2.1	0.0	7.2	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	68.5
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	31	50	9	60	20	1117	28	46	1118	13
Future Volume (veh/h)	35	9	31	50	9	60	20	1117	28	46	1118	13
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)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.99
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	9	31	50	9	60	20	1117	28	46	1118	13
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	161	51	112	143	39	133	38	3330	83	64	3461	40
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.65	0.65	0.04	0.67	0.67
Sat Flow, veh/h	616	288	637	524	223	759	1774	5098	128	1774	5182	60
Grp Volume(v), veh/h	75	0	0	119	0	0	20	743	402	46	731	400
Grp Sat Flow(s),veh/h/ln	1542	0	0	1506	0	0	1774	1695	1835	1774	1695	1852
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	1.1	9.7	9.7	2.6	9.1	9.1
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.6	0.0	0.0	1.1	9.7	9.7	2.6	9.1	9.1
Prop In Lane	0.47		0.41	0.42		0.50	1.00		0.07	1.00		0.03
Lane Grp Cap(c), veh/h	324	0	0	316	0	0	38	2214	1199	64	2264	1237
V/C Ratio(X)	0.23	0.00	0.00	0.38	0.00	0.00	0.53	0.34	0.34	0.72	0.32	0.32
Avail Cap(c_a), veh/h	581	0	0	576	0	0	115	2214	1199	133	2264	1237
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	36.6	0.0	0.0	48.4	7.7	7.7	47.7	7.0	7.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	0.0	11.0	0.4	0.8	14.0	0.4	0.7
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	1.8	0.0	0.0	3.0	0.0	0.0	0.7	4.7	5.2	1.5	4.4	4.9
LnGrp Delay(d),s/veh	35.9	0.0	0.0	37.3	0.0	0.0	59.4	8.1	8.5	61.7	7.4	7.7
LnGrp LOS	D			D			E	A	A	E	A	A
Approach Vol, veh/h		75			119			1165			1177	
Approach Delay, s/veh		35.9			37.3			9.1			9.6	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	69.8		22.1	6.6	71.3		22.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	43.5		35.5	6.5	44.5		35.5
Max Q Clear Time (g_c+I1), s	4.6	11.7		5.8	3.1	11.1		8.6
Green Ext Time (p_c), s	0.0	9.4		0.4	0.0	9.3		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	16	16	131	8	36	8	1019	56	65	1139	75
Future Volume (veh/h)	117	16	16	131	8	36	8	1019	56	65	1139	75
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)	0.98		0.96	0.98		0.97	1.00		0.97	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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	117	16	16	131	8	36	8	1019	56	65	1139	75
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	140	140	220	15	45	18	3202	176	85	3354	221
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	1.00	1.00	0.05	0.69	0.69
Sat Flow, veh/h	1336	836	836	942	92	268	1774	4925	270	1774	4874	321
Grp Volume(v), veh/h	117	0	32	175	0	0	8	701	374	65	792	422
Grp Sat Flow(s),veh/h/ln	1336	0	1672	1301	0	0	1774	1695	1805	1774	1695	1805
Q Serve(g_s), s	0.0	0.0	1.6	11.6	0.0	0.0	0.4	0.0	0.0	3.6	9.5	9.5
Cycle Q Clear(g_c), s	7.7	0.0	1.6	13.2	0.0	0.0	0.4	0.0	0.0	3.6	9.5	9.5
Prop In Lane	1.00		0.50	0.75		0.21	1.00		0.15	1.00		0.18
Lane Grp Cap(c), veh/h	301	0	279	280	0	0	18	2204	1173	85	2333	1242
V/C Ratio(X)	0.39	0.00	0.11	0.62	0.00	0.00	0.45	0.32	0.32	0.77	0.34	0.34
Avail Cap(c_a), veh/h	472	0	493	459	0	0	151	2204	1173	381	2333	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	35.4	40.7	0.0	0.0	48.7	0.0	0.0	47.1	6.3	6.4
Incr Delay (d2), s/veh	0.8	0.0	0.2	2.3	0.0	0.0	17.0	0.4	0.7	13.3	0.4	0.7
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	3.0	0.0	0.8	4.8	0.0	0.0	0.3	0.1	0.2	2.1	4.5	4.9
LnGrp Delay(d),s/veh	38.7	0.0	35.6	43.0	0.0	0.0	65.8	0.4	0.7	60.3	6.7	7.1
LnGrp LOS	D		D	D			E	A	A	E	A	A
Approach Vol, veh/h		149			175			1083			1279	
Approach Delay, s/veh		38.0			43.0			1.0			9.6	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	69.5		21.2	5.5	73.3		21.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	35.5		29.5	8.5	48.5		29.5
Max Q Clear Time (g_c+I1), s	5.6	2.0		9.7	2.4	11.5		15.2
Green Ext Time (p_c), s	0.1	8.8		0.4	0.0	10.6		0.8

Intersection Summary		
HCM 2010 Ctrl Delay		9.9
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	108	8	0	16	77	1017	9	10	1328	14
Future Vol, veh/h	5	0	108	8	0	16	77	1017	9	10	1328	14
Conflicting Peds, #/hr	22	0	12	16	0	26	12	0	16	26	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	108	8	0	16	77	1017	9	10	1328	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1964	2583	709	1769	2586	565	1364	0	0	1052	0	0
Stage 1	1377	1377	-	1202	1202	-	-	-	-	-	-	-
Stage 2	587	1206	-	567	1384	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*76	28	323	102	28	*698	260	-	-	*877	-	-
Stage 1	*108	211	-	558	579	-	-	-	-	-	-	-
Stage 2	*716	576	-	434	209	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*54	18	311	49	18	*663	255	-	-	*855	-	-
Mov Cap-2 Maneuver	*54	18	-	49	18	-	-	-	-	-	-	-
Stage 1	*74	204	-	380	394	-	-	-	-	-	-	-
Stage 2	*476	392	-	276	202	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.6	39.5	1.8	0.1
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	255	-	-	257	128	* 855	-	-
HCM Lane V/C Ratio	0.302	-	-	0.44	0.188	0.012	-	-
HCM Control Delay (s)	25.1	-	-	29.6	39.5	9.3	-	-
HCM Lane LOS	D	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	1.2	-	-	2.1	0.7	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	22	0	28	1	1041	32	29	1434	5
Future Vol, veh/h	0	0	0	22	0	28	1	1041	32	29	1434	5
Conflicting Peds, #/hr	16	0	31	25	0	10	31	0	25	10	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	22	0	28	1	1041	32	29	1434	5

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1741	2612	572	1470	0	0	1098	0	0
Stage 1	1084	1084	-	-	-	-	-	-	-
Stage 2	657	1528	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*310	*48	*671	231	-	-	*844	-	-
Stage 1	*689	*655	-	-	-	-	-	-	-
Stage 2	*435	*178	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*281	*0	*649	231	-	-	*824	-	-
Mov Cap-2 Maneuver	*281	*0	-	-	-	-	-	-	-
Stage 1	*665	*0	-	-	-	-	-	-	-
Stage 2	*410	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	231	-	-	412	* 824	-	-
HCM Lane V/C Ratio	0.004	-	-	0.121	0.035	-	-
HCM Control Delay (s)	20.7	-	-	14.9	9.5	-	-
HCM Lane LOS	C	-	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	51	1119	1340	53
Future Vol, veh/h	6	11	51	1119	1340	53
Conflicting Peds, #/hr	6	6	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	11	51	1119	1340	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1929	709	1399	0	-	0
Stage 1	1373	-	-	-	-	-
Stage 2	556	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*231	323	250	-	-	-
Stage 1	*142	-	-	-	-	-
Stage 2	*689	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*181	319	249	-	-	-
Mov Cap-2 Maneuver	*181	-	-	-	-	-
Stage 1	*112	-	-	-	-	-
Stage 2	*685	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	20.4		1		0	
HCM LOS	C					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	249	-	251	-	-
HCM Lane V/C Ratio	0.205	-	0.068	-	-
HCM Control Delay (s)	23.1	-	20.4	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	122	41	83	1020	1363	45		
Future Volume (veh/h)	122	41	83	1020	1363	45		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	122	5	83	1020	1363	45		
Adj No. of Lanes	1	1	1	3	3	0		
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	156	139	106	4182	3625	120		
Arrive On Green	0.09	0.09	0.12	1.00	0.72	0.72		
Sat Flow, veh/h	1774	1583	1774	5253	5219	167		
Grp Volume(v), veh/h	122	5	83	1020	915	493		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1828		
Q Serve(g_s), s	6.7	0.3	4.5	0.0	10.4	10.4		
Cycle Q Clear(g_c), s	6.7	0.3	4.5	0.0	10.4	10.4		
Prop In Lane	1.00	1.00	1.00			0.09		
Lane Grp Cap(c), veh/h	156	139	106	4182	2433	1312		
V/C Ratio(X)	0.78	0.04	0.78	0.24	0.38	0.38		
Avail Cap(c_a), veh/h	506	451	239	4182	2433	1312		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	44.7	41.7	43.4	0.0	5.5	5.5		
Incr Delay (d2), s/veh	8.4	0.1	11.9	0.1	0.4	0.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.6	0.3	2.6	0.1	5.0	5.5		
LnGrp Delay(d),s/veh	53.1	41.9	55.3	0.1	5.9	6.3		
LnGrp LOS	D	D	E	A	A	A		
Approach Vol, veh/h	127			1103	1408			
Approach Delay, s/veh	52.6			4.3	6.0			
Approach LOS	D			A	A			
Timer	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		86.7		13.3	10.5	76.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.5		28.5	13.5	44.5		
Max Q Clear Time (g_c+I1), s		2.0		8.7	6.5	12.4		
Green Ext Time (p_c), s		9.6		0.3	0.1	12.5		
Intersection Summary								
HCM 2010 Ctrl Delay			7.5					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	58	2	2	9	53	1034	14	29	1333	87
Future Vol, veh/h	12	0	58	2	2	9	53	1034	14	29	1333	87
Conflicting Peds, #/hr	34	0	21	21	0	34	21	0	21	34	0	34
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	58	2	2	9	53	1034	14	29	1333	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2024	2657	765	1793	2693	592	1454	0	0	1082	0	0
Stage 1	1469	1469	-	1181	1181	-	-	-	-	-	-	-
Stage 2	555	1188	-	612	1512	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*382	*363	*618	*382	*342	*671	*777	-	-	*844	-	-
Stage 1	*632	*601	-	*689	*655	-	-	-	-	-	-	-
Stage 2	*689	*655	-	*634	*565	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*323	*305	*586	*301	*287	*628	*752	-	-	*817	-	-
Mov Cap-2 Maneuver	*323	*305	-	*301	*287	-	-	-	-	-	-	-
Stage 1	*568	*562	-	*619	*590	-	-	-	-	-	-	-
Stage 2	*608	*590	-	*540	*528	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	13	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 752	-	-	514	465	* 817	-	-
HCM Lane V/C Ratio	0.07	-	-	0.136	0.028	0.035	-	-
HCM Control Delay (s)	10.2	-	-	13.1	13	9.6	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	31	36	209	56	55	35	960	82	37	1332	31
Future Volume (veh/h)	70	31	36	209	56	55	35	960	82	37	1332	31
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		0.98	0.99		0.99	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	70	31	36	209	56	55	35	960	82	37	1332	31
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	423	224	260	301	67	64	55	2601	222	57	2793	65
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.06	1.00	1.00	0.06	1.00	1.00
Sat Flow, veh/h	1272	777	903	839	232	222	1774	4771	407	1774	5112	119
Grp Volume(v), veh/h	70	0	67	320	0	0	35	682	360	37	883	480
Grp Sat Flow(s),veh/h/ln	1272	0	1680	1293	0	0	1774	1695	1787	1774	1695	1840
Q Serve(g_s), s	0.0	0.0	3.0	21.1	0.0	0.0	1.9	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	3.0	24.1	0.0	0.0	1.9	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		0.54	0.65		0.17	1.00		0.23	1.00		0.06
Lane Grp Cap(c), veh/h	423	0	483	431	0	0	55	1849	974	57	1852	1005
V/C Ratio(X)	0.17	0.00	0.14	0.74	0.00	0.00	0.63	0.37	0.37	0.65	0.48	0.48
Avail Cap(c_a), veh/h	509	0	596	528	0	0	186	1849	974	115	1852	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	26.4	35.3	0.0	0.0	46.3	0.0	0.0	46.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	4.4	0.0	0.0	11.5	0.6	1.1	11.8	0.9	1.6
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	1.5	0.0	1.4	9.0	0.0	0.0	1.1	0.1	0.3	1.2	0.2	0.5
LnGrp Delay(d),s/veh	27.1	0.0	26.6	39.7	0.0	0.0	57.8	0.6	1.1	58.0	0.9	1.6
LnGrp LOS	C		C	D			E	A	A	E	A	A
Approach Vol, veh/h		137			320			1077			1400	
Approach Delay, s/veh		26.8			39.7			2.6			2.6	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	59.0		33.3	7.6	59.1		33.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	44.5		35.5	10.5	40.5		35.5
Max Q Clear Time (g_c+I1), s	4.0	2.0		6.4	3.9	2.0		26.1
Green Ext Time (p_c), s	0.0	8.9		0.6	0.0	12.6		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	12	120	12	9	4	105	775	8	39	1380	189
Future Volume (veh/h)	245	12	120	12	9	4	105	775	8	39	1380	189
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)	0.99		0.98	0.99		0.99	1.00		0.98	1.00		0.97
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	245	12	28	12	9	4	105	775	8	39	1380	189
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	365	404	337	359	265	118	132	3190	33	59	2584	354
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.07	0.61	0.61	0.07	1.00	1.00
Sat Flow, veh/h	1388	1863	1553	1355	1221	543	1774	5189	54	1774	4507	617
Grp Volume(v), veh/h	245	12	28	12	0	13	105	506	277	39	1038	531
Grp Sat Flow(s),veh/h/ln	1388	1863	1553	1355	0	1763	1774	1695	1852	1774	1695	1734
Q Serve(g_s), s	16.9	0.5	1.4	0.7	0.0	0.6	5.8	6.8	6.8	2.1	0.0	0.0
Cycle Q Clear(g_c), s	17.5	0.5	1.4	1.2	0.0	0.6	5.8	6.8	6.8	2.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.03	1.00		0.36
Lane Grp Cap(c), veh/h	365	404	337	359	0	383	132	2084	1139	59	1944	994
V/C Ratio(X)	0.67	0.03	0.08	0.03	0.00	0.03	0.79	0.24	0.24	0.66	0.53	0.53
Avail Cap(c_a), veh/h	540	639	533	530	0	605	186	2084	1139	165	1944	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	30.8	31.2	31.3	0.0	30.9	45.5	8.7	8.7	46.2	0.0	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.1	0.0	0.0	0.0	14.2	0.3	0.5	12.2	1.1	2.1
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	6.7	0.3	0.6	0.3	0.0	0.3	3.4	3.2	3.6	1.2	0.3	0.6
LnGrp Delay(d),s/veh	39.9	30.9	31.3	31.4	0.0	30.9	59.7	9.0	9.2	58.3	1.1	2.1
LnGrp LOS	D	C	C	C		C	E	A	A	E	A	A
Approach Vol, veh/h		285			25			888			1608	
Approach Delay, s/veh		38.7			31.1			15.1			2.8	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	66.0		26.2	11.9	61.8		26.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	9.3	42.9		34.3	10.5	41.7		34.3
Max Q Clear Time (g_c+I1), s	4.1	8.8		19.5	7.8	2.0		3.2
Green Ext Time (p_c), s	0.0	5.9		0.7	0.1	16.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	4	46	9	2	12	65	832	4	32	1467	36
Future Volume (veh/h)	40	4	46	9	2	12	65	832	4	32	1467	36
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)	0.97		0.96	0.97		0.95	1.00		0.99	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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	40	4	4	9	2	12	65	832	4	32	1467	36
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	299	26	267	138	45	139	83	3358	16	54	3199	79
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.64	0.64	0.03	0.63	0.63
Sat Flow, veh/h	1263	150	1513	465	256	787	1774	5223	25	1774	5105	125
Grp Volume(v), veh/h	44	0	4	23	0	0	65	540	296	32	974	529
Grp Sat Flow(s),veh/h/ln	1412	0	1513	1509	0	0	1774	1695	1858	1774	1695	1840
Q Serve(g_s), s	1.1	0.0	0.2	0.0	0.0	0.0	3.3	6.1	6.1	1.6	13.5	13.5
Cycle Q Clear(g_c), s	2.1	0.0	0.2	1.0	0.0	0.0	3.3	6.1	6.1	1.6	13.5	13.5
Prop In Lane	0.91		1.00	0.39		0.52	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	325	0	267	322	0	0	83	2180	1195	54	2124	1153
V/C Ratio(X)	0.14	0.00	0.01	0.07	0.00	0.00	0.78	0.25	0.25	0.59	0.46	0.46
Avail Cap(c_a), veh/h	636	0	605	651	0	0	108	2180	1195	108	2124	1153
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	0.00	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	31.3	0.0	30.6	31.0	0.0	0.0	42.4	6.8	6.8	43.1	8.8	8.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	23.1	0.3	0.5	8.1	0.6	1.1
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	0.9	0.0	0.1	0.5	0.0	0.0	2.1	2.9	3.3	0.9	6.4	7.1
LnGrp Delay(d),s/veh	31.5	0.0	30.6	31.0	0.0	0.0	65.5	7.1	7.3	51.1	9.4	9.9
LnGrp LOS	C		C	C			E	A	A	D	A	A
Approach Vol, veh/h		48			23			901			1535	
Approach Delay, s/veh		31.5			31.0			11.4			10.4	
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	7.3	62.4		20.4	8.7	60.9		20.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	35.0		36.0	5.5	35.0		36.0
Max Q Clear Time (g_c+I1), s	3.6	8.1		4.1	5.3	15.5		3.0
Green Ext Time (p_c), s	0.0	6.0		0.2	0.0	10.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	24	113	71	36	36	95	875	30	28	1417	90
Future Volume (veh/h)	94	24	113	71	36	36	95	875	30	28	1417	90
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)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	94	24	113	71	36	36	95	875	30	28	1417	90
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	309	59	277	154	78	59	121	3116	107	49	2818	179
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.07	0.62	0.62	0.03	0.58	0.58
Sat Flow, veh/h	1308	277	1304	458	365	277	1774	5044	173	1774	4884	310
Grp Volume(v), veh/h	94	0	137	143	0	0	95	588	317	28	984	523
Grp Sat Flow(s),veh/h/ln	1308	0	1580	1100	0	0	1774	1695	1826	1774	1695	1804
Q Serve(g_s), s	0.0	0.0	7.1	6.4	0.0	0.0	5.0	7.6	7.6	1.5	16.4	16.4
Cycle Q Clear(g_c), s	7.8	0.0	7.1	13.5	0.0	0.0	5.0	7.6	7.6	1.5	16.4	16.4
Prop In Lane	1.00		0.82	0.50		0.25	1.00		0.09	1.00		0.17
Lane Grp Cap(c), veh/h	309	0	336	291	0	0	121	2094	1128	49	1956	1041
V/C Ratio(X)	0.30	0.00	0.41	0.49	0.00	0.00	0.78	0.28	0.28	0.57	0.50	0.50
Avail Cap(c_a), veh/h	448	0	504	442	0	0	196	2094	1128	110	1956	1041
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	32.2	35.6	0.0	0.0	43.6	8.4	8.4	45.6	12.0	12.0
Incr Delay (d2), s/veh	0.5	0.0	0.8	1.3	0.0	0.0	10.5	0.3	0.6	10.2	0.9	1.7
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	2.2	0.0	3.2	3.6	0.0	0.0	2.8	3.6	4.0	0.9	7.9	8.6
LnGrp Delay(d),s/veh	33.1	0.0	33.0	36.9	0.0	0.0	54.1	8.7	9.0	55.8	12.9	13.7
LnGrp LOS	C		C	D			D	A	A	E	B	B
Approach Vol, veh/h		231			143			1000			1535	
Approach Delay, s/veh		33.1			36.9			13.1			14.0	
Approach LOS		C			D			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	7.1	63.2		24.7	11.0	59.3		24.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.9	45.3		30.3	10.5	40.7		30.3
Max Q Clear Time (g_c+I1), s	3.5	9.6		9.8	7.0	18.4		15.5
Green Ext Time (p_c), s	0.0	7.1		1.1	0.1	11.5		0.6

Intersection Summary		
HCM 2010 Ctrl Delay		16.3
HCM 2010 LOS		B

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	1070	0	0	1609
Future Vol, veh/h	0	4	1070	0	0	1609
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	4	1070	0	0	1609

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	535	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	419	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	419	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	419	-
HCM Lane V/C Ratio	-	-	0.01	-
HCM Control Delay (s)	-	-	13.7	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection						
Int Delay, s/veh	3.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	87	186	17	12	125
Future Vol, veh/h	51	87	186	17	12	125
Conflicting Peds, #/hr	6	0	0	13	13	6
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	51	87	186	17	12	125

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	216	0	-	0	410	214
Stage 1	-	-	-	-	208	-
Stage 2	-	-	-	-	202	-
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	1354	-	-	-	598	826
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1337	-	-	-	560	811
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1337	-	-	-	780
HCM Lane V/C Ratio	0.038	-	-	-	0.176
HCM Control Delay (s)	7.8	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection						
Int Delay, s/veh	0					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	7	0	324	0	0
Future Vol, veh/h	142	7	0	324	0	0
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	142	7	0	324	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	470	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	324	-
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	-	-	1432	-	552	901
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1432	-	552	901
Mov Cap-2 Maneuver	-	-	-	-	552	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	733	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1432	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	3.2					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	33	0	108	95	0
Future Vol, veh/h	66	33	0	108	95	0
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	66	33	0	108	95	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	99	0	191	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	108	-
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	-	-	1494	-	798	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	798	976
Mov Cap-2 Maneuver	-	-	-	-	798	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	798	-	-	1494	-
HCM Lane V/C Ratio	0.119	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	682	23	363	254	513	34	429	644	794	913	32
Future Volume (veh/h)	73	682	23	363	254	513	34	429	644	794	913	32
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		0.98	1.00		0.90	1.00		0.97	1.00		0.99
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	73	682	23	363	254	425	34	429	519	794	913	32
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	97	946	32	442	1077	773	44	1581	477	735	2520	88
Arrive On Green	0.05	0.27	0.27	0.09	0.30	0.30	0.02	0.31	0.31	0.21	0.50	0.50
Sat Flow, veh/h	1774	3490	118	5003	3539	1428	1774	5085	1535	3442	5042	176
Grp Volume(v), veh/h	73	346	359	363	254	425	34	429	519	794	613	332
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1668	1770	1428	1774	1695	1535	1721	1695	1829
Q Serve(g_s), s	6.3	27.4	27.5	11.1	8.3	31.7	3.0	9.8	48.2	33.1	17.1	17.2
Cycle Q Clear(g_c), s	6.3	27.4	27.5	11.1	8.3	31.7	3.0	9.8	48.2	33.1	17.1	17.2
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	97	480	498	442	1077	773	44	1581	477	735	1694	914
V/C Ratio(X)	0.75	0.72	0.72	0.82	0.24	0.55	0.77	0.27	1.09	1.08	0.36	0.36
Avail Cap(c_a), veh/h	149	480	498	442	1077	773	66	1581	477	735	1694	914
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	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	51.2	51.2	69.4	40.4	25.6	75.1	40.2	53.4	61.0	23.7	23.7
Incr Delay (d2), s/veh	10.9	9.0	8.7	11.1	0.5	2.6	26.1	0.4	66.9	57.0	0.6	1.1
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	3.4	14.6	15.2	5.6	4.2	13.0	1.8	4.7	29.3	21.5	8.1	8.9
LnGrp Delay(d),s/veh	83.0	60.2	59.9	80.6	40.9	28.3	101.2	40.6	120.3	118.0	24.3	24.8
LnGrp LOS	F	E	E	F	D	C	F	D	F	F	C	C
Approach Vol, veh/h		778			1042			982			1739	
Approach Delay, s/veh		62.2			49.6			84.8			67.2	
Approach LOS		E			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	52.7	18.2	46.5	8.3	82.0	13.0	51.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.1	48.2	13.7	42.0	5.8	75.5	13.0	42.7
Max Q Clear Time (g_c+I1), s	35.1	50.2	13.1	29.5	5.0	19.2	8.3	33.7
Green Ext Time (p_c), s	0.0	0.0	0.1	3.6	0.0	7.9	0.0	2.4

Intersection Summary			
HCM 2010 Ctrl Delay			66.1
HCM 2010 LOS			E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	7	21	55	17	44	40	1713	60	89	1459	70
Future Volume (veh/h)	38	7	21	55	17	44	40	1713	60	89	1459	70
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)	0.97		0.96	0.96		0.95	1.00		0.99	1.00		0.98
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	7	21	55	17	44	40	1713	60	89	1459	70
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	204	44	91	172	59	112	57	3114	109	113	3224	155
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	775	224	466	629	303	570	1774	5043	177	1774	4967	238
Grp Volume(v), veh/h	66	0	0	116	0	0	40	1151	622	89	996	533
Grp Sat Flow(s),veh/h/ln	1466	0	0	1502	0	0	1774	1695	1830	1774	1695	1815
Q Serve(g_s), s	0.0	0.0	0.0	3.1	0.0	0.0	2.5	21.6	21.7	5.4	16.1	16.1
Cycle Q Clear(g_c), s	3.7	0.0	0.0	6.9	0.0	0.0	2.5	21.6	21.7	5.4	16.1	16.1
Prop In Lane	0.58		0.32	0.47		0.38	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	339	0	0	343	0	0	57	2093	1130	113	2201	1178
V/C Ratio(X)	0.19	0.00	0.00	0.34	0.00	0.00	0.70	0.55	0.55	0.79	0.45	0.45
Avail Cap(c_a), veh/h	486	0	0	495	0	0	116	2093	1130	202	2201	1178
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	38.2	0.0	0.0	52.7	12.2	12.2	50.8	9.6	9.6
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	14.6	1.0	1.9	11.3	0.7	1.3
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	1.7	0.0	0.0	3.1	0.0	0.0	1.4	10.4	11.5	3.0	7.7	8.4
LnGrp Delay(d),s/veh	37.3	0.0	0.0	38.8	0.0	0.0	67.3	13.2	14.1	62.1	10.3	10.8
LnGrp LOS	D			D			E	B	B	E	B	B
Approach Vol, veh/h		66			116			1813			1618	
Approach Delay, s/veh		37.3			38.8			14.7			13.3	
Approach LOS		D			D			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	11.5	72.4		26.1	8.0	75.9		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	12.5	50.9		33.1	7.2	56.2		33.1
Max Q Clear Time (g_c+I1), s	7.4	23.7		5.7	4.5	18.1		8.9
Green Ext Time (p_c), s	0.1	15.6		0.3	0.0	15.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			✣		↰	↑↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	132	20	18	80	17	41	38	1618	63	108	1278	110
Future Volume (veh/h)	132	20	18	80	17	41	38	1618	63	108	1278	110
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)	0.99		0.96	0.98		0.98	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	132	20	18	80	17	41	38	1618	63	108	1278	110
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	233	123	111	152	37	58	55	3325	129	135	3372	290
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.02	0.44	0.44	0.08	0.71	0.71
Sat Flow, veh/h	1324	888	799	720	264	416	1774	5021	195	1774	4767	410
Grp Volume(v), veh/h	132	0	38	138	0	0	38	1092	589	108	909	479
Grp Sat Flow(s),veh/h/ln	1324	0	1687	1400	0	0	1774	1695	1826	1774	1695	1787
Q Serve(g_s), s	1.4	0.0	2.2	8.4	0.0	0.0	2.3	25.1	25.2	6.6	11.8	11.8
Cycle Q Clear(g_c), s	12.0	0.0	2.2	10.5	0.0	0.0	2.3	25.1	25.2	6.6	11.8	11.8
Prop In Lane	1.00		0.47	0.58		0.30	1.00		0.11	1.00		0.23
Lane Grp Cap(c), veh/h	233	0	234	246	0	0	55	2245	1209	135	2398	1264
V/C Ratio(X)	0.57	0.00	0.16	0.56	0.00	0.00	0.69	0.49	0.49	0.80	0.38	0.38
Avail Cap(c_a), veh/h	357	0	391	381	0	0	106	2245	1209	266	2398	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	41.7	45.5	0.0	0.0	53.3	17.3	17.3	50.0	6.4	6.4
Incr Delay (d2), s/veh	2.2	0.0	0.3	2.0	0.0	0.0	14.0	0.8	1.4	10.1	0.5	0.9
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	4.0	0.0	1.0	4.2	0.0	0.0	1.4	12.1	13.2	3.6	5.6	6.0
LnGrp Delay(d),s/veh	48.2	0.0	42.1	47.5	0.0	0.0	67.3	18.1	18.7	60.1	6.9	7.3
LnGrp LOS	D		D	D			E	B	B	E	A	A
Approach Vol, veh/h		170			138			1719			1496	
Approach Delay, s/veh		46.8			47.5			19.4			10.9	
Approach LOS		D			D			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	12.9	77.3		19.8	7.9	82.3		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	16.5	54.5		25.5	6.6	64.4		25.5
Max Q Clear Time (g_c+I1), s	8.6	27.2		14.0	4.3	13.8		12.5
Green Ext Time (p_c), s	0.1	14.6		0.4	0.0	14.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1	112	2	0	18	97	1657	20	36	1307	59
Future Vol, veh/h	12	1	112	2	0	18	97	1657	20	36	1307	59
Conflicting Peds, #/hr	40	0	29	16	0	27	29	0	16	27	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	112	2	0	18	97	1657	20	36	1307	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2346	3347	752	2512	3366	906	1406	0	0	1704	0	0
Stage 1	1449	1449	-	1888	1888	-	-	-	-	-	-	-
Stage 2	897	1898	-	624	1478	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*208	*17	303	*141	*16	*525	248	-	-	*660	-	-
Stage 1	*96	*194	-	*539	*512	-	-	-	-	-	-	-
Stage 2	*539	*512	-	*401	*188	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*122	*9	283	*49	*8	*492	239	-	-	*643	-	-
Mov Cap-2 Maneuver	*122	*9	-	*49	*8	-	-	-	-	-	-	-
Stage 1	*55	*176	-	*312	*297	-	-	-	-	-	-	-
Stage 2	*297	*297	-	*221	*171	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45.8	20.1	1.6	0.3
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	239	-	-	207	258	* 643	-	-
HCM Lane V/C Ratio	0.406	-	-	0.604	0.078	0.056	-	-
HCM Control Delay (s)	30	-	-	45.8	20.1	10.9	-	-
HCM Lane LOS	D	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	1.9	-	-	3.4	0.2	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	15	0	16	1	1745	49	61	1364	8
Future Vol, veh/h	0	0	0	15	0	16	1	1745	49	61	1364	8
Conflicting Peds, #/hr	29	0	39	18	0	8	39	0	18	8	0	29
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	15	0	16	1	1745	49	61	1364	8

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	2476	3323	923	1411	0	0	1812	0	0
Stage 1	1790	1790	-	-	-	-	-	-	-
Stage 2	686	1533	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*215	*20	*501	247	-	-	*630	-	-
Stage 1	*514	*489	-	-	-	-	-	-	-
Stage 2	*420	*177	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*187	*0	*489	247	-	-	*619	-	-
Mov Cap-2 Maneuver	*187	*0	-	-	-	-	-	-	-
Stage 1	*505	*0	-	-	-	-	-	-	-
Stage 2	*372	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.8	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	247	-	-	274	* 619	-	-
HCM Lane V/C Ratio	0.004	-	-	0.113	0.099	-	-
HCM Control Delay (s)	19.6	-	-	19.8	11.5	-	-
HCM Lane LOS	C	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	34	21	1790	1354	31
Future Vol, veh/h	6	34	21	1790	1354	31
Conflicting Peds, #/hr	20	20	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	34	21	1790	1354	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2168	733	1405	0	-	0
Stage 1	1390	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*402	312	248	-	-	-
Stage 1	*139	-	-	-	-	-
Stage 2	*514	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*353	300	243	-	-	-
Mov Cap-2 Maneuver	*353	-	-	-	-	-
Stage 1	*125	-	-	-	-	-
Stage 2	*504	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	243	-	307	-	-
HCM Lane V/C Ratio	0.086	-	0.13	-	-
HCM Control Delay (s)	21.2	-	18.5	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	24	57	1735	1355	37
Future Volume (veh/h)	75	24	57	1735	1355	37
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	75	-24	57	1735	1355	37
Adj No. of Lanes	1	1	1	3	3	0
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	86	77	74	4422	4004	109
Arrive On Green	0.05	0.00	0.04	0.87	0.79	0.79
Sat Flow, veh/h	1774	1583	1774	5253	5255	139
Grp Volume(v), veh/h	75	-24	57	1735	903	489
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1836
Q Serve(g_s), s	4.6	0.0	3.5	7.4	8.5	8.5
Cycle Q Clear(g_c), s	4.6	0.0	3.5	7.4	8.5	8.5
Prop In Lane	1.00	1.00	1.00			0.08
Lane Grp Cap(c), veh/h	86	77	74	4422	2668	1445
V/C Ratio(X)	0.87	-0.31	0.77	0.39	0.34	0.34
Avail Cap(c_a), veh/h	460	410	250	4422	2668	1445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	0.0	52.2	1.4	3.4	3.4
Incr Delay (d2), s/veh	21.9	0.0	15.4	0.3	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.0	3.5	4.0	4.5
LnGrp Delay(d),s/veh	73.8	0.0	67.5	1.7	3.7	4.0
LnGrp LOS	E		E	A	A	A
Approach Vol, veh/h	51			1792	1392	
Approach Delay, s/veh	108.6			3.8	3.9	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		100.2		9.8	9.1	91.1		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		72.5		28.5	15.5	52.5		
Max Q Clear Time (g_c+I1), s		9.4		6.6	5.5	10.5		
Green Ext Time (p_c), s		23.1		0.2	0.1	13.4		

Intersection Summary		
HCM 2010 Ctrl Delay		5.5
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	31	3	1	6	38	1756	8	42	1329	48
Future Vol, veh/h	8	0	31	3	1	6	38	1756	8	42	1329	48
Conflicting Peds, #/hr	23	0	15	24	0	32	15	0	24	32	0	23
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	31	3	1	6	38	1756	8	42	1329	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2271	3332	736	2508	3352	946	1400	0	0	1796	0	0
Stage 1	1460	1460	-	1868	1868	-	-	-	-	-	-	-
Stage 2	811	1872	-	640	1484	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*43	*8	*621	*30	*8	*509	*781	-	-	*639	-	-
Stage 1	*626	*599	-	*522	*496	-	-	-	-	-	-	-
Stage 2	*522	*496	-	*638	*579	-	-	-	-	-	-	-
Platoon blocked, %			1			1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*33	*7	*594	*25	*7	*478	*764	-	-	*620	-	-
Mov Cap-2 Maneuver	*33	*7	-	*25	*7	-	-	-	-	-	-	-
Stage 1	*582	*546	-	*481	*458	-	-	-	-	-	-	-
Stage 2	*474	*458	-	*550	*527	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	43.3	139.7	0.2	0.3
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 764	-	-	132	36	* 620	-	-
HCM Lane V/C Ratio	0.05	-	-	0.295	0.278	0.068	-	-
HCM Control Delay (s)	10	-	-	43.3	139.7	11.2	-	-
HCM Lane LOS	A	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	0.9	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	23	35	132	25	69	54	1656	161	56	1285	24
Future Volume (veh/h)	64	23	35	132	25	69	54	1656	161	56	1285	24
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)	0.99		0.97	0.99		0.99	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	23	35	132	25	69	54	1656	161	56	1285	24
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	141	215	203	38	86	70	2988	290	72	3275	61
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.64	0.64	0.04	0.64	0.64
Sat Flow, veh/h	1288	657	999	729	177	398	1774	4699	456	1774	5139	96
Grp Volume(v), veh/h	64	0	58	226	0	0	54	1194	623	56	848	461
Grp Sat Flow(s),veh/h/ln	1288	0	1656	1304	0	0	1774	1695	1764	1774	1695	1845
Q Serve(g_s), s	0.0	0.0	3.6	17.7	0.0	0.0	3.8	24.7	24.9	3.9	15.1	15.1
Cycle Q Clear(g_c), s	6.1	0.0	3.6	21.3	0.0	0.0	3.8	24.7	24.9	3.9	15.1	15.1
Prop In Lane	1.00		0.60	0.58		0.31	1.00		0.26	1.00		0.05
Lane Grp Cap(c), veh/h	301	0	357	327	0	0	70	2156	1122	72	2160	1175
V/C Ratio(X)	0.21	0.00	0.16	0.69	0.00	0.00	0.77	0.55	0.56	0.78	0.39	0.39
Avail Cap(c_a), veh/h	389	0	470	425	0	0	192	2156	1122	149	2160	1175
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	39.9	47.9	0.0	0.0	59.5	12.8	12.8	59.4	11.0	11.0
Incr Delay (d2), s/veh	0.3	0.0	0.2	3.2	0.0	0.0	16.3	1.0	2.0	16.0	0.5	1.0
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	1.9	0.0	1.6	7.8	0.0	0.0	2.2	11.7	12.6	2.2	7.2	8.0
LnGrp Delay(d),s/veh	41.2	0.0	40.1	51.1	0.0	0.0	75.8	13.8	14.8	75.4	11.5	12.0
LnGrp LOS	D		D	D			E	B	B	E	B	B
Approach Vol, veh/h		122			226			1871			1365	
Approach Delay, s/veh		40.7			51.1			15.9			14.3	
Approach LOS		D			D			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	9.6	84.0		31.4	9.4	84.2		31.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	65.5		35.5	13.5	62.5		35.5				
Max Q Clear Time (g_c+I1), s	5.9	26.9		8.1	5.8	17.1		23.3				
Green Ext Time (p_c), s	0.0	19.6		0.5	0.0	12.4		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.4									
HCM 2010 LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	7	95	15	5	26	193	1536	4	46	1246	199
Future Volume (veh/h)	274	7	95	15	5	26	193	1536	4	46	1246	199
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)	0.99		0.97	0.99		0.99	1.00		0.99	1.00		0.98
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	274	7	36	15	5	26	193	1536	4	46	1246	199
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	410	492	407	422	68	355	224	2958	8	64	2091	334
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.13	0.56	0.56	0.04	0.47	0.47
Sat Flow, veh/h	1355	1863	1542	1341	259	1345	1774	5237	14	1774	4409	704
Grp Volume(v), veh/h	274	7	36	15	0	31	193	994	546	46	958	487
Grp Sat Flow(s),veh/h/ln	1355	1863	1542	1341	0	1604	1774	1695	1860	1774	1695	1722
Q Serve(g_s), s	19.0	0.3	1.8	0.8	0.0	1.5	10.7	18.1	18.1	2.6	20.7	20.7
Cycle Q Clear(g_c), s	20.5	0.3	1.8	1.1	0.0	1.5	10.7	18.1	18.1	2.6	20.7	20.7
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.01	1.00		0.41
Lane Grp Cap(c), veh/h	410	492	407	422	0	423	224	1915	1051	64	1608	817
V/C Ratio(X)	0.67	0.01	0.09	0.04	0.00	0.07	0.86	0.52	0.52	0.72	0.60	0.60
Avail Cap(c_a), veh/h	561	699	578	571	0	601	239	1915	1051	98	1608	817
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	1.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	27.2	27.7	27.6	0.0	27.6	42.8	13.4	13.4	47.7	19.3	19.3
Incr Delay (d2), s/veh	1.9	0.0	0.1	0.0	0.0	0.1	22.6	0.9	1.6	14.0	1.6	3.2
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	7.3	0.1	0.8	0.3	0.0	0.7	6.6	8.7	9.7	1.5	9.9	10.5
LnGrp Delay(d),s/veh	37.2	27.2	27.8	27.6	0.0	27.7	65.4	14.3	15.0	61.7	20.9	22.4
LnGrp LOS	D	C	C	C		C	E	B	B	E	C	C
Approach Vol, veh/h		317			46			1733			1491	
Approach Delay, s/veh		35.9			27.7			20.2			22.7	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	61.0		30.9	17.1	51.9		30.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	43.5		37.5	13.5	35.5		37.5
Max Q Clear Time (g_c+I1), s	4.6	20.1		22.5	12.7	22.7		3.5
Green Ext Time (p_c), s	0.0	12.0		0.9	0.0	7.8		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		22.7
HCM 2010 LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	3	90	10	3	9	136	1547	7	41	1278	66
Future Volume (veh/h)	112	3	90	10	3	9	136	1547	7	41	1278	66
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)	0.97		0.97	0.97		0.95	1.00		0.97	1.00		0.99
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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	112	3	16	10	3	9	136	1547	7	41	1278	66
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	342	8	347	140	50	96	167	3157	14	60	2693	139
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.09	0.60	0.60	0.01	0.18	0.18
Sat Flow, veh/h	1196	36	1531	387	222	422	1774	5224	24	1774	4950	256
Grp Volume(v), veh/h	115	0	16	22	0	0	136	1004	550	41	875	469
Grp Sat Flow(s),veh/h/ln	1233	0	1531	1031	0	0	1774	1695	1858	1774	1695	1815
Q Serve(g_s), s	0.0	0.0	0.8	0.1	0.0	0.0	7.5	16.6	16.6	2.3	23.2	23.2
Cycle Q Clear(g_c), s	9.5	0.0	0.8	9.7	0.0	0.0	7.5	16.6	16.6	2.3	23.2	23.2
Prop In Lane	0.97		1.00	0.45		0.41	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	350	0	347	286	0	0	167	2049	1123	60	1844	988
V/C Ratio(X)	0.33	0.00	0.05	0.08	0.00	0.00	0.81	0.49	0.49	0.68	0.47	0.47
Avail Cap(c_a), veh/h	540	0	559	490	0	0	257	2049	1123	257	1844	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	33.6	0.0	30.2	30.6	0.0	0.0	44.4	11.1	11.1	48.9	28.2	28.2
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.0	10.8	0.8	1.5	9.7	0.7	1.2
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	2.8	0.0	0.3	0.5	0.0	0.0	4.2	7.9	8.9	1.3	11.0	12.0
LnGrp Delay(d),s/veh	34.1	0.0	30.3	30.7	0.0	0.0	55.2	12.0	12.6	58.6	28.9	29.4
LnGrp LOS	C		C	C			E	B	B	E	C	C
Approach Vol, veh/h		131			22			1690			1385	
Approach Delay, s/veh		33.6			30.7			15.7			29.9	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	64.9		27.2	13.9	58.9		27.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	35.5		36.5	14.5	35.5		36.5
Max Q Clear Time (g_c+I1), s	4.3	18.6		11.5	9.5	25.2		11.7
Green Ext Time (p_c), s	0.0	10.0		0.6	0.1	6.2		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	25	95	55	18	32	132	1721	66	64	1340	94
Future Volume (veh/h)	127	25	95	55	18	32	132	1721	66	64	1340	94
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)	0.98		0.95	0.98		0.95	1.00		0.94	1.00		0.96
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	127	25	95	55	18	32	132	1721	66	64	1340	94
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	330	71	270	166	58	74	98	3016	116	82	2868	201
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.60	0.60	0.05	0.59	0.59
Sat Flow, veh/h	1318	327	1244	512	269	342	1774	5012	192	1774	4836	339
Grp Volume(v), veh/h	127	0	120	105	0	0	132	1164	623	64	939	495
Grp Sat Flow(s),veh/h/ln	1318	0	1572	1123	0	0	1774	1695	1814	1774	1695	1785
Q Serve(g_s), s	0.0	0.0	6.5	4.5	0.0	0.0	5.5	20.8	20.9	3.6	15.6	15.6
Cycle Q Clear(g_c), s	10.6	0.0	6.5	10.9	0.0	0.0	5.5	20.8	20.9	3.6	15.6	15.6
Prop In Lane	1.00		0.79	0.52		0.30	1.00		0.11	1.00		0.19
Lane Grp Cap(c), veh/h	330	0	341	299	0	0	98	2040	1091	82	2011	1059
V/C Ratio(X)	0.38	0.00	0.35	0.35	0.00	0.00	1.35	0.57	0.57	0.78	0.47	0.47
Avail Cap(c_a), veh/h	446	0	479	421	0	0	98	2040	1091	98	2011	1059
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	33.2	35.5	0.0	0.0	47.3	12.1	12.1	47.2	11.5	11.5
Incr Delay (d2), s/veh	0.7	0.0	0.6	0.7	0.0	0.0	211.8	1.2	2.2	27.9	0.8	1.5
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	3.2	0.0	2.9	2.7	0.0	0.0	8.4	10.0	11.0	2.4	7.4	8.0
LnGrp Delay(d),s/veh	35.5	0.0	33.8	36.2	0.0	0.0	259.1	13.2	14.3	75.0	12.2	12.9
LnGrp LOS	D		C	D			F	B	B	E	B	B
Approach Vol, veh/h		247			105			1919			1498	
Approach Delay, s/veh		34.7			36.2			30.5			15.2	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	64.7		26.2	10.0	63.8		26.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	50.5		30.5	5.5	50.5		30.5
Max Q Clear Time (g_c+I1), s	5.6	22.9		12.6	7.5	17.6		12.9
Green Ext Time (p_c), s	0.0	15.9		1.0	0.0	13.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1867	2	0	1491
Future Vol, veh/h	0	1	1867	2	0	1491
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	1	1867	2	0	1491

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	935	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	229	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	229	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	229	-
HCM Lane V/C Ratio	-	-	0.004	-
HCM Control Delay (s)	-	-	20.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	172	113	5	11	95
Future Vol, veh/h	48	172	113	5	11	95
Conflicting Peds, #/hr	7	0	0	11	11	7
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	48	172	113	5	11	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	129	0	-	0	406	134
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	279	-
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	1457	-	-	-	601	915
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	768	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	567	899
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	760	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	848
HCM Lane V/C Ratio	0.033	-	-	-	0.125
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection						
Int Delay, s/veh	0					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	242	0	0	228	0	0
Future Vol, veh/h	242	0	0	228	0	0
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	242	0	0	228	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	242	0	470	242
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	228	-
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	-	-	1324	-	552	797
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1324	-	552	797
Mov Cap-2 Maneuver	-	-	-	-	552	-
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	810	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1324	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	2.1					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	98	0	55	63	0
Future Vol, veh/h	85	98	0	55	63	0
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	85	98	0	55	63	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	183	0	189	134
Stage 1	-	-	-	-	134	-
Stage 2	-	-	-	-	55	-
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	-	-	1392	-	800	915
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1392	-	800	915
Mov Cap-2 Maneuver	-	-	-	-	800	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	800	-	-	1392	-
HCM Lane V/C Ratio	0.079	-	-	-	-
HCM Control Delay (s)	9.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	313	36	574	611	952	36	807	482	620	839	50
Future Volume (veh/h)	99	313	36	574	611	952	36	807	482	620	839	50
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		0.96	1.00		0.91	1.00		0.97	1.00		0.96
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	99	313	36	574	611	908	36	807	294	620	839	50
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	119	836	95	578	1100	767	46	1569	473	691	2366	141
Arrive On Green	0.07	0.26	0.26	0.12	0.31	0.31	0.03	0.31	0.31	0.20	0.48	0.48
Sat Flow, veh/h	1774	3186	363	5003	3539	1444	1774	5085	1532	3442	4897	291
Grp Volume(v), veh/h	99	172	177	574	611	908	36	807	294	620	580	309
Grp Sat Flow(s),veh/h/ln	1774	1770	1779	1668	1770	1444	1774	1695	1532	1721	1695	1798
Q Serve(g_s), s	8.8	12.7	13.0	18.3	23.0	49.7	3.2	20.9	26.3	28.1	17.1	17.2
Cycle Q Clear(g_c), s	8.8	12.7	13.0	18.3	23.0	49.7	3.2	20.9	26.3	28.1	17.1	17.2
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	119	465	467	578	1100	767	46	1569	473	691	1638	869
V/C Ratio(X)	0.83	0.37	0.38	0.99	0.56	1.18	0.78	0.51	0.62	0.90	0.35	0.36
Avail Cap(c_a), veh/h	167	465	467	578	1100	767	102	1569	473	940	1638	869
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	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	48.2	48.3	70.7	45.9	40.0	77.4	45.5	47.3	62.3	25.8	25.8
Incr Delay (d2), s/veh	20.8	2.3	2.3	32.1	1.7	93.8	23.6	1.2	6.0	8.9	0.6	1.1
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	5.0	6.5	6.7	10.2	11.5	53.7	1.9	10.0	12.0	14.2	8.1	8.8
LnGrp Delay(d),s/veh	94.5	50.5	50.6	102.7	47.6	133.8	101.0	46.7	53.4	71.2	26.4	26.9
LnGrp LOS	F	D	D	F	D	F	F	D	D	E	C	C
Approach Vol, veh/h		448			2093			1137			1509	
Approach Delay, s/veh		60.3			100.1			50.1			44.9	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.6	53.9	23.0	46.5	8.7	81.8	15.3	54.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	43.7	37.8	18.5	42.0	9.2	72.3	15.1	45.4
Max Q Clear Time (g_c+I1), s	30.1	28.3	20.3	15.0	5.2	19.2	10.8	51.7
Green Ext Time (p_c), s	2.0	4.5	0.0	2.1	0.0	7.3	0.1	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	69.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	32	50	9	60	21	1123	28	46	1126	13
Future Volume (veh/h)	35	9	32	50	9	60	21	1123	28	46	1126	13
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)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.99
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	9	32	50	9	60	21	1123	28	46	1126	13
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	159	50	114	143	39	133	39	3330	83	64	3458	40
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.65	0.65	0.04	0.67	0.67
Sat Flow, veh/h	607	287	650	524	223	760	1774	5098	127	1774	5182	60
Grp Volume(v), veh/h	76	0	0	119	0	0	21	747	404	46	737	402
Grp Sat Flow(s),veh/h/ln	1544	0	0	1507	0	0	1774	1695	1835	1774	1695	1852
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	1.2	9.8	9.8	2.6	9.2	9.2
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.6	0.0	0.0	1.2	9.8	9.8	2.6	9.2	9.2
Prop In Lane	0.46		0.42	0.42		0.50	1.00		0.07	1.00		0.03
Lane Grp Cap(c), veh/h	324	0	0	316	0	0	39	2215	1199	64	2262	1235
V/C Ratio(X)	0.23	0.00	0.00	0.38	0.00	0.00	0.54	0.34	0.34	0.72	0.33	0.33
Avail Cap(c_a), veh/h	582	0	0	576	0	0	115	2215	1199	133	2262	1235
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	0.0	36.6	0.0	0.0	48.4	7.7	7.7	47.7	7.1	7.1
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	0.0	10.9	0.4	0.8	14.0	0.4	0.7
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	1.8	0.0	0.0	3.0	0.0	0.0	0.7	4.7	5.2	1.5	4.4	4.9
LnGrp Delay(d),s/veh	35.9	0.0	0.0	37.3	0.0	0.0	59.3	8.1	8.5	61.7	7.5	7.8
LnGrp LOS	D			D			E	A	A	E	A	A
Approach Vol, veh/h		76			119			1172			1185	
Approach Delay, s/veh		35.9			37.3			9.2			9.7	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	69.8		22.1	6.7	71.2		22.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	43.5		35.5	6.5	44.5		35.5
Max Q Clear Time (g_c+I1), s	4.6	11.8		5.8	3.2	11.2		8.6
Green Ext Time (p_c), s	0.0	9.5		0.4	0.0	9.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	16	16	131	8	36	8	1026	56	65	1148	75
Future Volume (veh/h)	117	16	16	131	8	36	8	1026	56	65	1148	75
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)	0.98		0.96	0.98		0.97	1.00		0.97	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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	117	16	16	131	8	36	8	1026	56	65	1148	75
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	140	140	220	15	45	18	3203	175	85	3355	219
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	1.00	1.00	0.05	0.69	0.69
Sat Flow, veh/h	1336	836	836	942	92	268	1774	4927	269	1774	4877	318
Grp Volume(v), veh/h	117	0	32	175	0	0	8	706	376	65	798	425
Grp Sat Flow(s),veh/h/ln	1336	0	1672	1301	0	0	1774	1695	1805	1774	1695	1805
Q Serve(g_s), s	0.0	0.0	1.6	11.6	0.0	0.0	0.4	0.0	0.0	3.6	9.6	9.6
Cycle Q Clear(g_c), s	7.7	0.0	1.6	13.2	0.0	0.0	0.4	0.0	0.0	3.6	9.6	9.6
Prop In Lane	1.00		0.50	0.75		0.21	1.00		0.15	1.00		0.18
Lane Grp Cap(c), veh/h	301	0	279	280	0	0	18	2204	1174	85	2333	1242
V/C Ratio(X)	0.39	0.00	0.11	0.62	0.00	0.00	0.45	0.32	0.32	0.77	0.34	0.34
Avail Cap(c_a), veh/h	472	0	493	459	0	0	151	2204	1174	381	2333	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	35.4	40.7	0.0	0.0	48.7	0.0	0.0	47.1	6.4	6.4
Incr Delay (d2), s/veh	0.8	0.0	0.2	2.3	0.0	0.0	17.0	0.4	0.7	13.3	0.4	0.8
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	3.0	0.0	0.8	4.8	0.0	0.0	0.3	0.1	0.2	2.1	4.6	5.0
LnGrp Delay(d),s/veh	38.7	0.0	35.6	43.0	0.0	0.0	65.8	0.4	0.7	60.3	6.8	7.1
LnGrp LOS	D		D	D			E	A	A	E	A	A
Approach Vol, veh/h		149			175			1090			1288	
Approach Delay, s/veh		38.0			43.0			1.0			9.6	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	69.5		21.2	5.5	73.3		21.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	35.5		29.5	8.5	48.5		29.5
Max Q Clear Time (g_c+I1), s	5.6	2.0		9.7	2.4	11.6		15.2
Green Ext Time (p_c), s	0.1	8.9		0.4	0.0	10.7		0.8

Intersection Summary		
HCM 2010 Ctrl Delay		9.8
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	108	8	0	16	77	1024	9	10	1337	14
Future Vol, veh/h	5	0	108	8	0	16	77	1024	9	10	1337	14
Conflicting Peds, #/hr	22	0	12	16	0	26	12	0	16	26	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	108	8	0	16	77	1024	9	10	1337	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1976	2599	714	1780	2602	569	1373	0	0	1059	0	0
Stage 1	1386	1386	-	1209	1209	-	-	-	-	-	-	-
Stage 2	590	1213	-	571	1393	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*74	27	321	100	27	*698	257	-	-	*877	-	-
Stage 1	*107	209	-	551	574	-	-	-	-	-	-	-
Stage 2	*716	571	-	431	207	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*52	17	309	47	17	*663	252	-	-	*855	-	-
Mov Cap-2 Maneuver	*52	17	-	47	17	-	-	-	-	-	-	-
Stage 1	*73	202	-	373	388	-	-	-	-	-	-	-
Stage 2	*473	386	-	273	200	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.1	41.2	1.8	0.1
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	252	-	-	254	123	* 855	-	-
HCM Lane V/C Ratio	0.306	-	-	0.445	0.195	0.012	-	-
HCM Control Delay (s)	25.4	-	-	30.1	41.2	9.3	-	-
HCM Lane LOS	D	-	-	D	E	A	-	-
HCM 95th %tile Q(veh)	1.2	-	-	2.1	0.7	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	23	0	28	1	1048	32	29	1443	5
Future Vol, veh/h	0	0	0	23	0	28	1	1048	32	29	1443	5
Conflicting Peds, #/hr	16	0	31	25	0	10	31	0	25	10	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	23	0	28	1	1048	32	29	1443	5

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1751	2628	575	1479	0	0	1105	0	0
Stage 1	1091	1091	-	-	-	-	-	-	-
Stage 2	660	1537	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*304	*47	*671	228	-	-	*844	-	-
Stage 1	*689	*655	-	-	-	-	-	-	-
Stage 2	*433	*176	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*277	*0	*649	228	-	-	*824	-	-
Mov Cap-2 Maneuver	*277	*0	-	-	-	-	-	-	-
Stage 1	*665	*0	-	-	-	-	-	-	-
Stage 2	*408	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	228	-	-	404	* 824	-	-
HCM Lane V/C Ratio	0.004	-	-	0.126	0.035	-	-
HCM Control Delay (s)	20.9	-	-	15.2	9.5	-	-
HCM Lane LOS	C	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	51	1126	1350	53
Future Vol, veh/h	6	11	51	1126	1350	53
Conflicting Peds, #/hr	6	6	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	11	51	1126	1350	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1941	714	1409	0	-	0
Stage 1	1383	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*226	321	247	-	-	-
Stage 1	*140	-	-	-	-	-
Stage 2	*689	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*177	317	246	-	-	-
Mov Cap-2 Maneuver	*177	-	-	-	-	-
Stage 1	*110	-	-	-	-	-
Stage 2	*685	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.6	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	246	-	248	-	-
HCM Lane V/C Ratio	0.207	-	0.069	-	-
HCM Control Delay (s)	23.4	-	20.6	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.8	-	0.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	122	42	84	1027	1373	45		
Future Volume (veh/h)	122	42	84	1027	1373	45		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	122	6	84	1027	1373	45		
Adj No. of Lanes	1	1	1	3	3	0		
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	156	139	107	4181	3622	119		
Arrive On Green	0.09	0.09	0.12	1.00	0.72	0.72		
Sat Flow, veh/h	1774	1583	1774	5253	5221	166		
Grp Volume(v), veh/h	122	6	84	1027	921	497		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1828		
Q Serve(g_s), s	6.7	0.3	4.6	0.0	10.6	10.6		
Cycle Q Clear(g_c), s	6.7	0.3	4.6	0.0	10.6	10.6		
Prop In Lane	1.00	1.00	1.00			0.09		
Lane Grp Cap(c), veh/h	156	139	107	4181	2430	1311		
V/C Ratio(X)	0.78	0.04	0.78	0.25	0.38	0.38		
Avail Cap(c_a), veh/h	506	451	239	4181	2430	1311		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	44.7	41.8	43.3	0.0	5.5	5.5		
Incr Delay (d2), s/veh	8.3	0.1	11.8	0.1	0.5	0.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.6	0.3	2.6	0.1	5.0	5.5		
LnGrp Delay(d),s/veh	53.0	41.9	55.1	0.1	6.0	6.3		
LnGrp LOS	D	D	E	A	A	A		
Approach Vol, veh/h	128			1111	1418			
Approach Delay, s/veh	52.5			4.3	6.1			
Approach LOS	D			A	A			
Timer	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		86.7		13.3	10.5	76.2		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.5		28.5	13.5	44.5		
Max Q Clear Time (g_c+I1), s		2.0		8.7	6.6	12.6		
Green Ext Time (p_c), s		9.7		0.3	0.1	12.6		
Intersection Summary								
HCM 2010 Ctrl Delay			7.6					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	58	2	2	9	53	1042	14	29	1344	87
Future Vol, veh/h	12	0	58	2	2	9	53	1042	14	29	1344	87
Conflicting Peds, #/hr	34	0	21	21	0	34	21	0	21	34	0	34
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	58	2	2	9	53	1042	14	29	1344	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2038	2676	771	1806	2712	596	1465	0	0	1090	0	0
Stage 1	1480	1480	-	1189	1189	-	-	-	-	-	-	-
Stage 2	558	1196	-	617	1523	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*382	*360	*618	*382	*322	*671	*777	-	-	*844	-	-
Stage 1	*616	*592	-	*689	*655	-	-	-	-	-	-	-
Stage 2	*689	*655	-	*634	*555	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*323	*303	*586	*301	*271	*628	*752	-	-	*817	-	-
Mov Cap-2 Maneuver	*323	*303	-	*301	*271	-	-	-	-	-	-	-
Stage 1	*554	*553	-	*619	*590	-	-	-	-	-	-	-
Stage 2	*608	*590	-	*540	*519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.1	13.1	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 752	-	-	514	458	* 817	-	-
HCM Lane V/C Ratio	0.07	-	-	0.136	0.028	0.035	-	-
HCM Control Delay (s)	10.2	-	-	13.1	13.1	9.6	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	34	36	224	58	59	45	964	82	47	1334	31
Future Volume (veh/h)	70	34	36	224	58	59	45	964	82	47	1334	31
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		0.98	0.99		0.99	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	70	34	36	224	58	59	45	964	82	47	1334	31
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	441	247	262	314	66	67	63	2516	214	65	2699	63
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.07	1.00	1.00	0.07	1.00	1.00
Sat Flow, veh/h	1265	820	868	844	218	222	1774	4772	405	1774	5112	119
Grp Volume(v), veh/h	70	0	70	341	0	0	45	684	362	47	885	480
Grp Sat Flow(s),veh/h/ln	1265	0	1687	1284	0	0	1774	1695	1787	1774	1695	1840
Q Serve(g_s), s	0.0	0.0	3.0	22.9	0.0	0.0	2.5	0.0	0.0	2.6	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	3.0	25.9	0.0	0.0	2.5	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.51	0.66		0.17	1.00		0.23	1.00		0.06
Lane Grp Cap(c), veh/h	441	0	509	447	0	0	63	1787	942	65	1790	972
V/C Ratio(X)	0.16	0.00	0.14	0.76	0.00	0.00	0.71	0.38	0.38	0.73	0.49	0.49
Avail Cap(c_a), veh/h	509	0	599	523	0	0	186	1787	942	115	1790	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	25.5	34.9	0.0	0.0	45.9	0.0	0.0	45.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	5.6	0.0	0.0	13.7	0.6	1.2	14.3	1.0	1.8
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	1.5	0.0	1.4	9.7	0.0	0.0	1.4	0.2	0.3	1.5	0.2	0.5
LnGrp Delay(d),s/veh	26.1	0.0	25.6	40.5	0.0	0.0	59.6	0.6	1.2	60.2	1.0	1.8
LnGrp LOS	C		C	D			E	A	A	E	A	A
Approach Vol, veh/h		140			341			1091			1412	
Approach Delay, s/veh		25.8			40.5			3.2			3.2	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	57.2		34.6	8.1	57.3		34.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.5	44.5		35.5	10.5	40.5		35.5				
Max Q Clear Time (g_c+I1), s	4.6	2.0		6.3	4.5	2.0		27.9				
Green Ext Time (p_c), s	0.0	8.9		0.6	0.0	12.7		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			8.6									
HCM 2010 LOS			A									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	12	120	12	9	4	105	810	8	41	1404	192
Future Volume (veh/h)	252	12	120	12	9	4	105	810	8	41	1404	192
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)	0.99		0.98	0.99		0.99	1.00		0.98	1.00		0.97
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	252	12	28	12	9	4	105	810	8	41	1404	192
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	371	413	344	365	270	120	132	3164	31	60	2565	351
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.07	0.61	0.61	0.07	1.00	1.00
Sat Flow, veh/h	1388	1863	1553	1355	1221	543	1774	5192	51	1774	4508	616
Grp Volume(v), veh/h	252	12	28	12	0	13	105	529	289	41	1056	540
Grp Sat Flow(s),veh/h/ln	1388	1863	1553	1355	0	1764	1774	1695	1853	1774	1695	1734
Q Serve(g_s), s	17.4	0.5	1.4	0.7	0.0	0.6	5.8	7.2	7.2	2.3	0.0	0.0
Cycle Q Clear(g_c), s	18.0	0.5	1.4	1.2	0.0	0.6	5.8	7.2	7.2	2.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.03	1.00		0.36
Lane Grp Cap(c), veh/h	371	413	344	365	0	391	132	2066	1129	60	1929	987
V/C Ratio(X)	0.68	0.03	0.08	0.03	0.00	0.03	0.79	0.26	0.26	0.68	0.55	0.55
Avail Cap(c_a), veh/h	540	639	533	530	0	605	186	2066	1129	165	1929	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	30.5	30.9	31.0	0.0	30.5	45.5	9.0	9.0	46.1	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.1	0.0	0.0	0.0	14.2	0.3	0.5	12.6	1.1	2.2
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	6.9	0.3	0.6	0.3	0.0	0.3	3.4	3.5	3.9	1.3	0.3	0.6
LnGrp Delay(d),s/veh	39.7	30.5	31.0	31.0	0.0	30.6	59.7	9.3	9.6	58.7	1.1	2.2
LnGrp LOS	D	C	C	C		C	E	A	A	E	A	A
Approach Vol, veh/h		292			25			923			1637	
Approach Delay, s/veh		38.5			30.8			15.1			2.9	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	65.4		26.7	11.9	61.4		26.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	9.3	42.9		34.3	10.5	41.7		34.3
Max Q Clear Time (g_c+I1), s	4.3	9.2		20.0	7.8	2.0		3.2
Green Ext Time (p_c), s	0.0	6.2		0.8	0.1	16.4		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		10.7
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	4	46	9	2	12	65	866	4	32	1490	37
Future Volume (veh/h)	41	4	46	9	2	12	65	866	4	32	1490	37
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)	0.97		0.96	0.97		0.95	1.00		0.99	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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	41	4	4	9	2	12	65	866	4	32	1490	37
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	300	26	267	138	45	139	83	3358	16	54	3197	79
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.64	0.64	0.03	0.63	0.63
Sat Flow, veh/h	1265	146	1513	465	256	787	1774	5224	24	1774	5103	127
Grp Volume(v), veh/h	45	0	4	23	0	0	65	562	308	32	990	537
Grp Sat Flow(s),veh/h/ln	1412	0	1513	1509	0	0	1774	1695	1858	1774	1695	1840
Q Serve(g_s), s	1.2	0.0	0.2	0.0	0.0	0.0	3.3	6.4	6.4	1.6	13.9	13.9
Cycle Q Clear(g_c), s	2.2	0.0	0.2	1.0	0.0	0.0	3.3	6.4	6.4	1.6	13.9	13.9
Prop In Lane	0.91		1.00	0.39		0.52	1.00		0.01	1.00		0.07
Lane Grp Cap(c), veh/h	326	0	267	322	0	0	83	2179	1195	54	2124	1153
V/C Ratio(X)	0.14	0.00	0.01	0.07	0.00	0.00	0.78	0.26	0.26	0.59	0.47	0.47
Avail Cap(c_a), veh/h	636	0	605	651	0	0	108	2179	1195	108	2124	1153
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	0.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	31.4	0.0	30.6	30.9	0.0	0.0	42.4	6.9	6.9	43.1	8.9	8.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	23.1	0.3	0.5	8.0	0.6	1.1
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	1.0	0.0	0.1	0.5	0.0	0.0	2.1	3.1	3.4	0.9	6.6	7.4
LnGrp Delay(d),s/veh	31.6	0.0	30.6	31.0	0.0	0.0	65.5	7.2	7.4	51.0	9.5	10.0
LnGrp LOS	C		C	C			E	A	A	D	A	A
Approach Vol, veh/h		49			23			935			1559	
Approach Delay, s/veh		31.5			31.0			11.3			10.5	
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	7.3	62.4		20.4	8.7	60.9		20.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	35.0		36.0	5.5	35.0		36.0
Max Q Clear Time (g_c+I1), s	3.6	8.4		4.2	5.3	15.9		3.0
Green Ext Time (p_c), s	0.0	6.3		0.2	0.0	10.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	24	113	71	36	36	95	903	30	28	1437	94
Future Volume (veh/h)	99	24	113	71	36	36	95	903	30	28	1437	94
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)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	99	24	113	71	36	36	95	903	30	28	1437	94
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	309	59	277	154	78	59	121	3120	103	49	2812	184
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.07	0.62	0.62	0.03	0.58	0.58
Sat Flow, veh/h	1308	277	1304	458	365	277	1774	5050	168	1774	4874	319
Grp Volume(v), veh/h	99	0	137	143	0	0	95	606	327	28	1000	531
Grp Sat Flow(s),veh/h/ln	1308	0	1580	1100	0	0	1774	1695	1827	1774	1695	1802
Q Serve(g_s), s	0.0	0.0	7.1	6.4	0.0	0.0	5.0	7.9	7.9	1.5	16.8	16.8
Cycle Q Clear(g_c), s	8.3	0.0	7.1	13.5	0.0	0.0	5.0	7.9	7.9	1.5	16.8	16.8
Prop In Lane	1.00		0.82	0.50		0.25	1.00		0.09	1.00		0.18
Lane Grp Cap(c), veh/h	309	0	336	291	0	0	121	2094	1129	49	1956	1040
V/C Ratio(X)	0.32	0.00	0.41	0.49	0.00	0.00	0.78	0.29	0.29	0.57	0.51	0.51
Avail Cap(c_a), veh/h	448	0	504	442	0	0	196	2094	1129	110	1956	1040
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	0.0	32.2	35.6	0.0	0.0	43.6	8.4	8.5	45.6	12.1	12.1
Incr Delay (d2), s/veh	0.6	0.0	0.8	1.3	0.0	0.0	10.5	0.3	0.6	10.2	1.0	1.8
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	2.3	0.0	3.2	3.6	0.0	0.0	2.8	3.8	4.2	0.9	8.0	8.8
LnGrp Delay(d),s/veh	33.3	0.0	33.0	36.9	0.0	0.0	54.1	8.8	9.1	55.8	13.0	13.8
LnGrp LOS	C		C	D			D	A	A	E	B	B
Approach Vol, veh/h		236			143			1028			1559	
Approach Delay, s/veh		33.2			36.9			13.1			14.1	
Approach LOS		C			D			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	7.1	63.2		24.7	11.0	59.3		24.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.9	45.3		30.3	10.5	40.7		30.3
Max Q Clear Time (g_c+I1), s	3.5	9.9		10.3	7.0	18.8		15.5
Green Ext Time (p_c), s	0.0	7.4		1.1	0.1	11.6		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	1070	35	0	1637
Future Vol, veh/h	0	22	1070	35	0	1637
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	22	1070	35	0	1637

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	553	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	408	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	408	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	408	-
HCM Lane V/C Ratio	-	-	0.054	-
HCM Control Delay (s)	-	-	14.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	87	186	17	12	125
Future Vol, veh/h	51	87	186	17	12	125
Conflicting Peds, #/hr	6	0	0	13	13	6
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	51	87	186	17	12	125

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	216	0	-	0	410	214
Stage 1	-	-	-	-	208	-
Stage 2	-	-	-	-	202	-
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	1354	-	-	-	598	826
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1337	-	-	-	560	811
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1337	-	-	-	780
HCM Lane V/C Ratio	0.038	-	-	-	0.176
HCM Control Delay (s)	7.8	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	21	0	324	17	0
Future Vol, veh/h	142	21	0	324	17	0
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	142	21	0	324	17	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	477	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	324	-
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	-	-	1416	-	547	893
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1416	-	547	893
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	733	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	547	-	-	1416	-
HCM Lane V/C Ratio	0.031	-	-	-	-
HCM Control Delay (s)	11.8	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	3.2					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	33	0	108	95	0
Future Vol, veh/h	66	33	0	108	95	0
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	66	33	0	108	95	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	99	0	191	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	108	-
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	-	-	1494	-	798	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	798	976
Mov Cap-2 Maneuver	-	-	-	-	798	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	798	-	-	1494	-
HCM Lane V/C Ratio	0.119	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	682	23	363	254	527	34	443	644	804	923	32
Future Volume (veh/h)	73	682	23	363	254	527	34	443	644	804	923	32
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		0.98	1.00		0.90	1.00		0.97	1.00		0.99
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	73	682	23	363	254	439	34	443	519	804	923	32
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	97	946	32	442	1077	773	44	1581	477	735	2521	87
Arrive On Green	0.05	0.27	0.27	0.09	0.30	0.30	0.02	0.31	0.31	0.21	0.50	0.50
Sat Flow, veh/h	1774	3490	118	5003	3539	1428	1774	5085	1535	3442	5044	175
Grp Volume(v), veh/h	73	346	359	363	254	439	34	443	519	804	620	335
Grp Sat Flow(s),veh/h/ln	1774	1770	1839	1668	1770	1428	1774	1695	1535	1721	1695	1829
Q Serve(g_s), s	6.3	27.4	27.5	11.1	8.3	33.2	3.0	10.2	48.2	33.1	17.4	17.4
Cycle Q Clear(g_c), s	6.3	27.4	27.5	11.1	8.3	33.2	3.0	10.2	48.2	33.1	17.4	17.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	97	480	498	442	1077	773	44	1581	477	735	1694	914
V/C Ratio(X)	0.75	0.72	0.72	0.82	0.24	0.57	0.77	0.28	1.09	1.09	0.37	0.37
Avail Cap(c_a), veh/h	149	480	498	442	1077	773	66	1581	477	735	1694	914
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	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	51.2	51.2	69.4	40.4	26.0	75.1	40.3	53.4	61.0	23.7	23.7
Incr Delay (d2), s/veh	10.9	9.0	8.7	11.1	0.5	2.8	26.1	0.4	66.9	61.8	0.6	1.1
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	3.4	14.6	15.2	5.6	4.2	13.6	1.8	4.8	29.3	22.0	8.2	9.0
LnGrp Delay(d),s/veh	83.0	60.2	59.9	80.6	40.9	28.9	101.2	40.7	120.3	122.7	24.3	24.9
LnGrp LOS	F	E	E	F	D	C	F	D	F	F	C	C
Approach Vol, veh/h		778			1056			996			1759	
Approach Delay, s/veh		62.2			49.5			84.3			69.4	
Approach LOS		E			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	52.7	18.2	46.5	8.3	82.0	13.0	51.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.1	48.2	13.7	42.0	5.8	75.5	13.0	42.7
Max Q Clear Time (g_c+I1), s	35.1	50.2	13.1	29.5	5.0	19.4	8.3	35.2
Green Ext Time (p_c), s	0.0	0.0	0.1	3.6	0.0	8.0	0.0	2.2

Intersection Summary			
HCM 2010 Ctrl Delay			66.8
HCM 2010 LOS			E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	7	23	55	17	44	41	1722	60	89	1468	70
Future Volume (veh/h)	38	7	23	55	17	44	41	1722	60	89	1468	70
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)	0.97		0.96	0.96		0.95	1.00		0.99	1.00		0.98
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	7	23	55	17	44	41	1722	60	89	1468	70
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	198	44	98	172	59	112	58	3115	108	113	3223	154
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	752	222	498	629	303	570	1774	5044	176	1774	4968	237
Grp Volume(v), veh/h	68	0	0	116	0	0	41	1157	625	89	1002	536
Grp Sat Flow(s),veh/h/ln	1473	0	0	1502	0	0	1774	1695	1830	1774	1695	1815
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	2.5	21.8	21.8	5.4	16.2	16.2
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.9	0.0	0.0	2.5	21.8	21.8	5.4	16.2	16.2
Prop In Lane	0.56		0.34	0.47		0.38	1.00		0.10	1.00		0.13
Lane Grp Cap(c), veh/h	340	0	0	343	0	0	58	2093	1130	113	2200	1178
V/C Ratio(X)	0.20	0.00	0.00	0.34	0.00	0.00	0.71	0.55	0.55	0.79	0.46	0.46
Avail Cap(c_a), veh/h	488	0	0	495	0	0	116	2093	1130	202	2200	1178
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	0.0	38.2	0.0	0.0	52.7	12.2	12.2	50.8	9.6	9.6
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	15.0	1.1	2.0	11.3	0.7	1.3
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	1.8	0.0	0.0	3.1	0.0	0.0	1.5	10.4	11.6	3.0	7.7	8.5
LnGrp Delay(d),s/veh	37.3	0.0	0.0	38.8	0.0	0.0	67.7	13.3	14.2	62.1	10.3	10.9
LnGrp LOS	D			D			E	B	B	E	B	B
Approach Vol, veh/h		68			116			1823			1627	
Approach Delay, s/veh		37.3			38.8			14.8			13.3	
Approach LOS		D			D			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	11.5	72.4		26.1	8.1	75.9		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	12.5	50.9		33.1	7.2	56.2		33.1
Max Q Clear Time (g_c+I1), s	7.4	23.8		5.8	4.5	18.2		8.9
Green Ext Time (p_c), s	0.1	15.6		0.3	0.0	15.1		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	20	18	80	17	41	38	1629	63	108	1289	110
Future Volume (veh/h)	132	20	18	80	17	41	38	1629	63	108	1289	110
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)	0.99		0.96	0.98		0.98	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	132	20	18	80	17	41	38	1629	63	108	1289	110
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	233	123	111	152	37	58	55	3326	129	135	3375	288
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.02	0.44	0.44	0.08	0.71	0.71
Sat Flow, veh/h	1324	888	799	720	264	416	1774	5022	194	1774	4771	407
Grp Volume(v), veh/h	132	0	38	138	0	0	38	1099	593	108	916	483
Grp Sat Flow(s),veh/h/ln	1324	0	1687	1400	0	0	1774	1695	1826	1774	1695	1788
Q Serve(g_s), s	1.4	0.0	2.2	8.4	0.0	0.0	2.3	25.4	25.4	6.6	11.9	11.9
Cycle Q Clear(g_c), s	12.0	0.0	2.2	10.5	0.0	0.0	2.3	25.4	25.4	6.6	11.9	11.9
Prop In Lane	1.00		0.47	0.58		0.30	1.00		0.11	1.00		0.23
Lane Grp Cap(c), veh/h	233	0	234	246	0	0	55	2245	1209	135	2398	1265
V/C Ratio(X)	0.57	0.00	0.16	0.56	0.00	0.00	0.69	0.49	0.49	0.80	0.38	0.38
Avail Cap(c_a), veh/h	357	0	391	381	0	0	106	2245	1209	266	2398	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	41.7	45.5	0.0	0.0	53.3	17.4	17.4	50.0	6.5	6.5
Incr Delay (d2), s/veh	2.2	0.0	0.3	2.0	0.0	0.0	14.0	0.8	1.4	10.1	0.5	0.9
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	4.0	0.0	1.0	4.2	0.0	0.0	1.4	12.1	13.3	3.6	5.6	6.1
LnGrp Delay(d),s/veh	48.2	0.0	42.1	47.5	0.0	0.0	67.3	18.2	18.8	60.1	6.9	7.3
LnGrp LOS	D		D	D			E	B	B	E	A	A
Approach Vol, veh/h		170			138			1730			1507	
Approach Delay, s/veh		46.8			47.5			19.5			10.9	
Approach LOS		D			D			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	12.9	77.3		19.8	7.9	82.3		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	16.5	54.5		25.5	6.6	64.4		25.5
Max Q Clear Time (g_c+I1), s	8.6	27.4		14.0	4.3	13.9		12.5
Green Ext Time (p_c), s	0.1	14.7		0.4	0.0	14.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1	112	2	0	18	97	1668	20	36	1318	59
Future Vol, veh/h	12	1	112	2	0	18	97	1668	20	36	1318	59
Conflicting Peds, #/hr	40	0	29	16	0	27	29	0	16	27	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	112	2	0	18	97	1668	20	36	1318	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2361	3369	758	2528	3388	911	1417	0	0	1715	0	0
Stage 1	1460	1460	-	1899	1899	-	-	-	-	-	-	-
Stage 2	901	1909	-	629	1489	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*201	*15	300	*136	*15	*525	245	-	-	*660	-	-
Stage 1	*94	*192	-	*539	*512	-	-	-	-	-	-	-
Stage 2	*539	*512	-	*398	*186	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*117	*8	281	*46	*8	*492	236	-	-	*643	-	-
Mov Cap-2 Maneuver	*117	*8	-	*46	*8	-	-	-	-	-	-	-
Stage 1	*53	*174	-	*309	*294	-	-	-	-	-	-	-
Stage 2	*294	*294	-	*218	*169	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	49	20.6	1.7	0.3
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	236	-	-	200	250	* 643	-	-
HCM Lane V/C Ratio	0.411	-	-	0.625	0.08	0.056	-	-
HCM Control Delay (s)	30.5	-	-	49	20.6	10.9	-	-
HCM Lane LOS	D	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	1.9	-	-	3.6	0.3	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	15	0	16	1	1756	50	61	1375	8
Future Vol, veh/h	0	0	0	15	0	16	1	1756	50	61	1375	8
Conflicting Peds, #/hr	29	0	39	18	0	8	39	0	18	8	0	29
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	15	0	16	1	1756	50	61	1375	8

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	2491	3345	929	1422	0	0	1824	0	0
Stage 1	1801	1801	-	-	-	-	-	-	-
Stage 2	690	1544	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*208	*19	*501	244	-	-	*630	-	-
Stage 1	*514	*489	-	-	-	-	-	-	-
Stage 2	*418	*175	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*181	*0	*489	244	-	-	*619	-	-
Mov Cap-2 Maneuver	*181	*0	-	-	-	-	-	-	-
Stage 1	*505	*0	-	-	-	-	-	-	-
Stage 2	*370	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.2	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	244	-	-	268	* 619	-	-
HCM Lane V/C Ratio	0.004	-	-	0.116	0.099	-	-
HCM Control Delay (s)	19.8	-	-	20.2	11.5	-	-
HCM Lane LOS	C	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	34	21	1801	1365	31
Future Vol, veh/h	6	34	21	1801	1365	31
Conflicting Peds, #/hr	20	20	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	34	21	1801	1365	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2183	738	1416	0	-	0
Stage 1	1401	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*390	309	245	-	-	-
Stage 1	*137	-	-	-	-	-
Stage 2	*514	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*342	297	240	-	-	-
Mov Cap-2 Maneuver	*342	-	-	-	-	-
Stage 1	*123	-	-	-	-	-
Stage 2	*504	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.7	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	240	-	303	-	-
HCM Lane V/C Ratio	0.088	-	0.132	-	-
HCM Control Delay (s)	21.4	-	18.7	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	75	26	58	1746	1366	37		
Future Volume (veh/h)	75	26	58	1746	1366	37		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	75	-22	58	1746	1366	37		
Adj No. of Lanes	1	1	1	3	3	0		
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	88	78	75	4418	3997	108		
Arrive On Green	0.05	0.00	0.04	0.87	0.79	0.79		
Sat Flow, veh/h	1774	1583	1774	5253	5256	138		
Grp Volume(v), veh/h	75	-22	58	1746	910	493		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1836		
Q Serve(g_s), s	4.6	0.0	3.6	7.5	8.7	8.7		
Cycle Q Clear(g_c), s	4.6	0.0	3.6	7.5	8.7	8.7		
Prop In Lane	1.00	1.00	1.00			0.08		
Lane Grp Cap(c), veh/h	88	78	75	4418	2663	1442		
V/C Ratio(X)	0.86	-0.28	0.77	0.40	0.34	0.34		
Avail Cap(c_a), veh/h	460	410	250	4418	2663	1442		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	51.9	0.0	52.1	1.4	3.5	3.5		
Incr Delay (d2), s/veh	20.2	0.0	15.1	0.3	0.4	0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.1	3.5	4.0	4.5		
LnGrp Delay(d),s/veh	72.1	0.0	67.3	1.7	3.8	4.1		
LnGrp LOS	E		E	A	A	A		
Approach Vol, veh/h	53			1804	1403			
Approach Delay, s/veh	102.0			3.8	3.9			
Approach LOS	F			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		100.1		9.9	9.2	90.9		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		72.5		28.5	15.5	52.5		
Max Q Clear Time (g_c+I1), s		9.5		6.6	5.6	10.7		
Green Ext Time (p_c), s		23.4		0.2	0.1	13.5		

Intersection Summary		
HCM 2010 Ctrl Delay		5.5
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	31	3	1	6	38	1769	8	42	1342	48
Future Vol, veh/h	8	0	31	3	1	6	38	1769	8	42	1342	48
Conflicting Peds, #/hr	23	0	15	24	0	32	15	0	24	32	0	23
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	31	3	1	6	38	1769	8	42	1342	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2289	3358	742	2526	3378	953	1413	0	0	1809	0	0
Stage 1	1473	1473	-	1881	1881	-	-	-	-	-	-	-
Stage 2	816	1885	-	645	1497	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*42	*8	*597	*30	*7	*509	*751	-	-	*639	-	-
Stage 1	*613	*583	-	*522	*496	-	-	-	-	-	-	-
Stage 2	*522	*496	-	*613	*583	-	-	-	-	-	-	-
Platoon blocked, %			1			1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*31	*7	*571	*24	*6	*478	*734	-	-	*620	-	-
Mov Cap-2 Maneuver	*31	*7	-	*24	*6	-	-	-	-	-	-	-
Stage 1	*568	*531	-	*480	*457	-	-	-	-	-	-	-
Stage 2	*473	*457	-	*528	*531	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	46.4	155.9	0.2	0.3
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 734	-	-	125	33	* 620	-	-
HCM Lane V/C Ratio	0.052	-	-	0.312	0.303	0.068	-	-
HCM Control Delay (s)	10.2	-	-	46.4	155.9	11.2	-	-
HCM Lane LOS	B	-	-	E	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.2	1	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	26	35	155	28	76	69	1662	162	67	1287	24
Future Volume (veh/h)	64	26	35	155	28	76	69	1662	162	67	1287	24
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)	0.99		0.98	0.99		0.99	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	26	35	155	28	76	69	1662	162	67	1287	24
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	326	167	225	223	37	89	89	2855	278	86	3116	58
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.61	0.61	0.05	0.61	0.61
Sat Flow, veh/h	1278	710	956	752	156	377	1774	4697	457	1774	5139	96
Grp Volume(v), veh/h	64	0	61	259	0	0	69	1198	626	67	849	462
Grp Sat Flow(s),veh/h/ln	1278	0	1666	1285	0	0	1774	1695	1764	1774	1695	1845
Q Serve(g_s), s	0.0	0.0	3.6	21.2	0.0	0.0	4.8	26.8	26.9	4.7	16.4	16.4
Cycle Q Clear(g_c), s	5.8	0.0	3.6	24.8	0.0	0.0	4.8	26.8	26.9	4.7	16.4	16.4
Prop In Lane	1.00		0.57	0.60		0.29	1.00		0.26	1.00		0.05
Lane Grp Cap(c), veh/h	326	0	393	349	0	0	89	2061	1072	86	2055	1118
V/C Ratio(X)	0.20	0.00	0.16	0.74	0.00	0.00	0.78	0.58	0.58	0.78	0.41	0.41
Avail Cap(c_a), veh/h	387	0	473	418	0	0	192	2061	1072	149	2055	1118
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	37.9	47.4	0.0	0.0	58.7	14.9	14.9	58.8	12.9	12.9
Incr Delay (d2), s/veh	0.3	0.0	0.2	5.7	0.0	0.0	13.6	1.2	2.3	14.1	0.6	1.1
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	1.8	0.0	1.7	9.2	0.0	0.0	2.7	12.8	13.7	2.6	7.8	8.7
LnGrp Delay(d),s/veh	39.0	0.0	38.1	53.1	0.0	0.0	72.3	16.1	17.2	72.9	13.5	14.1
LnGrp LOS	D		D	D			E	B	B	E	B	B
Approach Vol, veh/h		125			259			1893			1378	
Approach Delay, s/veh		38.6			53.1			18.5			16.6	
Approach LOS		D			D			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	10.5	80.5		34.0	10.7	80.3		34.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	10.5	65.5		35.5	13.5	62.5		35.5
Max Q Clear Time (g_c+I1), s	6.7	28.9		7.8	6.8	18.4		26.8
Green Ext Time (p_c), s	0.0	19.1		0.5	0.1	12.3		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	7	95	15	5	26	193	1575	4	48	1284	203
Future Volume (veh/h)	282	7	95	15	5	26	193	1575	4	48	1284	203
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)	0.99		0.97	0.99		0.99	1.00		0.99	1.00		0.98
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	282	7	36	15	5	26	193	1575	4	48	1284	203
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	416	500	414	428	69	361	224	2932	7	65	2076	328
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.13	0.56	0.56	0.04	0.47	0.47
Sat Flow, veh/h	1356	1863	1542	1341	259	1345	1774	5237	13	1774	4416	698
Grp Volume(v), veh/h	282	7	36	15	0	31	193	1020	559	48	986	501
Grp Sat Flow(s),veh/h/ln	1356	1863	1542	1341	0	1604	1774	1695	1860	1774	1695	1724
Q Serve(g_s), s	19.6	0.3	1.7	0.8	0.0	1.4	10.7	18.9	18.9	2.7	21.7	21.7
Cycle Q Clear(g_c), s	21.0	0.3	1.7	1.1	0.0	1.4	10.7	18.9	18.9	2.7	21.7	21.7
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.01	1.00		0.41
Lane Grp Cap(c), veh/h	416	500	414	428	0	430	224	1898	1042	65	1594	810
V/C Ratio(X)	0.68	0.01	0.09	0.04	0.00	0.07	0.86	0.54	0.54	0.73	0.62	0.62
Avail Cap(c_a), veh/h	561	699	578	571	0	601	239	1898	1042	98	1594	810
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	1.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	26.9	27.4	27.3	0.0	27.3	42.8	13.9	13.9	47.7	19.8	19.8
Incr Delay (d2), s/veh	2.0	0.0	0.1	0.0	0.0	0.1	22.5	1.0	1.8	14.7	1.8	3.5
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	7.6	0.1	0.8	0.3	0.0	0.6	6.6	9.0	10.1	1.6	10.5	11.1
LnGrp Delay(d),s/veh	37.1	26.9	27.5	27.3	0.0	27.4	65.3	14.8	15.6	62.4	21.6	23.3
LnGrp LOS	D	C	C	C		C	E	B	B	E	C	C
Approach Vol, veh/h		325			46			1772			1535	
Approach Delay, s/veh		35.8			27.3			20.6			23.4	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	60.5		31.3	17.1	51.5		31.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	43.5		37.5	13.5	35.5		37.5
Max Q Clear Time (g_c+I1), s	4.7	20.9		23.0	12.7	23.7		3.4
Green Ext Time (p_c), s	0.0	12.1		0.9	0.0	7.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	3	90	10	3	9	136	1585	7	41	1315	67
Future Volume (veh/h)	114	3	90	10	3	9	136	1585	7	41	1315	67
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)	0.97		0.97	0.97		0.95	1.00		0.97	1.00		0.99
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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	114	3	16	10	3	9	136	1585	7	41	1315	67
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	342	8	349	139	50	95	167	3150	14	60	2687	137
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.09	0.60	0.60	0.01	0.18	0.18
Sat Flow, veh/h	1188	36	1531	380	220	415	1774	5225	23	1774	4954	252
Grp Volume(v), veh/h	117	0	16	22	0	0	136	1028	564	41	900	482
Grp Sat Flow(s),veh/h/ln	1224	0	1531	1015	0	0	1774	1695	1858	1774	1695	1816
Q Serve(g_s), s	0.0	0.0	0.8	0.1	0.0	0.0	7.5	17.3	17.3	2.3	23.9	23.9
Cycle Q Clear(g_c), s	9.9	0.0	0.8	10.0	0.0	0.0	7.5	17.3	17.3	2.3	23.9	23.9
Prop In Lane	0.97		1.00	0.45		0.41	1.00		0.01	1.00		0.14
Lane Grp Cap(c), veh/h	350	0	349	284	0	0	167	2044	1120	60	1839	985
V/C Ratio(X)	0.33	0.00	0.05	0.08	0.00	0.00	0.81	0.50	0.50	0.68	0.49	0.49
Avail Cap(c_a), veh/h	538	0	559	485	0	0	257	2044	1120	257	1839	985
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	33.6	0.0	30.1	30.5	0.0	0.0	44.4	11.3	11.3	48.9	28.6	28.6
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	10.8	0.9	1.6	9.4	0.7	1.3
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	2.8	0.0	0.3	0.5	0.0	0.0	4.2	8.3	9.3	1.3	11.4	12.4
LnGrp Delay(d),s/veh	34.1	0.0	30.2	30.6	0.0	0.0	55.2	12.2	12.9	58.3	29.3	29.9
LnGrp LOS	C		C	C			E	B	B	E	C	C
Approach Vol, veh/h		133			22			1728			1423	
Approach Delay, s/veh		33.6			30.6			15.8			30.3	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	64.8		27.3	13.9	58.7		27.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	35.5		36.5	14.5	35.5		36.5
Max Q Clear Time (g_c+I1), s	4.3	19.3		11.9	9.5	25.9		12.0
Green Ext Time (p_c), s	0.0	9.9		0.7	0.1	6.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	25	95	55	18	32	132	1752	66	64	1371	100
Future Volume (veh/h)	133	25	95	55	18	32	132	1752	66	64	1371	100
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)	0.98		0.95	0.98		0.95	1.00		0.94	1.00		0.96
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	133	25	95	55	18	32	132	1752	66	64	1371	100
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	334	72	273	168	59	75	98	3006	113	82	2847	208
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.60	0.60	0.05	0.59	0.59
Sat Flow, veh/h	1318	328	1245	515	269	344	1774	5016	189	1774	4821	352
Grp Volume(v), veh/h	133	0	120	105	0	0	132	1184	634	64	964	507
Grp Sat Flow(s),veh/h/ln	1318	0	1572	1128	0	0	1774	1695	1814	1774	1695	1782
Q Serve(g_s), s	0.2	0.0	6.5	4.4	0.0	0.0	5.5	21.5	21.5	3.6	16.3	16.3
Cycle Q Clear(g_c), s	11.1	0.0	6.5	10.9	0.0	0.0	5.5	21.5	21.5	3.6	16.3	16.3
Prop In Lane	1.00		0.79	0.52		0.30	1.00		0.10	1.00		0.20
Lane Grp Cap(c), veh/h	334	0	345	302	0	0	98	2032	1088	82	2002	1053
V/C Ratio(X)	0.40	0.00	0.35	0.35	0.00	0.00	1.35	0.58	0.58	0.78	0.48	0.48
Avail Cap(c_a), veh/h	447	0	480	422	0	0	98	2032	1088	98	2002	1053
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	33.0	35.3	0.0	0.0	47.3	12.3	12.3	47.2	11.7	11.7
Incr Delay (d2), s/veh	0.8	0.0	0.6	0.7	0.0	0.0	211.8	1.2	2.3	27.9	0.8	1.6
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	3.4	0.0	2.9	2.6	0.0	0.0	8.4	10.4	11.4	2.4	7.7	8.3
LnGrp Delay(d),s/veh	35.6	0.0	33.6	35.9	0.0	0.0	259.1	13.6	14.6	75.0	12.5	13.3
LnGrp LOS	D		C	D			F	B	B	E	B	B
Approach Vol, veh/h		253			105			1950			1535	
Approach Delay, s/veh		34.6			35.9			30.5			15.4	
Approach LOS		C			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	64.4		26.4	10.0	63.6		26.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	50.5		30.5	5.5	50.5		30.5
Max Q Clear Time (g_c+I1), s	5.6	23.5		13.1	7.5	18.3		12.9
Green Ext Time (p_c), s	0.0	16.0		1.0	0.0	13.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	30	1868	50	0	1534
Future Vol, veh/h	0	30	1868	50	0	1534
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	30	1868	50	0	1534

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	959	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	221	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	221	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	221	-
HCM Lane V/C Ratio	-	-	0.136	-
HCM Control Delay (s)	-	-	23.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.5	-

Intersection						
Int Delay, s/veh	3.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	172	113	5	11	95
Future Vol, veh/h	48	172	113	5	11	95
Conflicting Peds, #/hr	7	0	0	11	11	7
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	48	172	113	5	11	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	129	0	-	0	406	134
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	279	-
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	1457	-	-	-	601	915
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	768	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	567	899
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	760	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	848
HCM Lane V/C Ratio	0.033	-	-	-	0.125
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	242	13	0	228	31	0
Future Vol, veh/h	242	13	0	228	31	0
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	242	13	0	228	31	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	255	0	477	249
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	228	-
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	-	-	1310	-	547	790
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1310	-	547	790
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	810	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	547	-	-	1310	-
HCM Lane V/C Ratio	0.057	-	-	-	-
HCM Control Delay (s)	12	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	98	0	55	63	0
Future Vol, veh/h	85	98	0	55	63	0
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	85	98	0	55	63	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	183	0	189	134
Stage 1	-	-	-	-	134	-
Stage 2	-	-	-	-	55	-
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	-	-	1392	-	800	915
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1392	-	800	915
Mov Cap-2 Maneuver	-	-	-	-	800	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	800	-	-	1392	-
HCM Lane V/C Ratio	0.079	-	-	-	-
HCM Control Delay (s)	9.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	313	36	574	611	968	36	823	482	636	854	50
Future Volume (veh/h)	99	313	36	574	611	968	36	823	482	636	854	50
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		0.96	1.00		0.91	1.00		0.97	1.00		0.96
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	99	313	36	574	611	924	36	823	294	636	854	50
Adj No. of Lanes	1	2	0	3	2	1	1	3	1	2	3	0
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	119	836	95	578	1100	774	46	1546	466	707	2369	138
Arrive On Green	0.07	0.26	0.26	0.12	0.31	0.31	0.03	0.30	0.30	0.21	0.48	0.48
Sat Flow, veh/h	1774	3186	363	5003	3539	1444	1774	5085	1532	3442	4903	286
Grp Volume(v), veh/h	99	172	177	574	611	924	36	823	294	636	590	314
Grp Sat Flow(s),veh/h/ln	1774	1770	1779	1668	1770	1444	1774	1695	1532	1721	1695	1799
Q Serve(g_s), s	8.8	12.7	13.0	18.3	23.0	49.7	3.2	21.5	26.5	28.8	17.4	17.5
Cycle Q Clear(g_c), s	8.8	12.7	13.0	18.3	23.0	49.7	3.2	21.5	26.5	28.8	17.4	17.5
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	119	465	467	578	1100	774	46	1546	466	707	1638	869
V/C Ratio(X)	0.83	0.37	0.38	0.99	0.56	1.19	0.78	0.53	0.63	0.90	0.36	0.36
Avail Cap(c_a), veh/h	167	465	467	578	1100	774	102	1546	466	940	1638	869
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	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	48.2	48.3	70.7	45.9	39.6	77.4	46.2	48.0	62.0	25.9	25.9
Incr Delay (d2), s/veh	20.8	2.3	2.3	32.1	1.7	97.6	23.6	1.3	6.4	9.3	0.6	1.2
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	5.0	6.5	6.7	10.2	11.5	55.1	1.9	10.2	12.0	14.6	8.2	9.0
LnGrp Delay(d),s/veh	94.5	50.5	50.6	102.7	47.6	137.2	101.0	47.6	54.3	71.3	26.5	27.1
LnGrp LOS	F	D	D	F	D	F	F	D	D	E	C	C
Approach Vol, veh/h		448			2109			1153			1540	
Approach Delay, s/veh		60.3			101.9			51.0			45.1	
Approach LOS		E			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.4	53.1	23.0	46.5	8.7	81.8	15.3	54.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	43.7	37.8	18.5	42.0	9.2	72.3	15.1	45.4
Max Q Clear Time (g_c+I1), s	30.8	28.5	20.3	15.0	5.2	19.5	10.8	51.7
Green Ext Time (p_c), s	2.1	4.6	0.0	2.1	0.0	7.4	0.1	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		70.5
HCM 2010 LOS		E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	31	50	9	60	19	1224	28	46	1330	13
Future Volume (veh/h)	35	9	31	50	9	60	19	1224	28	46	1330	13
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)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.99
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	9	31	50	9	60	19	1224	28	46	1330	13
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	161	51	112	143	39	133	36	3338	76	64	3473	34
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.65	0.65	0.04	0.67	0.67
Sat Flow, veh/h	616	288	637	524	223	759	1774	5111	117	1774	5193	51
Grp Volume(v), veh/h	75	0	0	119	0	0	19	812	440	46	868	475
Grp Sat Flow(s),veh/h/ln	1542	0	0	1506	0	0	1774	1695	1837	1774	1695	1853
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	1.1	10.9	10.9	2.6	11.4	11.4
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.6	0.0	0.0	1.1	10.9	10.9	2.6	11.4	11.4
Prop In Lane	0.47		0.41	0.42		0.50	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	324	0	0	316	0	0	36	2214	1200	64	2267	1239
V/C Ratio(X)	0.23	0.00	0.00	0.38	0.00	0.00	0.52	0.37	0.37	0.72	0.38	0.38
Avail Cap(c_a), veh/h	581	0	0	576	0	0	115	2214	1200	133	2267	1239
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	36.6	0.0	0.0	48.5	7.9	7.9	47.7	7.4	7.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	0.0	11.1	0.5	0.9	14.0	0.5	0.9
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	1.8	0.0	0.0	3.0	0.0	0.0	0.6	5.2	5.8	1.5	5.5	6.1
LnGrp Delay(d),s/veh	35.9	0.0	0.0	37.3	0.0	0.0	59.6	8.4	8.8	61.7	7.9	8.3
LnGrp LOS	D			D			E	A	A	E	A	A
Approach Vol, veh/h		75			119			1271			1389	
Approach Delay, s/veh		35.9			37.3			9.3			9.8	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	69.8		22.1	6.6	71.4		22.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	43.5		35.5	6.5	44.5		35.5
Max Q Clear Time (g_c+I1), s	4.6	12.9		5.8	3.1	13.4		8.6
Green Ext Time (p_c), s	0.0	10.5		0.4	0.0	11.5		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	16	16	131	8	36	8	1125	56	65	1351	75
Future Volume (veh/h)	117	16	16	131	8	36	8	1125	56	65	1351	75
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)	0.98		0.96	0.98		0.97	1.00		0.97	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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	117	16	16	131	8	36	8	1125	56	65	1351	75
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	140	140	220	15	45	18	3221	160	85	3392	188
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	1.00	1.00	0.05	0.69	0.69
Sat Flow, veh/h	1336	836	836	942	92	268	1774	4954	246	1774	4930	274
Grp Volume(v), veh/h	117	0	32	175	0	0	8	770	411	65	929	497
Grp Sat Flow(s),veh/h/ln	1336	0	1672	1301	0	0	1774	1695	1810	1774	1695	1813
Q Serve(g_s), s	0.0	0.0	1.6	11.6	0.0	0.0	0.4	0.0	0.0	3.6	11.8	11.8
Cycle Q Clear(g_c), s	7.7	0.0	1.6	13.2	0.0	0.0	0.4	0.0	0.0	3.6	11.8	11.8
Prop In Lane	1.00		0.50	0.75		0.21	1.00		0.14	1.00		0.15
Lane Grp Cap(c), veh/h	301	0	279	280	0	0	18	2204	1177	85	2333	1248
V/C Ratio(X)	0.39	0.00	0.11	0.62	0.00	0.00	0.45	0.35	0.35	0.77	0.40	0.40
Avail Cap(c_a), veh/h	472	0	493	459	0	0	151	2204	1177	381	2333	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	35.4	40.7	0.0	0.0	48.7	0.0	0.0	47.1	6.7	6.7
Incr Delay (d2), s/veh	0.8	0.0	0.2	2.3	0.0	0.0	17.0	0.4	0.8	13.3	0.5	1.0
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	3.0	0.0	0.8	4.8	0.0	0.0	0.3	0.1	0.3	2.1	5.6	6.1
LnGrp Delay(d),s/veh	38.7	0.0	35.6	43.0	0.0	0.0	65.8	0.4	0.8	60.3	7.2	7.7
LnGrp LOS	D		D	D			E	A	A	E	A	A
Approach Vol, veh/h		149			175			1189			1491	
Approach Delay, s/veh		38.0			43.0			1.0			9.7	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	69.5		21.2	5.5	73.3		21.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	35.5		29.5	8.5	48.5		29.5
Max Q Clear Time (g_c+I1), s	5.6	2.0		9.7	2.4	13.8		15.2
Green Ext Time (p_c), s	0.1	10.0		0.4	0.0	13.1		0.8

Intersection Summary		
HCM 2010 Ctrl Delay		9.6
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	108	8	0	16	77	1123	9	10	1540	14
Future Vol, veh/h	5	0	108	8	0	16	77	1123	9	10	1540	14
Conflicting Peds, #/hr	22	0	12	16	0	26	12	0	16	26	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	108	8	0	16	77	1123	9	10	1540	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2218	2901	815	1960	2904	618	1576	0	0	1158	0	0
Stage 1	1589	1589	-	1308	1308	-	-	-	-	-	-	-
Stage 2	629	1312	-	652	1596	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*51	16	275	76	16	*671	204	-	-	*844	-	-
Stage 1	*76	166	-	559	572	-	-	-	-	-	-	-
Stage 2	*689	569	-	385	165	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*33	9	265	30	9	*638	200	-	-	*823	-	-
Mov Cap-2 Maneuver	*33	9	-	30	9	-	-	-	-	-	-	-
Stage 1	*46	161	-	335	343	-	-	-	-	-	-	-
Stage 2	*403	341	-	222	160	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	43.3	66.1	2.2	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	200	-	-	202	82	* 823	-	-
HCM Lane V/C Ratio	0.385	-	-	0.559	0.293	0.012	-	-
HCM Control Delay (s)	33.8	-	-	43.3	66.1	9.4	-	-
HCM Lane LOS	D	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	1.7	-	-	3	1.1	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	22	0	28	1	1147	31	29	1646	5
Future Vol, veh/h	0	0	0	22	0	28	1	1147	31	29	1646	5
Conflicting Peds, #/hr	16	0	31	25	0	10	31	0	25	10	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	22	0	28	1	1147	31	29	1646	5

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1931	2930	624	1682	0	0	1203	0	0
Stage 1	1190	1190	-	-	-	-	-	-	-
Stage 2	741	1740	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*261	*28	*645	181	-	-	*811	-	-
Stage 1	*662	*629	-	-	-	-	-	-	-
Stage 2	*393	*140	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*236	*0	*623	181	-	-	*791	-	-
Mov Cap-2 Maneuver	*236	*0	-	-	-	-	-	-	-
Stage 1	*635	*0	-	-	-	-	-	-	-
Stage 2	*369	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	181	-	-	362	* 791	-	-
HCM Lane V/C Ratio	0.006	-	-	0.138	0.037	-	-
HCM Control Delay (s)	25	-	-	16.5	9.7	-	-
HCM Lane LOS	D	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	51	1224	1552	53
Future Vol, veh/h	6	11	51	1224	1552	53
Conflicting Peds, #/hr	6	6	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	11	51	1224	1552	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2183	815	1611	0	-	0
Stage 1	1585	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*172	275	196	-	-	-
Stage 1	*105	-	-	-	-	-
Stage 2	*662	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*126	272	195	-	-	-
Mov Cap-2 Maneuver	*126	-	-	-	-	-
Stage 1	*77	-	-	-	-	-
Stage 2	*658	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.4	1.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	195	-	193	-	-
HCM Lane V/C Ratio	0.262	-	0.088	-	-
HCM Control Delay (s)	29.9	-	25.4	-	-
HCM Lane LOS	D	-	D	-	-
HCM 95th %tile Q(veh)	1	-	0.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	122	41	82	1125	1575	45		
Future Volume (veh/h)	122	41	82	1125	1575	45		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	122	5	82	1125	1575	45		
Adj No. of Lanes	1	1	1	3	3	0		
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	156	139	105	4182	3647	104		
Arrive On Green	0.09	0.09	0.12	1.00	0.72	0.72		
Sat Flow, veh/h	1774	1583	1774	5253	5245	145		
Grp Volume(v), veh/h	122	5	82	1125	1051	569		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1833		
Q Serve(g_s), s	6.7	0.3	4.5	0.0	12.7	12.7		
Cycle Q Clear(g_c), s	6.7	0.3	4.5	0.0	12.7	12.7		
Prop In Lane	1.00	1.00	1.00			0.08		
Lane Grp Cap(c), veh/h	156	139	105	4182	2435	1316		
V/C Ratio(X)	0.78	0.04	0.78	0.27	0.43	0.43		
Avail Cap(c_a), veh/h	506	451	239	4182	2435	1316		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	44.7	41.7	43.5	0.0	5.8	5.8		
Incr Delay (d2), s/veh	8.4	0.1	12.0	0.2	0.6	1.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.6	0.3	2.5	0.1	6.0	6.7		
LnGrp Delay(d),s/veh	53.1	41.9	55.4	0.2	6.3	6.8		
LnGrp LOS	D	D	E	A	A	A		
Approach Vol, veh/h	127			1207	1620			
Approach Delay, s/veh	52.6			3.9	6.5			
Approach LOS	D			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		86.7		13.3	10.4	76.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.5		28.5	13.5	44.5		
Max Q Clear Time (g_c+I1), s		2.0		8.7	6.5	14.7		
Green Ext Time (p_c), s		11.1		0.3	0.1	14.6		
Intersection Summary								
HCM 2010 Ctrl Delay			7.4					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	58	2	2	9	53	1138	14	29	1545	87
Future Vol, veh/h	12	0	58	2	2	9	53	1138	14	29	1545	87
Conflicting Peds, #/hr	34	0	21	21	0	34	21	0	21	34	0	34
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	58	2	2	9	53	1138	14	29	1545	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2277	2973	871	1982	3009	644	1666	0	0	1186	0	0
Stage 1	1681	1681	-	1285	1285	-	-	-	-	-	-	-
Stage 2	596	1292	-	697	1724	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*301	*286	*565	*301	*286	*645	*711	-	-	*811	-	-
Stage 1	*580	*552	-	*662	*629	-	-	-	-	-	-	-
Stage 2	*662	*629	-	*580	*552	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*252	*238	*536	*233	*238	*604	*688	-	-	*784	-	-
Mov Cap-2 Maneuver	*252	*238	-	*233	*238	-	-	-	-	-	-	-
Stage 1	*518	*514	-	*591	*562	-	-	-	-	-	-	-
Stage 2	*580	*562	-	*488	*514	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	14.1	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 688	-	-	449	408	* 784	-	-
HCM Lane V/C Ratio	0.077	-	-	0.156	0.032	0.037	-	-
HCM Control Delay (s)	10.7	-	-	14.5	14.1	9.8	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	29	36	156	48	40	44	1080	59	35	1546	31
Future Volume (veh/h)	70	29	36	156	48	40	44	1080	59	35	1546	31
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)	0.99		0.98	0.99		0.99	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	70	29	36	156	48	40	44	1080	59	35	1546	31
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	363	178	222	251	70	51	63	2935	160	55	3030	61
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.07	1.00	1.00	0.06	1.00	1.00
Sat Flow, veh/h	1297	746	926	802	294	215	1774	4934	269	1774	5131	103
Grp Volume(v), veh/h	70	0	65	244	0	0	44	742	397	35	1022	555
Grp Sat Flow(s),veh/h/ln	1297	0	1673	1311	0	0	1774	1695	1813	1774	1695	1843
Q Serve(g_s), s	0.0	0.0	3.1	15.0	0.0	0.0	2.4	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear(g_c), s	4.7	0.0	3.1	18.1	0.0	0.0	2.4	0.0	0.0	1.9	0.0	0.0
Prop In Lane	1.00		0.55	0.64		0.16	1.00		0.15	1.00		0.06
Lane Grp Cap(c), veh/h	363	0	400	372	0	0	63	2017	1078	55	2002	1089
V/C Ratio(X)	0.19	0.00	0.16	0.66	0.00	0.00	0.70	0.37	0.37	0.63	0.51	0.51
Avail Cap(c_a), veh/h	513	0	594	539	0	0	186	2017	1078	115	2002	1089
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	30.1	36.7	0.0	0.0	46.0	0.0	0.0	46.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.2	2.0	0.0	0.0	13.4	0.5	1.0	11.5	0.9	1.7
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	1.6	0.0	1.4	6.5	0.0	0.0	1.4	0.1	0.3	1.1	0.3	0.5
LnGrp Delay(d),s/veh	31.0	0.0	30.3	38.7	0.0	0.0	59.3	0.5	1.0	57.8	0.9	1.7
LnGrp LOS	C		C	D			E	A	A	E	A	A
Approach Vol, veh/h		135			244			1183			1612	
Approach Delay, s/veh		30.7			38.7			2.9			2.4	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	64.0		28.4	8.0	63.6		28.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	44.5		35.5	10.5	40.5		35.5
Max Q Clear Time (g_c+I1), s	3.9	2.0		6.7	4.4	2.0		20.1
Green Ext Time (p_c), s	0.0	10.0		0.6	0.0	15.7		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	6.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	12	120	12	9	4	105	888	8	40	1556	184
Future Volume (veh/h)	246	12	120	12	9	4	105	888	8	40	1556	184
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)	0.99		0.98	0.99		0.99	1.00		0.98	1.00		0.97
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	246	12	28	12	9	4	105	888	8	40	1556	184
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	366	406	338	360	266	118	132	3190	29	60	2633	311
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.07	0.61	0.61	0.07	1.00	1.00
Sat Flow, veh/h	1388	1863	1553	1355	1221	543	1774	5197	47	1774	4597	543
Grp Volume(v), veh/h	246	12	28	12	0	13	105	579	317	40	1147	593
Grp Sat Flow(s),veh/h/ln	1388	1863	1553	1355	0	1763	1774	1695	1854	1774	1695	1750
Q Serve(g_s), s	17.0	0.5	1.4	0.7	0.0	0.6	5.8	8.0	8.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	17.6	0.5	1.4	1.2	0.0	0.6	5.8	8.0	8.0	2.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.03	1.00		0.31
Lane Grp Cap(c), veh/h	366	406	338	360	0	384	132	2081	1138	60	1942	1002
V/C Ratio(X)	0.67	0.03	0.08	0.03	0.00	0.03	0.79	0.28	0.28	0.67	0.59	0.59
Avail Cap(c_a), veh/h	540	639	533	530	0	605	186	2081	1138	165	1942	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	30.8	31.2	31.3	0.0	30.8	45.5	9.0	9.0	46.1	0.0	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.1	0.0	0.0	0.0	14.1	0.3	0.6	12.4	1.3	2.6
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	6.7	0.3	0.6	0.3	0.0	0.3	3.4	3.8	4.2	1.3	0.4	0.7
LnGrp Delay(d),s/veh	39.9	30.8	31.3	31.3	0.0	30.9	59.7	9.3	9.6	58.5	1.3	2.6
LnGrp LOS	D	C	C	C		C	E	A	A	E	A	A
Approach Vol, veh/h		286			25			1001			1780	
Approach Delay, s/veh		38.7			31.1			14.7			3.0	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	65.9		26.3	11.9	61.8		26.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	9.3	42.9		34.3	10.5	41.7		34.3
Max Q Clear Time (g_c+I1), s	4.2	10.0		19.6	7.8	2.0		3.2
Green Ext Time (p_c), s	0.0	6.9		0.7	0.1	18.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	4	46	9	2	12	65	945	4	32	1644	35
Future Volume (veh/h)	40	4	46	9	2	12	65	945	4	32	1644	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)	0.97		0.96	0.97		0.95	1.00		0.99	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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	40	4	4	9	2	12	65	945	4	32	1644	35
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	299	26	267	138	45	139	83	3361	14	54	3211	68
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.64	0.64	0.03	0.63	0.63
Sat Flow, veh/h	1263	150	1513	465	256	787	1774	5227	22	1774	5124	109
Grp Volume(v), veh/h	44	0	4	23	0	0	65	613	336	32	1088	591
Grp Sat Flow(s),veh/h/ln	1412	0	1513	1509	0	0	1774	1695	1858	1774	1695	1843
Q Serve(g_s), s	1.1	0.0	0.2	0.0	0.0	0.0	3.3	7.1	7.1	1.6	15.9	15.9
Cycle Q Clear(g_c), s	2.1	0.0	0.2	1.0	0.0	0.0	3.3	7.1	7.1	1.6	15.9	15.9
Prop In Lane	0.91		1.00	0.39		0.52	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	325	0	267	322	0	0	83	2180	1195	54	2124	1155
V/C Ratio(X)	0.14	0.00	0.01	0.07	0.00	0.00	0.78	0.28	0.28	0.59	0.51	0.51
Avail Cap(c_a), veh/h	636	0	605	651	0	0	108	2180	1195	108	2124	1155
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	0.00	1.00	1.00	1.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	31.3	0.0	30.6	31.0	0.0	0.0	42.4	7.0	7.0	43.1	9.2	9.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	23.1	0.3	0.6	7.5	0.7	1.2
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	0.9	0.0	0.1	0.5	0.0	0.0	2.1	3.4	3.8	0.9	7.6	8.4
LnGrp Delay(d),s/veh	31.5	0.0	30.6	31.0	0.0	0.0	65.5	7.3	7.6	50.6	9.9	10.5
LnGrp LOS	C		C	C			E	A	A	D	A	B
Approach Vol, veh/h		48			23			1014			1711	
Approach Delay, s/veh		31.5			31.0			11.1			10.9	
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	7.3	62.4		20.4	8.7	60.9		20.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	35.0		36.0	5.5	35.0		36.0
Max Q Clear Time (g_c+I1), s	3.6	9.1		4.1	5.3	17.9		3.0
Green Ext Time (p_c), s	0.0	7.0		0.2	0.0	10.9		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		11.5
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	24	138	71	36	36	121	988	30	28	1601	84
Future Volume (veh/h)	93	24	138	71	36	36	121	988	30	28	1601	84
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)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	93	24	138	71	36	36	121	988	30	28	1601	84
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	315	52	300	150	76	57	151	3076	93	49	2717	142
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.08	0.61	0.61	0.03	0.55	0.55
Sat Flow, veh/h	1309	233	1341	420	339	255	1774	5067	154	1774	4944	259
Grp Volume(v), veh/h	93	0	162	143	0	0	121	661	357	28	1098	587
Grp Sat Flow(s),veh/h/ln	1309	0	1574	1014	0	0	1774	1695	1830	1774	1695	1813
Q Serve(g_s), s	0.0	0.0	8.5	6.5	0.0	0.0	6.4	9.0	9.1	1.5	20.5	20.5
Cycle Q Clear(g_c), s	7.8	0.0	8.5	14.9	0.0	0.0	6.4	9.0	9.1	1.5	20.5	20.5
Prop In Lane	1.00		0.85	0.50		0.25	1.00		0.08	1.00		0.14
Lane Grp Cap(c), veh/h	315	0	352	283	0	0	151	2058	1111	49	1863	996
V/C Ratio(X)	0.30	0.00	0.46	0.50	0.00	0.00	0.80	0.32	0.32	0.57	0.59	0.59
Avail Cap(c_a), veh/h	440	0	502	418	0	0	196	2058	1111	110	1863	996
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	31.9	35.6	0.0	0.0	42.7	9.1	9.1	45.6	14.3	14.3
Incr Delay (d2), s/veh	0.5	0.0	0.9	1.4	0.0	0.0	16.4	0.4	0.8	10.2	1.4	2.6
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	2.1	0.0	3.8	3.6	0.0	0.0	3.8	4.3	4.8	0.9	9.8	10.8
LnGrp Delay(d),s/veh	32.2	0.0	32.9	37.0	0.0	0.0	59.1	9.5	9.9	55.8	15.6	16.8
LnGrp LOS	C		C	D			E	A	A	E	B	B
Approach Vol, veh/h		255			143			1139			1713	
Approach Delay, s/veh		32.6			37.0			14.9			16.7	
Approach LOS		C			D			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	7.1	62.2		25.7	12.6	56.7		25.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.9	45.3		30.3	10.5	40.7		30.3
Max Q Clear Time (g_c+I1), s	3.5	11.1		10.5	8.4	22.5		16.9
Green Ext Time (p_c), s	0.0	8.2		1.2	0.1	11.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Intersection						
Int Delay, s/veh	0.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	20	1163	14	0	1780
Future Vol, veh/h	0	20	1163	14	0	1780
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	20	1163	14	0	1780

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	589	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	387	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	387	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	387	-
HCM Lane V/C Ratio	-	-	0.052	-
HCM Control Delay (s)	-	-	14.8	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	54	91	17	12	125
Future Vol, veh/h	51	54	91	17	12	125
Conflicting Peds, #/hr	6	0	0	13	13	6
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	51	54	91	17	12	125

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	121	0	-	0	282	119
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	169	-
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	1467	-	-	-	708	933
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1449	-	-	-	666	916
Mov Cap-2 Maneuver	-	-	-	-	666	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	851	-

Approach	EB	WB	SB
HCM Control Delay, s	3.7	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1449	-	-	-	887
HCM Lane V/C Ratio	0.035	-	-	-	0.154
HCM Control Delay (s)	7.6	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	109	14	0	229	15	0
Future Vol, veh/h	109	14	0	229	15	0
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	109	14	0	229	15	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	123	0	345	116
Stage 1	-	-	-	-	116	-
Stage 2	-	-	-	-	229	-
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	-	-	1464	-	652	936
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	809	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1464	-	652	936
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	809	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	652	-	-	1464	-
HCM Lane V/C Ratio	0.023	-	-	-	-
HCM Control Delay (s)	10.7	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	0	0	108	0	0
Future Vol, veh/h	66	0	0	108	0	0
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	66	0	0	108	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	66	0	174	66
Stage 1	-	-	-	-	66	-
Stage 2	-	-	-	-	108	-
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	-	-	1536	-	816	998
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1536	-	816	998
Mov Cap-2 Maneuver	-	-	-	-	816	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1536	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	738	23	434	282	949	34	536	832	1031	942	32
Future Volume (veh/h)	124	738	23	434	282	949	34	536	832	1031	942	32
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		0.98	1.00		0.89	1.00		0.97	1.00		0.98
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	124	738	23	434	282	861	34	536	707	1031	942	32
Adj No. of Lanes	1	2	0	3	1	2	1	2	2	2	3	0
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	145	949	30	442	517	1287	44	1101	840	735	2522	86
Arrive On Green	0.08	0.27	0.27	0.09	0.28	0.28	0.02	0.31	0.31	0.21	0.50	0.50
Sat Flow, veh/h	1774	3501	109	5003	1863	2490	1774	3539	2701	3442	5047	171
Grp Volume(v), veh/h	124	373	388	434	282	861	34	536	707	1031	632	342
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1668	1863	1245	1774	1770	1351	1721	1695	1828
Q Serve(g_s), s	10.7	30.2	30.2	13.4	20.0	41.7	3.0	19.1	37.9	33.1	17.8	17.8
Cycle Q Clear(g_c), s	10.7	30.2	30.2	13.4	20.0	41.7	3.0	19.1	37.9	33.1	17.8	17.8
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	145	480	499	442	517	1287	44	1101	840	735	1694	913
V/C Ratio(X)	0.86	0.78	0.78	0.98	0.55	0.67	0.77	0.49	0.84	1.40	0.37	0.37
Avail Cap(c_a), veh/h	149	480	499	442	517	1287	66	1101	840	735	1694	913
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	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	52.2	52.2	70.5	47.6	30.7	75.1	43.4	49.8	61.0	23.8	23.9
Incr Delay (d2), s/veh	35.5	11.8	11.4	36.6	3.9	2.6	26.1	1.5	10.0	189.4	0.6	1.2
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	6.7	16.3	16.9	7.7	10.8	14.8	1.8	9.5	15.3	35.1	8.5	9.3
LnGrp Delay(d),s/veh	105.7	63.9	63.6	107.1	51.5	33.3	101.2	44.9	59.8	250.4	24.5	25.0
LnGrp LOS	F	E	E	F	D	C	F	D	E	F	C	C
Approach Vol, veh/h		885			1577			1277			2005	
Approach Delay, s/veh		69.6			56.9			54.7			140.7	
Approach LOS		E			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	52.7	18.2	46.5	8.3	82.0	17.1	47.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.1	48.2	13.7	42.0	5.8	75.5	13.0	42.7
Max Q Clear Time (g_c+I1), s	35.1	39.9	15.4	32.2	5.0	19.8	12.7	43.7
Green Ext Time (p_c), s	0.0	4.3	0.0	3.4	0.0	8.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	7	20	55	17	44	39	1929	60	89	1568	70
Future Volume (veh/h)	38	7	20	55	17	44	39	1929	60	89	1568	70
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)	0.97		0.96	0.96		0.95	1.00		0.99	1.00		0.98
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	7	20	55	17	44	39	1929	60	89	1568	70
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	206	44	88	172	59	112	56	3128	97	113	3238	145
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	787	224	450	629	303	570	1774	5066	157	1774	4986	223
Grp Volume(v), veh/h	65	0	0	116	0	0	39	1290	699	89	1066	572
Grp Sat Flow(s),veh/h/ln	1462	0	0	1502	0	0	1774	1695	1833	1774	1695	1818
Q Serve(g_s), s	0.0	0.0	0.0	3.2	0.0	0.0	2.4	25.9	25.9	5.4	17.7	17.7
Cycle Q Clear(g_c), s	3.7	0.0	0.0	6.9	0.0	0.0	2.4	25.9	25.9	5.4	17.7	17.7
Prop In Lane	0.58		0.31	0.47		0.38	1.00		0.09	1.00		0.12
Lane Grp Cap(c), veh/h	338	0	0	343	0	0	56	2093	1132	113	2202	1181
V/C Ratio(X)	0.19	0.00	0.00	0.34	0.00	0.00	0.69	0.62	0.62	0.79	0.48	0.48
Avail Cap(c_a), veh/h	486	0	0	495	0	0	116	2093	1132	202	2202	1181
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	38.2	0.0	0.0	52.7	13.0	13.0	50.8	9.9	9.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	14.3	1.4	2.5	11.3	0.8	1.4
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	1.7	0.0	0.0	3.1	0.0	0.0	1.4	12.4	13.8	3.0	8.4	9.2
LnGrp Delay(d),s/veh	37.3	0.0	0.0	38.8	0.0	0.0	67.0	14.4	15.5	62.1	10.6	11.3
LnGrp LOS	D			D			E	B	B	E	B	B
Approach Vol, veh/h		65			116			2028			1727	
Approach Delay, s/veh		37.3			38.8			15.8			13.5	
Approach LOS		D			D			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	11.5	72.4		26.1	8.0	75.9		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	12.5	50.9		33.1	7.2	56.2		33.1
Max Q Clear Time (g_c+I1), s	7.4	27.9		5.7	4.4	19.7		8.9
Green Ext Time (p_c), s	0.1	15.8		0.3	0.0	16.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	20	18	80	17	41	38	1833	63	108	1386	110
Future Volume (veh/h)	132	20	18	80	17	41	38	1833	63	108	1386	110
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)	0.99		0.96	0.98		0.98	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	132	20	18	80	17	41	38	1833	63	108	1386	110
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	233	123	111	152	37	58	55	3342	115	135	3397	270
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.66	0.66	0.08	0.71	0.71
Sat Flow, veh/h	1324	888	799	720	264	416	1774	5047	173	1774	4802	381
Grp Volume(v), veh/h	132	0	38	138	0	0	38	1231	665	108	979	517
Grp Sat Flow(s),veh/h/ln	1324	0	1687	1400	0	0	1774	1695	1830	1774	1695	1793
Q Serve(g_s), s	1.4	0.0	2.2	8.4	0.0	0.0	2.3	21.2	21.2	6.6	13.1	13.1
Cycle Q Clear(g_c), s	12.0	0.0	2.2	10.5	0.0	0.0	2.3	21.2	21.2	6.6	13.1	13.1
Prop In Lane	1.00		0.47	0.58		0.30	1.00		0.09	1.00		0.21
Lane Grp Cap(c), veh/h	233	0	234	246	0	0	55	2245	1212	135	2398	1268
V/C Ratio(X)	0.57	0.00	0.16	0.56	0.00	0.00	0.69	0.55	0.55	0.80	0.41	0.41
Avail Cap(c_a), veh/h	357	0	391	381	0	0	106	2245	1212	266	2398	1268
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	41.7	45.5	0.0	0.0	52.7	9.9	9.9	50.0	6.6	6.6
Incr Delay (d2), s/veh	2.2	0.0	0.3	2.0	0.0	0.0	14.0	1.0	1.8	10.1	0.5	1.0
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	4.0	0.0	1.0	4.2	0.0	0.0	1.4	10.0	11.1	3.6	6.2	6.7
LnGrp Delay(d),s/veh	48.2	0.0	42.1	47.5	0.0	0.0	66.7	10.8	11.7	60.1	7.1	7.6
LnGrp LOS	D		D	D			E	B	B	E	A	A
Approach Vol, veh/h		170			138			1934			1604	
Approach Delay, s/veh		46.8			47.5			12.2			10.9	
Approach LOS		D			D			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	12.9	77.3		19.8	7.9	82.3		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	16.5	54.5		25.5	6.6	64.4		25.5
Max Q Clear Time (g_c+I1), s	8.6	23.2		14.0	4.3	15.1		12.5
Green Ext Time (p_c), s	0.1	18.3		0.4	0.0	15.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1	112	2	0	18	97	1872	20	36	1415	59
Future Vol, veh/h	12	1	112	2	0	18	97	1872	20	36	1415	59
Conflicting Peds, #/hr	40	0	29	16	0	27	29	0	16	27	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	112	2	0	18	97	1872	20	36	1415	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2540	3670	806	2771	3689	1013	1514	0	0	1919	0	0
Stage 1	1557	1557	-	2103	2103	-	-	-	-	-	-	-
Stage 2	983	2113	-	668	1586	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*176	*8	279	*98	*7	*477	219	-	-	*600	-	-
Stage 1	*81	*172	-	*489	*465	-	-	-	-	-	-	-
Stage 2	*489	*465	-	*377	*166	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*96	*4	261	*27	*4	*447	211	-	-	*584	-	-
Mov Cap-2 Maneuver	*96	*4	-	*27	*4	-	-	-	-	-	-	-
Stage 1	*42	*155	-	*257	*245	-	-	-	-	-	-	-
Stage 2	*244	*245	-	*195	*150	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	86.3	28.2	1.7	0.3
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	211	-	-	155	175	* 584	-	-
HCM Lane V/C Ratio	0.46	-	-	0.806	0.114	0.062	-	-
HCM Control Delay (s)	35.8	-	-	86.3	28.2	11.6	-	-
HCM Lane LOS	E	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	2.2	-	-	5.2	0.4	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	14	0	16	1	1960	49	61	1472	8
Future Vol, veh/h	0	0	0	14	0	16	1	1960	49	61	1472	8
Conflicting Peds, #/hr	29	0	39	18	0	8	39	0	18	8	0	29
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	14	0	16	1	1960	49	61	1472	8

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	2734	3646	1031	1519	0	0	2027	0	0
Stage 1	2005	2005	-	-	-	-	-	-	-
Stage 2	729	1641	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*167	*9	*453	218	-	-	*569	-	-
Stage 1	*465	*442	-	-	-	-	-	-	-
Stage 2	*398	*156	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*144	*0	*442	218	-	-	*560	-	-
Mov Cap-2 Maneuver	*144	*0	-	-	-	-	-	-	-
Stage 1	*457	*0	-	-	-	-	-	-	-
Stage 2	*349	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.4	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	218	-	-	225	* 560	-	-
HCM Lane V/C Ratio	0.005	-	-	0.133	0.109	-	-
HCM Control Delay (s)	21.6	-	-	23.4	12.2	-	-
HCM Lane LOS	C	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	34	21	2004	1461	31
Future Vol, veh/h	6	34	21	2004	1461	31
Conflicting Peds, #/hr	20	20	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	34	21	2004	1461	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2361	786	1512	0	-	0
Stage 1	1497	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*389	288	220	-	-	-
Stage 1	*119	-	-	-	-	-
Stage 2	*465	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*338	277	216	-	-	-
Mov Cap-2 Maneuver	*338	-	-	-	-	-
Stage 1	*105	-	-	-	-	-
Stage 2	*456	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.7	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	216	-	285	-	-
HCM Lane V/C Ratio	0.097	-	0.14	-	-
HCM Control Delay (s)	23.5	-	19.7	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Notes
~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	23	56	1949	1462	37
Future Volume (veh/h)	75	23	56	1949	1462	37
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	75	-25	56	1949	1462	37
Adj No. of Lanes	1	1	1	3	3	0
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	86	76	73	4424	4019	102
Arrive On Green	0.05	0.00	0.04	0.87	0.79	0.79
Sat Flow, veh/h	1774	1583	1774	5253	5267	129
Grp Volume(v), veh/h	75	-25	56	1949	972	527
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1838
Q Serve(g_s), s	4.6	0.0	3.4	8.9	9.4	9.4
Cycle Q Clear(g_c), s	4.6	0.0	3.4	8.9	9.4	9.4
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	86	76	73	4424	2672	1449
V/C Ratio(X)	0.88	-0.33	0.77	0.44	0.36	0.36
Avail Cap(c_a), veh/h	460	410	250	4424	2672	1449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	0.0	52.2	1.5	3.5	3.5
Incr Delay (d2), s/veh	22.8	0.0	15.6	0.3	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.0	4.1	4.5	5.0
LnGrp Delay(d),s/veh	74.9	0.0	67.8	1.8	3.8	4.2
LnGrp LOS	E		E	A	A	A
Approach Vol, veh/h	50			2005	1499	
Approach Delay, s/veh	112.3			3.7	4.0	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		100.2		9.8	9.0	91.2		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		72.5		28.5	15.5	52.5		
Max Q Clear Time (g_c+I1), s		10.9		6.6	5.4	11.4		
Green Ext Time (p_c), s		28.4		0.2	0.1	14.9		

Intersection Summary		
HCM 2010 Ctrl Delay		5.3
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	31	3	1	6	38	1970	8	42	1435	48
Future Vol, veh/h	8	0	31	3	1	6	38	1970	8	42	1435	48
Conflicting Peds, #/hr	23	0	15	24	0	32	15	0	24	32	0	23
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	31	3	1	6	38	1970	8	42	1435	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2463	3652	789	2764	3672	1053	1506	0	0	2010	0	0
Stage 1	1566	1566	-	2082	2082	-	-	-	-	-	-	-
Stage 2	897	2086	-	682	1590	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*32	*5	*597	*21	*5	*445	*751	-	-	*560	-	-
Stage 1	*613	*583	-	*457	*434	-	-	-	-	-	-	-
Stage 2	*457	*434	-	*613	*565	-	-	-	-	-	-	-
Platoon blocked, %			1			1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*22	*4	*571	*17	*4	*418	*734	-	-	*542	-	-
Mov Cap-2 Maneuver	*22	*4	-	*17	*4	-	-	-	-	-	-	-
Stage 1	*568	*526	-	*420	*400	-	-	-	-	-	-	-
Stage 2	*413	*400	-	*522	*510	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	69.2	250.7	0.2	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 734	-	-	93	23	* 542	-	-
HCM Lane V/C Ratio	0.052	-	-	0.419	0.435	0.077	-	-
HCM Control Delay (s)	10.2	-	-	69.2	250.7	12.2	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.7	1.3	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	15	35	96	20	59	59	1880	93	42	1405	24
Future Volume (veh/h)	64	15	35	96	20	59	59	1880	93	42	1405	24
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)	0.99		0.97	0.99		0.99	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	15	35	96	20	59	59	1880	93	42	1405	24
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	262	88	206	168	41	84	76	3370	166	54	3438	59
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.04	0.68	0.68	0.03	0.67	0.67
Sat Flow, veh/h	1303	487	1137	682	225	461	1774	4956	245	1774	5148	88
Grp Volume(v), veh/h	64	0	50	175	0	0	59	1285	688	42	925	504
Grp Sat Flow(s),veh/h/ln	1303	0	1624	1368	0	0	1774	1695	1810	1774	1695	1846
Q Serve(g_s), s	0.0	0.0	3.3	12.3	0.0	0.0	4.1	24.4	24.5	2.9	15.6	15.6
Cycle Q Clear(g_c), s	6.7	0.0	3.3	15.5	0.0	0.0	4.1	24.4	24.5	2.9	15.6	15.6
Prop In Lane	1.00		0.70	0.55		0.34	1.00		0.14	1.00		0.05
Lane Grp Cap(c), veh/h	262	0	294	293	0	0	76	2305	1231	54	2264	1233
V/C Ratio(X)	0.24	0.00	0.17	0.60	0.00	0.00	0.77	0.56	0.56	0.77	0.41	0.41
Avail Cap(c_a), veh/h	396	0	461	442	0	0	192	2305	1231	149	2264	1233
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	0.0	43.2	48.7	0.0	0.0	59.2	10.3	10.3	60.1	9.5	9.5
Incr Delay (d2), s/veh	0.5	0.0	0.3	2.0	0.0	0.0	15.2	1.0	1.8	20.1	0.5	1.0
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	2.0	0.0	1.5	5.8	0.0	0.0	2.3	11.6	12.9	1.8	7.4	8.2
LnGrp Delay(d),s/veh	45.1	0.0	43.5	50.6	0.0	0.0	74.4	11.3	12.2	80.3	10.0	10.5
LnGrp LOS	D		D	D			E	B	B	F	B	B
Approach Vol, veh/h		114			175			2032			1471	
Approach Delay, s/veh		44.4			50.6			13.4			12.2	
Approach LOS		D			D			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	8.3	89.5		27.2	9.9	88.0		27.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	10.5	65.5		35.5	13.5	62.5		35.5
Max Q Clear Time (g_c+I1), s	4.9	26.5		8.7	6.1	17.6		17.5
Green Ext Time (p_c), s	0.0	22.0		0.4	0.1	14.1		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	7	95	15	5	26	193	1718	4	47	1339	195
Future Volume (veh/h)	270	7	95	15	5	26	193	1718	4	47	1339	195
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)	0.99		0.97	0.99		0.99	1.00		0.99	1.00		0.98
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	270	7	36	15	5	26	193	1718	4	47	1339	195
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	407	488	404	419	68	352	224	2968	7	65	2131	310
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.13	0.57	0.57	0.04	0.48	0.48
Sat Flow, veh/h	1355	1863	1542	1340	259	1345	1774	5238	12	1774	4472	651
Grp Volume(v), veh/h	270	7	36	15	0	31	193	1112	610	47	1015	519
Grp Sat Flow(s),veh/h/ln	1355	1863	1542	1340	0	1603	1774	1695	1860	1774	1695	1733
Q Serve(g_s), s	18.7	0.3	1.8	0.8	0.0	1.5	10.7	21.2	21.2	2.6	22.4	22.4
Cycle Q Clear(g_c), s	20.2	0.3	1.8	1.1	0.0	1.5	10.7	21.2	21.2	2.6	22.4	22.4
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.01	1.00		0.38
Lane Grp Cap(c), veh/h	407	488	404	419	0	420	224	1921	1054	65	1615	826
V/C Ratio(X)	0.66	0.01	0.09	0.04	0.00	0.07	0.86	0.58	0.58	0.73	0.63	0.63
Avail Cap(c_a), veh/h	560	699	578	571	0	601	239	1921	1054	98	1615	826
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	1.00	1.00	1.00	0.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	27.3	27.9	27.7	0.0	27.8	42.8	14.0	14.0	47.7	19.6	19.6
Incr Delay (d2), s/veh	1.9	0.0	0.1	0.0	0.0	0.1	21.9	1.1	2.0	14.3	1.9	3.6
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	7.2	0.1	0.8	0.3	0.0	0.7	6.6	10.2	11.4	1.5	10.9	11.5
LnGrp Delay(d),s/veh	37.2	27.3	28.0	27.8	0.0	27.8	64.7	15.1	16.0	62.0	21.4	23.2
LnGrp LOS	D	C	C	C		C	E	B	B	E	C	C
Approach Vol, veh/h		313			46			1915			1581	
Approach Delay, s/veh		35.9			27.8			20.4			23.2	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	61.2		30.7	17.1	52.2		30.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	43.5		37.5	13.5	35.5		37.5
Max Q Clear Time (g_c+I1), s	4.6	23.2		22.2	12.7	24.4		3.5
Green Ext Time (p_c), s	0.0	12.5		0.9	0.0	7.4		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	3	90	10	3	9	136	1730	7	41	1372	65
Future Volume (veh/h)	111	3	90	10	3	9	136	1730	7	41	1372	65
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)	0.97		0.97	0.97		0.95	1.00		0.97	1.00		0.99
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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	111	3	16	10	3	9	136	1730	7	41	1372	65
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	342	8	346	141	51	96	167	3163	13	60	2710	128
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.09	0.61	0.61	0.01	0.18	0.18
Sat Flow, veh/h	1200	37	1531	390	224	425	1774	5227	21	1774	4974	236
Grp Volume(v), veh/h	114	0	16	22	0	0	136	1122	615	41	935	502
Grp Sat Flow(s),veh/h/ln	1237	0	1531	1040	0	0	1774	1695	1858	1774	1695	1819
Q Serve(g_s), s	0.0	0.0	0.8	0.1	0.0	0.0	7.5	19.5	19.5	2.3	24.9	24.9
Cycle Q Clear(g_c), s	9.4	0.0	0.8	9.5	0.0	0.0	7.5	19.5	19.5	2.3	24.9	24.9
Prop In Lane	0.97		1.00	0.45		0.41	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	350	0	346	287	0	0	167	2052	1125	60	1847	991
V/C Ratio(X)	0.33	0.00	0.05	0.08	0.00	0.00	0.81	0.55	0.55	0.68	0.51	0.51
Avail Cap(c_a), veh/h	541	0	559	492	0	0	257	2052	1125	257	1847	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	33.6	0.0	30.3	30.6	0.0	0.0	44.4	11.7	11.7	48.9	28.9	28.9
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.0	10.8	1.1	1.9	9.2	0.7	1.3
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	2.8	0.0	0.3	0.5	0.0	0.0	4.2	9.3	10.5	1.3	11.9	12.9
LnGrp Delay(d),s/veh	34.1	0.0	30.3	30.7	0.0	0.0	55.2	12.7	13.6	58.1	29.6	30.2
LnGrp LOS	C		C	C			E	B	B	E	C	C
Approach Vol, veh/h		130			22			1873			1478	
Approach Delay, s/veh		33.7			30.7			16.1			30.6	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	65.0		27.1	13.9	59.0		27.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	35.5		36.5	14.5	35.5		36.5
Max Q Clear Time (g_c+I1), s	4.3	21.5		11.4	9.5	26.9		11.5
Green Ext Time (p_c), s	0.0	9.7		0.6	0.1	5.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	25	110	55	18	32	186	1910	66	64	1438	90
Future Volume (veh/h)	120	25	110	55	18	32	186	1910	66	64	1438	90
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)	0.98		0.95	0.98		0.95	1.00		0.94	1.00		0.96
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	120	25	110	55	18	32	186	1910	66	64	1438	90
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	330	64	282	162	57	72	98	3011	104	82	2874	180
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.60	0.60	0.05	0.59	0.59
Sat Flow, veh/h	1319	290	1276	483	258	325	1774	5035	174	1774	4878	305
Grp Volume(v), veh/h	120	0	135	105	0	0	186	1285	691	64	999	529
Grp Sat Flow(s),veh/h/ln	1319	0	1565	1066	0	0	1774	1695	1818	1774	1695	1793
Q Serve(g_s), s	0.0	0.0	7.4	4.5	0.0	0.0	5.5	24.5	24.6	3.6	17.2	17.2
Cycle Q Clear(g_c), s	10.1	0.0	7.4	11.9	0.0	0.0	5.5	24.5	24.6	3.6	17.2	17.2
Prop In Lane	1.00		0.81	0.52		0.30	1.00		0.10	1.00		0.17
Lane Grp Cap(c), veh/h	330	0	345	290	0	0	98	2027	1087	82	1998	1056
V/C Ratio(X)	0.36	0.00	0.39	0.36	0.00	0.00	1.91	0.63	0.64	0.78	0.50	0.50
Avail Cap(c_a), veh/h	442	0	477	407	0	0	98	2027	1087	98	1998	1056
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	33.2	35.7	0.0	0.0	47.3	13.0	13.0	47.2	12.0	12.0
Incr Delay (d2), s/veh	0.7	0.0	0.7	0.8	0.0	0.0	443.5	1.5	2.8	27.9	0.9	1.7
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	3.0	0.0	3.3	2.7	0.0	0.0	14.7	11.8	13.1	2.4	8.2	8.9
LnGrp Delay(d),s/veh	35.0	0.0	34.0	36.4	0.0	0.0	490.8	14.5	15.9	75.0	12.9	13.7
LnGrp LOS	C		C	D			F	B	B	E	B	B
Approach Vol, veh/h		255			105			2162			1592	
Approach Delay, s/veh		34.4			36.4			55.9			15.6	
Approach LOS		C			D			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	64.3		26.6	10.0	63.4		26.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	50.5		30.5	5.5	50.5		30.5
Max Q Clear Time (g_c+I1), s	5.6	26.6		12.1	7.5	19.2		13.9
Green Ext Time (p_c), s	0.0	16.1		1.1	0.0	13.9		0.5

Intersection Summary		
HCM 2010 Ctrl Delay		38.5
HCM 2010 LOS		D

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	2021	27	0	1581
Future Vol, veh/h	0	11	2021	27	0	1581
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	11	2021	27	0	1581

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1024	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	200	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	200	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	200	-
HCM Lane V/C Ratio	-	-	0.055	-
HCM Control Delay (s)	-	-	24	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection						
Int Delay, s/veh	4.7					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	74	50	5	11	95
Future Vol, veh/h	48	74	50	5	11	95
Conflicting Peds, #/hr	7	0	0	11	11	7
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	48	74	50	5	11	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	66	0	-	0	245	71
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	181	-
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	1536	-	-	-	743	991
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1520	-	-	-	704	974
Mov Cap-2 Maneuver	-	-	-	-	704	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	842	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1520	-	-	-	937
HCM Lane V/C Ratio	0.032	-	-	-	0.113
HCM Control Delay (s)	7.4	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	144	6	0	165	10	0
Future Vol, veh/h	144	6	0	165	10	0
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	144	6	0	165	10	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	150	0	312	147
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	165	-
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	-	-	1431	-	681	900
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1431	-	681	900
Mov Cap-2 Maneuver	-	-	-	-	681	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	864	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	681	-	-	1431	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	10.4	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	0	0	55	0	0
Future Vol, veh/h	85	0	0	55	0	0
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	85	0	0	55	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	85	0	140	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	55	-
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	-	-	1512	-	853	974
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1512	-	853	974
Mov Cap-2 Maneuver	-	-	-	-	853	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1512	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	341	36	694	660	1263	36	857	652	967	879	50
Future Volume (veh/h)	130	341	36	694	660	1263	36	857	652	967	879	50
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		0.96	1.00		0.84	1.00		0.96	1.00		0.94
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	130	341	36	694	660	1219	36	857	464	967	879	50
Adj No. of Lanes	1	2	0	3	1	2	1	2	2	2	3	0
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	151	845	88	578	546	1452	46	836	633	940	2369	134
Arrive On Green	0.08	0.26	0.26	0.12	0.29	0.29	0.03	0.24	0.24	0.27	0.48	0.48
Sat Flow, veh/h	1774	3218	337	5003	1863	2354	1774	3539	2680	3442	4903	278
Grp Volume(v), veh/h	130	186	191	694	660	1219	36	857	464	967	607	322
Grp Sat Flow(s),veh/h/ln	1774	1770	1785	1668	1863	1177	1774	1770	1340	1721	1695	1791
Q Serve(g_s), s	11.6	13.9	14.1	18.5	46.9	46.9	3.2	37.8	25.6	43.7	18.0	18.1
Cycle Q Clear(g_c), s	11.6	13.9	14.1	18.5	46.9	46.9	3.2	37.8	25.6	43.7	18.0	18.1
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	151	465	469	578	546	1452	46	836	633	940	1638	865
V/C Ratio(X)	0.86	0.40	0.41	1.20	1.21	0.84	0.78	1.02	0.73	1.03	0.37	0.37
Avail Cap(c_a), veh/h	167	465	469	578	546	1452	102	836	633	940	1638	865
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	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	48.6	48.7	70.7	56.5	30.6	77.4	61.1	56.4	58.2	26.0	26.1
Incr Delay (d2), s/veh	32.2	2.6	2.6	103.4	107.5	5.0	23.6	37.6	7.4	36.9	0.6	1.2
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	7.1	7.1	7.3	14.1	40.4	23.9	1.9	22.8	10.1	25.6	8.6	9.2
LnGrp Delay(d),s/veh	104.5	51.2	51.3	174.1	164.1	35.6	101.0	98.7	63.8	95.1	26.7	27.3
LnGrp LOS	F	D	D	F	F	D	F	F	E	F	C	C
Approach Vol, veh/h		507			2573			1357			1896	
Approach Delay, s/veh		64.9			105.9			86.8			61.7	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.2	42.3	23.0	46.5	8.7	81.8	18.1	51.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	43.7	37.8	18.5	42.0	9.2	72.3	15.1	45.4
Max Q Clear Time (g_c+I1), s	45.7	39.8	20.5	16.1	5.2	20.1	13.6	48.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	7.7	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		85.3
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	31	50	9	60	20	1233	28	46	1331	13
Future Volume (veh/h)	35	9	31	50	9	60	20	1233	28	46	1331	13
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)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.99
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	9	31	50	9	60	20	1233	28	46	1331	13
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	161	51	112	143	39	133	38	3339	76	64	3469	34
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.65	0.65	0.04	0.67	0.67
Sat Flow, veh/h	616	288	637	524	223	759	1774	5112	116	1774	5193	51
Grp Volume(v), veh/h	75	0	0	119	0	0	20	818	443	46	869	475
Grp Sat Flow(s),veh/h/ln	1542	0	0	1506	0	0	1774	1695	1838	1774	1695	1853
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	1.1	11.0	11.0	2.6	11.4	11.4
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.6	0.0	0.0	1.1	11.0	11.0	2.6	11.4	11.4
Prop In Lane	0.47		0.41	0.42		0.50	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	324	0	0	316	0	0	38	2214	1200	64	2264	1238
V/C Ratio(X)	0.23	0.00	0.00	0.38	0.00	0.00	0.53	0.37	0.37	0.72	0.38	0.38
Avail Cap(c_a), veh/h	581	0	0	576	0	0	115	2214	1200	133	2264	1238
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	36.6	0.0	0.0	48.4	7.9	7.9	47.7	7.4	7.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	0.0	11.0	0.5	0.9	14.0	0.5	0.9
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	1.8	0.0	0.0	3.0	0.0	0.0	0.7	5.3	5.8	1.5	5.5	6.1
LnGrp Delay(d),s/veh	35.9	0.0	0.0	37.3	0.0	0.0	59.4	8.4	8.8	61.7	7.9	8.3
LnGrp LOS	D			D			E	A	A	E	A	A
Approach Vol, veh/h		75			119			1281			1390	
Approach Delay, s/veh		35.9			37.3			9.3			9.8	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	69.8		22.1	6.6	71.3		22.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	43.5		35.5	6.5	44.5		35.5
Max Q Clear Time (g_c+I1), s	4.6	13.0		5.8	3.1	13.4		8.6
Green Ext Time (p_c), s	0.0	10.5		0.4	0.0	11.5		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	16	16	131	8	36	8	1135	56	65	1352	75
Future Volume (veh/h)	117	16	16	131	8	36	8	1135	56	65	1352	75
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)	0.98		0.96	0.98		0.97	1.00		0.97	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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	117	16	16	131	8	36	8	1135	56	65	1352	75
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	140	140	220	15	45	18	3222	159	85	3392	188
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	1.00	1.00	0.05	0.69	0.69
Sat Flow, veh/h	1336	836	836	942	92	268	1774	4956	244	1774	4930	273
Grp Volume(v), veh/h	117	0	32	175	0	0	8	776	415	65	930	497
Grp Sat Flow(s),veh/h/ln	1336	0	1672	1301	0	0	1774	1695	1810	1774	1695	1813
Q Serve(g_s), s	0.0	0.0	1.6	11.6	0.0	0.0	0.4	0.0	0.0	3.6	11.8	11.8
Cycle Q Clear(g_c), s	7.7	0.0	1.6	13.2	0.0	0.0	0.4	0.0	0.0	3.6	11.8	11.8
Prop In Lane	1.00		0.50	0.75		0.21	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	301	0	279	280	0	0	18	2204	1177	85	2333	1248
V/C Ratio(X)	0.39	0.00	0.11	0.62	0.00	0.00	0.45	0.35	0.35	0.77	0.40	0.40
Avail Cap(c_a), veh/h	472	0	493	459	0	0	151	2204	1177	381	2333	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	35.4	40.7	0.0	0.0	48.7	0.0	0.0	47.1	6.7	6.7
Incr Delay (d2), s/veh	0.8	0.0	0.2	2.3	0.0	0.0	17.0	0.4	0.8	13.3	0.5	1.0
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	3.0	0.0	0.8	4.8	0.0	0.0	0.3	0.1	0.3	2.1	5.6	6.1
LnGrp Delay(d),s/veh	38.7	0.0	35.6	43.0	0.0	0.0	65.8	0.4	0.8	60.3	7.2	7.7
LnGrp LOS	D		D	D			E	A	A	E	A	A
Approach Vol, veh/h		149			175			1199			1492	
Approach Delay, s/veh		38.0			43.0			1.0			9.7	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	69.5		21.2	5.5	73.3		21.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	35.5		29.5	8.5	48.5		29.5
Max Q Clear Time (g_c+I1), s	5.6	2.0		9.7	2.4	13.8		15.2
Green Ext Time (p_c), s	0.1	10.1		0.4	0.0	13.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	108	8	0	16	77	1133	9	10	1541	14
Future Vol, veh/h	5	0	108	8	0	16	77	1133	9	10	1541	14
Conflicting Peds, #/hr	22	0	12	16	0	26	12	0	16	26	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	108	8	0	16	77	1133	9	10	1541	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2223	2912	816	1970	2915	623	1577	0	0	1168	0	0
Stage 1	1590	1590	-	1318	1318	-	-	-	-	-	-	-
Stage 2	633	1322	-	652	1597	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*51	*16	275	*75	*16	*645	204	-	-	*811	-	-
Stage 1	*76	*166	-	*662	*629	-	-	-	-	-	-	-
Stage 2	*662	*629	-	*385	*164	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*33	*9	265	*30	*9	*613	200	-	-	*790	-	-
Mov Cap-2 Maneuver	*33	*9	-	*30	*9	-	-	-	-	-	-	-
Stage 1	*46	*160	-	*397	*378	-	-	-	-	-	-	-
Stage 2	*386	*378	-	*222	*158	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	43.3	66.1	2.1	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	200	-	-	202	82	* 790	-	-
HCM Lane V/C Ratio	0.385	-	-	0.559	0.293	0.013	-	-
HCM Control Delay (s)	33.8	-	-	43.3	66.1	9.6	-	-
HCM Lane LOS	D	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	1.7	-	-	3	1.1	0	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	22	0	28	1	1157	32	29	1647	5
Future Vol, veh/h	0	0	0	22	0	28	1	1157	32	29	1647	5
Conflicting Peds, #/hr	16	0	31	25	0	10	31	0	25	10	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	22	0	28	1	1157	32	29	1647	5

Major/Minor				Minor1			Major1			Major2		
Conflicting Flow All				1942	2941	630	1683	0	0	1214	0	0
Stage 1				1200	1200	-	-	-	-	-	-	-
Stage 2				742	1741	-	-	-	-	-	-	-
Critical Hdwy				5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1				6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2				6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy				3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver				*256	*27	*645	181	-	-	*811	-	-
Stage 1				*662	*629	-	-	-	-	-	-	-
Stage 2				*392	*139	-	-	-	-	-	-	-
Platoon blocked, %				1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver				*231	*0	*623	181	-	-	*791	-	-
Mov Cap-2 Maneuver				*231	*0	-	-	-	-	-	-	-
Stage 1				*635	*0	-	-	-	-	-	-	-
Stage 2				*368	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.7	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	181	-	-	357	* 791	-	-
HCM Lane V/C Ratio	0.006	-	-	0.14	0.037	-	-
HCM Control Delay (s)	25	-	-	16.7	9.7	-	-
HCM Lane LOS	D	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.7					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	51	1235	1553	53
Future Vol, veh/h	6	11	51	1235	1553	53
Conflicting Peds, #/hr	6	6	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	11	51	1235	1553	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2188	815	1612	0	-	0
Stage 1	1586	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*171	275	196	-	-	-
Stage 1	*105	-	-	-	-	-
Stage 2	*662	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*125	272	195	-	-	-
Mov Cap-2 Maneuver	*125	-	-	-	-	-
Stage 1	*77	-	-	-	-	-
Stage 2	*658	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.6	1.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	195	-	192	-	-
HCM Lane V/C Ratio	0.262	-	0.089	-	-
HCM Control Delay (s)	29.9	-	25.6	-	-
HCM Lane LOS	D	-	D	-	-
HCM 95th %tile Q(veh)	1	-	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	122	41	83	1136	1576	45		
Future Volume (veh/h)	122	41	83	1136	1576	45		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	122	5	83	1136	1576	45		
Adj No. of Lanes	1	1	1	3	3	0		
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	156	139	106	4182	3644	104		
Arrive On Green	0.09	0.09	0.12	1.00	0.72	0.72		
Sat Flow, veh/h	1774	1583	1774	5253	5245	145		
Grp Volume(v), veh/h	122	5	83	1136	1052	569		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1833		
Q Serve(g_s), s	6.7	0.3	4.5	0.0	12.7	12.7		
Cycle Q Clear(g_c), s	6.7	0.3	4.5	0.0	12.7	12.7		
Prop In Lane	1.00	1.00	1.00			0.08		
Lane Grp Cap(c), veh/h	156	139	106	4182	2433	1315		
V/C Ratio(X)	0.78	0.04	0.78	0.27	0.43	0.43		
Avail Cap(c_a), veh/h	506	451	239	4182	2433	1315		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	44.7	41.7	43.4	0.0	5.8	5.8		
Incr Delay (d2), s/veh	8.4	0.1	11.9	0.2	0.6	1.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.6	0.3	2.6	0.1	6.0	6.7		
LnGrp Delay(d),s/veh	53.1	41.9	55.3	0.2	6.3	6.8		
LnGrp LOS	D	D	E	A	A	A		
Approach Vol, veh/h	127			1219	1621			
Approach Delay, s/veh	52.6			3.9	6.5			
Approach LOS	D			A	A			
Timer	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		86.7		13.3	10.5	76.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.5		28.5	13.5	44.5		
Max Q Clear Time (g_c+I1), s		2.0		8.7	6.5	14.7		
Green Ext Time (p_c), s		11.2		0.3	0.1	14.6		
Intersection Summary								
HCM 2010 Ctrl Delay			7.4					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	58	2	2	9	53	1150	14	29	1546	87
Future Vol, veh/h	12	0	58	2	2	9	53	1150	14	29	1546	87
Conflicting Peds, #/hr	34	0	21	21	0	34	21	0	21	34	0	34
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	58	2	2	9	53	1150	14	29	1546	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2283	2986	872	1994	3022	650	1667	0	0	1198	0	0
Stage 1	1682	1682	-	1297	1297	-	-	-	-	-	-	-
Stage 2	601	1304	-	697	1725	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*301	*286	*565	*301	*286	*645	*711	-	-	*811	-	-
Stage 1	*580	*552	-	*662	*629	-	-	-	-	-	-	-
Stage 2	*662	*629	-	*580	*552	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*252	*238	*536	*233	*238	*604	*688	-	-	*784	-	-
Mov Cap-2 Maneuver	*252	*238	-	*233	*238	-	-	-	-	-	-	-
Stage 1	*518	*514	-	*591	*562	-	-	-	-	-	-	-
Stage 2	*580	*562	-	*488	*514	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	14.1	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 688	-	-	449	408	* 784	-	-
HCM Lane V/C Ratio	0.077	-	-	0.156	0.032	0.037	-	-
HCM Control Delay (s)	10.7	-	-	14.5	14.1	9.8	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	31	36	209	56	55	35	1076	82	37	1545	31
Future Volume (veh/h)	70	31	36	209	56	55	35	1076	82	37	1545	31
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		0.98	0.99		0.99	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	70	31	36	209	56	55	35	1076	82	37	1545	31
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	423	224	260	301	67	64	55	2627	200	57	2803	56
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.06	1.00	1.00	0.06	1.00	1.00
Sat Flow, veh/h	1272	777	903	839	232	222	1774	4818	367	1774	5131	103
Grp Volume(v), veh/h	70	0	67	320	0	0	35	757	401	37	1021	555
Grp Sat Flow(s),veh/h/ln	1272	0	1680	1293	0	0	1774	1695	1794	1774	1695	1843
Q Serve(g_s), s	0.0	0.0	3.0	21.1	0.0	0.0	1.9	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	3.0	24.1	0.0	0.0	1.9	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		0.54	0.65		0.17	1.00		0.20	1.00		0.06
Lane Grp Cap(c), veh/h	423	0	483	431	0	0	55	1849	979	57	1852	1007
V/C Ratio(X)	0.17	0.00	0.14	0.74	0.00	0.00	0.63	0.41	0.41	0.65	0.55	0.55
Avail Cap(c_a), veh/h	509	0	596	528	0	0	186	1849	979	115	1852	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	26.4	35.3	0.0	0.0	46.3	0.0	0.0	46.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	4.4	0.0	0.0	11.5	0.7	1.3	11.8	1.2	2.2
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	1.5	0.0	1.4	9.0	0.0	0.0	1.1	0.2	0.3	1.2	0.3	0.6
LnGrp Delay(d),s/veh	27.1	0.0	26.6	39.7	0.0	0.0	57.8	0.7	1.3	58.0	1.2	2.2
LnGrp LOS	C		C	D			E	A	A	E	A	A
Approach Vol, veh/h		137			320			1193			1613	
Approach Delay, s/veh		26.8			39.7			2.6			2.8	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	59.0		33.3	7.6	59.1		33.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	44.5		35.5	10.5	40.5		35.5
Max Q Clear Time (g_c+I1), s	4.0	2.0		6.4	3.9	2.0		26.1
Green Ext Time (p_c), s	0.0	10.3		0.6	0.0	15.7		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	12	120	12	9	4	105	891	8	39	1593	189
Future Volume (veh/h)	245	12	120	12	9	4	105	891	8	39	1593	189
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)	0.99		0.98	0.99		0.99	1.00		0.98	1.00		0.97
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	245	12	28	12	9	4	105	891	8	39	1593	189
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	365	404	337	359	265	118	132	3195	29	59	2635	312
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.07	0.61	0.61	0.07	1.00	1.00
Sat Flow, veh/h	1388	1863	1553	1355	1221	543	1774	5197	47	1774	4595	544
Grp Volume(v), veh/h	245	12	28	12	0	13	105	581	318	39	1174	608
Grp Sat Flow(s),veh/h/ln	1388	1863	1553	1355	0	1763	1774	1695	1854	1774	1695	1749
Q Serve(g_s), s	16.9	0.5	1.4	0.7	0.0	0.6	5.8	8.0	8.0	2.1	0.0	0.0
Cycle Q Clear(g_c), s	17.5	0.5	1.4	1.2	0.0	0.6	5.8	8.0	8.0	2.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.03	1.00		0.31
Lane Grp Cap(c), veh/h	365	404	337	359	0	383	132	2084	1140	59	1944	1003
V/C Ratio(X)	0.67	0.03	0.08	0.03	0.00	0.03	0.79	0.28	0.28	0.66	0.60	0.61
Avail Cap(c_a), veh/h	540	639	533	530	0	605	186	2084	1140	165	1944	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	30.8	31.2	31.3	0.0	30.9	45.5	9.0	9.0	46.2	0.0	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.1	0.0	0.0	0.0	14.1	0.3	0.6	12.2	1.4	2.7
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	6.7	0.3	0.6	0.3	0.0	0.3	3.4	3.8	4.3	1.2	0.4	0.8
LnGrp Delay(d),s/veh	39.9	30.9	31.3	31.4	0.0	30.9	59.6	9.3	9.6	58.3	1.4	2.7
LnGrp LOS	D	C	C	C		C	E	A	A	E	A	A
Approach Vol, veh/h		285			25			1004			1821	
Approach Delay, s/veh		38.7			31.1			14.6			3.1	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	66.0		26.2	11.9	61.8		26.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	9.3	42.9		34.3	10.5	41.7		34.3
Max Q Clear Time (g_c+I1), s	4.1	10.0		19.5	7.8	2.0		3.2
Green Ext Time (p_c), s	0.0	6.9		0.7	0.1	19.3		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		10.2
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	4	46	9	2	12	65	948	4	32	1680	36
Future Volume (veh/h)	40	4	46	9	2	12	65	948	4	32	1680	36
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)	0.97		0.96	0.97		0.95	1.00		0.99	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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	40	4	4	9	2	12	65	948	4	32	1680	36
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	299	26	267	138	45	139	83	3361	14	54	3211	69
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.64	0.64	0.03	0.63	0.63
Sat Flow, veh/h	1263	150	1513	465	256	787	1774	5227	22	1774	5123	110
Grp Volume(v), veh/h	44	0	4	23	0	0	65	615	337	32	1112	604
Grp Sat Flow(s),veh/h/ln	1412	0	1513	1509	0	0	1774	1695	1858	1774	1695	1843
Q Serve(g_s), s	1.1	0.0	0.2	0.0	0.0	0.0	3.3	7.1	7.1	1.6	16.4	16.4
Cycle Q Clear(g_c), s	2.1	0.0	0.2	1.0	0.0	0.0	3.3	7.1	7.1	1.6	16.4	16.4
Prop In Lane	0.91		1.00	0.39		0.52	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	325	0	267	322	0	0	83	2180	1195	54	2124	1155
V/C Ratio(X)	0.14	0.00	0.01	0.07	0.00	0.00	0.78	0.28	0.28	0.59	0.52	0.52
Avail Cap(c_a), veh/h	636	0	605	651	0	0	108	2180	1195	108	2124	1155
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	0.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	31.3	0.0	30.6	31.0	0.0	0.0	42.4	7.0	7.0	43.1	9.3	9.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	23.1	0.3	0.6	7.4	0.7	1.3
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	0.9	0.0	0.1	0.5	0.0	0.0	2.1	3.4	3.8	0.9	7.8	8.6
LnGrp Delay(d),s/veh	31.5	0.0	30.6	31.0	0.0	0.0	65.5	7.3	7.6	50.4	10.0	10.6
LnGrp LOS	C		C	C			E	A	A	D	B	B
Approach Vol, veh/h		48			23			1017			1748	
Approach Delay, s/veh		31.5			31.0			11.1			11.0	
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	7.3	62.4		20.4	8.7	60.9		20.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	35.0		36.0	5.5	35.0		36.0
Max Q Clear Time (g_c+I1), s	3.6	9.1		4.1	5.3	18.4		3.0
Green Ext Time (p_c), s	0.0	7.0		0.2	0.0	10.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	24	138	71	36	36	121	990	30	28	1631	90
Future Volume (veh/h)	94	24	138	71	36	36	121	990	30	28	1631	90
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)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	94	24	138	71	36	36	121	990	30	28	1631	90
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	315	52	300	150	76	57	151	3076	93	49	2709	149
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.08	0.61	0.61	0.03	0.55	0.55
Sat Flow, veh/h	1309	233	1341	420	339	255	1774	5067	153	1774	4929	272
Grp Volume(v), veh/h	94	0	162	143	0	0	121	662	358	28	1121	600
Grp Sat Flow(s),veh/h/ln	1309	0	1574	1014	0	0	1774	1695	1830	1774	1695	1811
Q Serve(g_s), s	0.0	0.0	8.5	6.5	0.0	0.0	6.4	9.1	9.1	1.5	21.2	21.2
Cycle Q Clear(g_c), s	7.9	0.0	8.5	14.9	0.0	0.0	6.4	9.1	9.1	1.5	21.2	21.2
Prop In Lane	1.00		0.85	0.50		0.25	1.00		0.08	1.00		0.15
Lane Grp Cap(c), veh/h	315	0	352	283	0	0	151	2058	1111	49	1863	995
V/C Ratio(X)	0.30	0.00	0.46	0.50	0.00	0.00	0.80	0.32	0.32	0.57	0.60	0.60
Avail Cap(c_a), veh/h	440	0	502	418	0	0	196	2058	1111	110	1863	995
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	31.9	35.6	0.0	0.0	42.7	9.1	9.1	45.6	14.4	14.4
Incr Delay (d2), s/veh	0.5	0.0	0.9	1.4	0.0	0.0	16.4	0.4	0.8	10.2	1.4	2.7
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	2.2	0.0	3.8	3.6	0.0	0.0	3.8	4.3	4.8	0.9	10.2	11.2
LnGrp Delay(d),s/veh	32.2	0.0	32.9	37.0	0.0	0.0	59.1	9.5	9.9	55.8	15.9	17.1
LnGrp LOS	C		C	D			E	A	A	E	B	B
Approach Vol, veh/h		256			143			1141			1749	
Approach Delay, s/veh		32.6			37.0			14.9			16.9	
Approach LOS		C			D			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	7.1	62.2		25.7	12.6	56.7		25.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.3	45.3		30.3	10.5	40.7		30.3
Max Q Clear Time (g_c+I1), s	3.5	11.1		10.5	8.4	23.2		16.9
Green Ext Time (p_c), s	0.0	8.2		1.2	0.1	11.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	1186	0	0	1822
Future Vol, veh/h	0	4	1186	0	0	1822
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	4	1186	0	0	1822

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	593	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	385	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	385	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	385	-
HCM Lane V/C Ratio	-	-	0.01	-
HCM Control Delay (s)	-	-	14.4	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection						
Int Delay, s/veh	3.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	87	186	17	12	125
Future Vol, veh/h	51	87	186	17	12	125
Conflicting Peds, #/hr	6	0	0	13	13	6
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	51	87	186	17	12	125

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	216	0	-	0	410	214
Stage 1	-	-	-	-	208	-
Stage 2	-	-	-	-	202	-
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	1354	-	-	-	598	826
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1337	-	-	-	560	811
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1337	-	-	-	780
HCM Lane V/C Ratio	0.038	-	-	-	0.176
HCM Control Delay (s)	7.8	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	7	0	324	0	0
Future Vol, veh/h	142	7	0	324	0	0
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	142	7	0	324	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	470	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	324	-
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	-	-	1432	-	552	901
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1432	-	552	901
Mov Cap-2 Maneuver	-	-	-	-	552	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	733	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1432	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	33	0	108	95	0
Future Vol, veh/h	66	33	0	108	95	0
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	66	33	0	108	95	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	99	0	191	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	108	-
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	-	-	1494	-	798	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	798	976
Mov Cap-2 Maneuver	-	-	-	-	798	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	798	-	-	1494	-
HCM Lane V/C Ratio	0.119	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	738	23	434	282	950	34	537	832	1046	957	32
Future Volume (veh/h)	124	738	23	434	282	950	34	537	832	1046	957	32
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		0.98	1.00		0.89	1.00		0.97	1.00		0.98
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	124	738	23	434	282	862	34	537	707	1046	957	32
Adj No. of Lanes	1	2	0	3	1	2	1	2	2	2	3	0
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	145	949	30	442	517	1287	44	1101	840	735	2523	84
Arrive On Green	0.08	0.27	0.27	0.09	0.28	0.28	0.02	0.31	0.31	0.21	0.50	0.50
Sat Flow, veh/h	1774	3501	109	5003	1863	2490	1774	3539	2701	3442	5050	169
Grp Volume(v), veh/h	124	373	388	434	282	862	34	537	707	1046	642	347
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1668	1863	1245	1774	1770	1351	1721	1695	1828
Q Serve(g_s), s	10.7	30.2	30.2	13.4	20.0	41.7	3.0	19.1	37.9	33.1	18.1	18.2
Cycle Q Clear(g_c), s	10.7	30.2	30.2	13.4	20.0	41.7	3.0	19.1	37.9	33.1	18.1	18.2
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	145	480	499	442	517	1287	44	1101	840	735	1694	914
V/C Ratio(X)	0.86	0.78	0.78	0.98	0.55	0.67	0.77	0.49	0.84	1.42	0.38	0.38
Avail Cap(c_a), veh/h	149	480	499	442	517	1287	66	1101	840	735	1694	914
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	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	52.2	52.2	70.5	47.6	30.7	75.1	43.4	49.8	61.0	23.9	23.9
Incr Delay (d2), s/veh	35.5	11.8	11.4	36.6	3.9	2.6	26.1	1.5	10.0	198.4	0.6	1.2
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	6.7	16.3	16.9	7.7	10.8	14.8	1.8	9.6	15.3	36.0	8.6	9.5
LnGrp Delay(d),s/veh	105.7	63.9	63.6	107.1	51.5	33.3	101.2	44.9	59.8	259.3	24.6	25.1
LnGrp LOS	F	E	E	F	D	C	F	D	E	F	C	C
Approach Vol, veh/h		885			1578			1278			2035	
Approach Delay, s/veh		69.6			56.9			54.7			145.3	
Approach LOS		E			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	52.7	18.2	46.5	8.3	82.0	17.1	47.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.1	48.2	13.7	42.0	5.8	75.5	13.0	42.7
Max Q Clear Time (g_c+I1), s	35.1	39.9	15.4	32.2	5.0	20.2	12.7	43.7
Green Ext Time (p_c), s	0.0	4.3	0.0	3.4	0.0	8.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	89.5
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	7	21	55	17	44	40	1935	60	89	1578	70
Future Volume (veh/h)	38	7	21	55	17	44	40	1935	60	89	1578	70
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)	0.97		0.96	0.96		0.95	1.00		0.99	1.00		0.98
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	7	21	55	17	44	40	1935	60	89	1578	70
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	204	44	91	172	59	112	57	3128	97	113	3237	144
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	775	224	466	629	303	570	1774	5067	157	1774	4987	221
Grp Volume(v), veh/h	66	0	0	116	0	0	40	1294	701	89	1073	575
Grp Sat Flow(s),veh/h/ln	1466	0	0	1502	0	0	1774	1695	1833	1774	1695	1818
Q Serve(g_s), s	0.0	0.0	0.0	3.1	0.0	0.0	2.5	26.0	26.1	5.4	17.9	17.9
Cycle Q Clear(g_c), s	3.7	0.0	0.0	6.9	0.0	0.0	2.5	26.0	26.1	5.4	17.9	17.9
Prop In Lane	0.58		0.32	0.47		0.38	1.00		0.09	1.00		0.12
Lane Grp Cap(c), veh/h	339	0	0	343	0	0	57	2093	1132	113	2201	1180
V/C Ratio(X)	0.19	0.00	0.00	0.34	0.00	0.00	0.70	0.62	0.62	0.79	0.49	0.49
Avail Cap(c_a), veh/h	486	0	0	495	0	0	116	2093	1132	202	2201	1180
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	0.0	38.2	0.0	0.0	52.7	13.0	13.0	50.8	9.9	9.9
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	14.6	1.4	2.6	11.3	0.8	1.4
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	1.7	0.0	0.0	3.1	0.0	0.0	1.4	12.4	13.9	3.0	8.6	9.4
LnGrp Delay(d),s/veh	37.3	0.0	0.0	38.8	0.0	0.0	67.3	14.4	15.6	62.1	10.7	11.3
LnGrp LOS	D			D			E	B	B	E	B	B
Approach Vol, veh/h		66			116			2035			1737	
Approach Delay, s/veh		37.3			38.8			15.8			13.5	
Approach LOS		D			D			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	11.5	72.4		26.1	8.0	75.9		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	12.5	50.9		33.1	7.2	56.2		33.1
Max Q Clear Time (g_c+I1), s	7.4	28.1		5.7	4.5	19.9		8.9
Green Ext Time (p_c), s	0.1	15.8		0.3	0.0	16.4		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	20	18	80	17	41	38	1840	63	108	1397	110
Future Volume (veh/h)	132	20	18	80	17	41	38	1840	63	108	1397	110
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)	0.99		0.96	0.98		0.98	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	132	20	18	80	17	41	38	1840	63	108	1397	110
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	233	123	111	152	37	58	55	3343	114	135	3399	268
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.66	0.66	0.08	0.71	0.71
Sat Flow, veh/h	1324	888	799	720	264	416	1774	5048	173	1774	4805	378
Grp Volume(v), veh/h	132	0	38	138	0	0	38	1235	668	108	986	521
Grp Sat Flow(s),veh/h/ln	1324	0	1687	1400	0	0	1774	1695	1830	1774	1695	1793
Q Serve(g_s), s	1.4	0.0	2.2	8.4	0.0	0.0	2.3	21.3	21.3	6.6	13.2	13.2
Cycle Q Clear(g_c), s	12.0	0.0	2.2	10.5	0.0	0.0	2.3	21.3	21.3	6.6	13.2	13.2
Prop In Lane	1.00		0.47	0.58		0.30	1.00		0.09	1.00		0.21
Lane Grp Cap(c), veh/h	233	0	234	246	0	0	55	2245	1212	135	2398	1268
V/C Ratio(X)	0.57	0.00	0.16	0.56	0.00	0.00	0.69	0.55	0.55	0.80	0.41	0.41
Avail Cap(c_a), veh/h	357	0	391	381	0	0	106	2245	1212	266	2398	1268
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	41.7	45.5	0.0	0.0	52.7	9.9	9.9	50.0	6.6	6.6
Incr Delay (d2), s/veh	2.2	0.0	0.3	2.0	0.0	0.0	14.0	1.0	1.8	10.1	0.5	1.0
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	4.0	0.0	1.0	4.2	0.0	0.0	1.4	10.1	11.2	3.6	6.2	6.7
LnGrp Delay(d),s/veh	48.2	0.0	42.1	47.5	0.0	0.0	66.7	10.8	11.7	60.1	7.2	7.6
LnGrp LOS	D		D	D			E	B	B	E	A	A
Approach Vol, veh/h		170			138			1941			1615	
Approach Delay, s/veh		46.8			47.5			12.2			10.9	
Approach LOS		D			D			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	12.9	77.3		19.8	7.9	82.3		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	16.5	54.5		25.5	6.6	64.4		25.5
Max Q Clear Time (g_c+I1), s	8.6	23.3		14.0	4.3	15.2		12.5
Green Ext Time (p_c), s	0.1	18.4		0.4	0.0	15.9		0.5

Intersection Summary			
HCM 2010 Ctrl Delay			14.4
HCM 2010 LOS			B

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1	112	2	0	18	97	1879	20	36	1426	59
Future Vol, veh/h	12	1	112	2	0	18	97	1879	20	36	1426	59
Conflicting Peds, #/hr	40	0	29	16	0	27	29	0	16	27	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	112	2	0	18	97	1879	20	36	1426	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2554	3688	812	2782	3707	1017	1525	0	0	1926	0	0
Stage 1	1568	1568	-	2110	2110	-	-	-	-	-	-	-
Stage 2	986	2120	-	672	1597	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*170	*7	276	*95	*7	*477	217	-	-	*600	-	-
Stage 1	*79	*170	-	*489	*465	-	-	-	-	-	-	-
Stage 2	*489	*465	-	*375	*164	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*92	*3	258	*24	*3	*447	209	-	-	*584	-	-
Mov Cap-2 Maneuver	*92	*3	-	*24	*3	-	-	-	-	-	-	-
Stage 1	*41	*153	-	*255	*243	-	-	-	-	-	-	-
Stage 2	*242	*243	-	*192	*148	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	113.1	30.3	1.8	0.3
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	209	-	-	139	162	* 584	-	-
HCM Lane V/C Ratio	0.464	-	-	0.899	0.123	0.062	-	-
HCM Control Delay (s)	36.3	-	-	113.1	30.3	11.6	-	-
HCM Lane LOS	E	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	2.2	-	-	6	0.4	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	15	0	16	1	1967	49	61	1483	8
Future Vol, veh/h	0	0	0	15	0	16	1	1967	49	61	1483	8
Conflicting Peds, #/hr	29	0	39	18	0	8	39	0	18	8	0	29
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	15	0	16	1	1967	49	61	1483	8

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	2745	3664	1034	1530	0	0	2034	0	0
Stage 1	2012	2012	-	-	-	-	-	-	-
Stage 2	733	1652	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*163	*9	*453	215	-	-	*569	-	-
Stage 1	*465	*442	-	-	-	-	-	-	-
Stage 2	*396	*154	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*140	*0	*442	215	-	-	*560	-	-
Mov Cap-2 Maneuver	*140	*0	-	-	-	-	-	-	-
Stage 1	*457	*0	-	-	-	-	-	-	-
Stage 2	*347	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.4	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	215	-	-	216	* 560	-	-
HCM Lane V/C Ratio	0.005	-	-	0.144	0.109	-	-
HCM Control Delay (s)	21.8	-	-	24.4	12.2	-	-
HCM Lane LOS	C	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	34	21	2012	1473	31
Future Vol, veh/h	6	34	21	2012	1473	31
Conflicting Peds, #/hr	20	20	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	34	21	2012	1473	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2376	792	1524	0	-	0
Stage 1	1509	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*376	285	217	-	-	-
Stage 1	*117	-	-	-	-	-
Stage 2	*465	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*326	274	213	-	-	-
Mov Cap-2 Maneuver	*326	-	-	-	-	-
Stage 1	*103	-	-	-	-	-
Stage 2	*456	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.9	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	213	-	281	-	-
HCM Lane V/C Ratio	0.099	-	0.142	-	-
HCM Control Delay (s)	23.7	-	19.9	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	75	24	57	1957	1474	37		
Future Volume (veh/h)	75	24	57	1957	1474	37		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	75	-24	57	1957	1474	37		
Adj No. of Lanes	1	1	1	3	3	0		
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	86	77	74	4422	4014	101		
Arrive On Green	0.05	0.00	0.04	0.87	0.79	0.79		
Sat Flow, veh/h	1774	1583	1774	5253	5268	128		
Grp Volume(v), veh/h	75	-24	57	1957	980	531		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1838		
Q Serve(g_s), s	4.6	0.0	3.5	9.0	9.5	9.5		
Cycle Q Clear(g_c), s	4.6	0.0	3.5	9.0	9.5	9.5		
Prop In Lane	1.00	1.00	1.00			0.07		
Lane Grp Cap(c), veh/h	86	77	74	4422	2668	1447		
V/C Ratio(X)	0.87	-0.31	0.77	0.44	0.37	0.37		
Avail Cap(c_a), veh/h	460	410	250	4422	2668	1447		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	52.0	0.0	52.2	1.5	3.5	3.5		
Incr Delay (d2), s/veh	21.9	0.0	15.4	0.3	0.4	0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.0	4.1	4.5	5.0		
LnGrp Delay(d),s/veh	73.8	0.0	67.5	1.8	3.9	4.2		
LnGrp LOS	E		E	A	A	A		
Approach Vol, veh/h	51			2014	1511			
Approach Delay, s/veh	108.6			3.7	4.0			
Approach LOS	F			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		100.2		9.8	9.1	91.1		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		72.5		28.5	15.5	52.5		
Max Q Clear Time (g_c+I1), s		11.0		6.6	5.5	11.5		
Green Ext Time (p_c), s		28.6		0.2	0.1	15.0		
Intersection Summary								
HCM 2010 Ctrl Delay			5.3					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	31	3	1	6	38	1978	8	42	1448	48
Future Vol, veh/h	8	0	31	3	1	6	38	1978	8	42	1448	48
Conflicting Peds, #/hr	23	0	15	24	0	32	15	0	24	32	0	23
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	31	3	1	6	38	1978	8	42	1448	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2479	3673	795	2777	3693	1057	1519	0	0	2018	0	0
Stage 1	1579	1579	-	2090	2090	-	-	-	-	-	-	-
Stage 2	900	2094	-	687	1603	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*32	*5	*573	*20	*5	*445	*721	-	-	*560	-	-
Stage 1	*588	*559	-	*457	*434	-	-	-	-	-	-	-
Stage 2	*457	*434	-	*588	*559	-	-	-	-	-	-	-
Platoon blocked, %			1			1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*22	*4	*548	*16	*4	*418	*705	-	-	*542	-	-
Mov Cap-2 Maneuver	*22	*4	-	*16	*4	-	-	-	-	-	-	-
Stage 1	*544	*505	-	*419	*399	-	-	-	-	-	-	-
Stage 2	*412	*399	-	*500	*505	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	69.2			266.2			0.2			0.3		
HCM LOS	F			F								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 705	-	-	93	22	* 542	-	-
HCM Lane V/C Ratio	0.054	-	-	0.419	0.455	0.077	-	-
HCM Control Delay (s)	10.4	-	-	69.2	266.2	12.2	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.7	1.3	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	23	35	132	25	69	54	1878	161	56	1404	24
Future Volume (veh/h)	64	23	35	132	25	69	54	1878	161	56	1404	24
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)	0.99		0.97	0.99		0.99	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	23	35	132	25	69	54	1878	161	56	1404	24
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	141	215	203	38	86	70	3026	258	72	3281	56
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.64	0.64	0.04	0.64	0.64
Sat Flow, veh/h	1288	657	999	729	177	398	1774	4759	406	1774	5148	88
Grp Volume(v), veh/h	64	0	58	226	0	0	54	1335	704	56	925	503
Grp Sat Flow(s),veh/h/ln	1288	0	1656	1304	0	0	1774	1695	1775	1774	1695	1846
Q Serve(g_s), s	0.0	0.0	3.6	17.7	0.0	0.0	3.8	29.6	29.9	3.9	17.0	17.0
Cycle Q Clear(g_c), s	6.1	0.0	3.6	21.3	0.0	0.0	3.8	29.6	29.9	3.9	17.0	17.0
Prop In Lane	1.00		0.60	0.58		0.31	1.00		0.23	1.00		0.05
Lane Grp Cap(c), veh/h	301	0	357	327	0	0	70	2156	1129	72	2160	1176
V/C Ratio(X)	0.21	0.00	0.16	0.69	0.00	0.00	0.77	0.62	0.62	0.78	0.43	0.43
Avail Cap(c_a), veh/h	389	0	470	425	0	0	192	2156	1129	149	2160	1176
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	39.9	47.9	0.0	0.0	59.5	13.7	13.7	59.4	11.3	11.3
Incr Delay (d2), s/veh	0.3	0.0	0.2	3.2	0.0	0.0	16.3	1.3	2.6	16.0	0.6	1.1
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	1.9	0.0	1.6	7.8	0.0	0.0	2.2	14.1	15.3	2.2	8.1	9.0
LnGrp Delay(d),s/veh	41.2	0.0	40.1	51.1	0.0	0.0	75.8	15.0	16.3	75.4	11.9	12.5
LnGrp LOS	D		D	D			E	B	B	E	B	B
Approach Vol, veh/h		122			226			2093			1484	
Approach Delay, s/veh		40.7			51.1			17.0			14.5	
Approach LOS		D			D			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	9.6	84.0		31.4	9.4	84.2		31.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	10.5	65.5		35.5	13.5	62.5		35.5
Max Q Clear Time (g_c+I1), s	5.9	31.9		8.1	5.8	19.0		23.3
Green Ext Time (p_c), s	0.0	21.1		0.5	0.0	14.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	7	95	15	5	26	193	1758	4	46	1365	199
Future Volume (veh/h)	274	7	95	15	5	26	193	1758	4	46	1365	199
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)	0.99		0.97	0.99		0.99	1.00		0.99	1.00		0.98
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	274	7	36	15	5	26	193	1758	4	46	1365	199
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	410	492	407	422	68	355	224	2959	7	64	2121	309
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.13	0.56	0.56	0.04	0.47	0.47
Sat Flow, veh/h	1355	1863	1542	1341	259	1345	1774	5239	12	1774	4471	652
Grp Volume(v), veh/h	274	7	36	15	0	31	193	1138	624	46	1035	529
Grp Sat Flow(s),veh/h/ln	1355	1863	1542	1341	0	1604	1774	1695	1861	1774	1695	1733
Q Serve(g_s), s	19.0	0.3	1.8	0.8	0.0	1.5	10.7	22.0	22.0	2.6	23.1	23.1
Cycle Q Clear(g_c), s	20.5	0.3	1.8	1.1	0.0	1.5	10.7	22.0	22.0	2.6	23.1	23.1
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.01	1.00		0.38
Lane Grp Cap(c), veh/h	410	492	407	422	0	423	224	1915	1051	64	1608	822
V/C Ratio(X)	0.67	0.01	0.09	0.04	0.00	0.07	0.86	0.59	0.59	0.72	0.64	0.64
Avail Cap(c_a), veh/h	561	699	578	571	0	601	239	1915	1051	98	1608	822
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	1.00	1.00	1.00	0.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	27.2	27.7	27.6	0.0	27.6	42.8	14.3	14.3	47.7	19.9	19.9
Incr Delay (d2), s/veh	1.9	0.0	0.1	0.0	0.0	0.1	21.7	1.2	2.1	14.0	2.0	3.9
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	7.3	0.1	0.8	0.3	0.0	0.7	6.6	10.6	11.9	1.5	11.2	11.9
LnGrp Delay(d),s/veh	37.2	27.2	27.8	27.6	0.0	27.7	64.6	15.4	16.4	61.7	21.9	23.7
LnGrp LOS	D	C	C	C		C	E	B	B	E	C	C
Approach Vol, veh/h		317			46			1955			1610	
Approach Delay, s/veh		35.9			27.7			20.6			23.6	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	61.0		30.9	17.1	51.9		30.9
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	43.5		37.5	13.5	35.5		37.5
Max Q Clear Time (g_c+I1), s	4.6	24.0		22.5	12.7	25.1		3.5
Green Ext Time (p_c), s	0.0	12.5		0.9	0.0	7.1		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	3	90	10	3	9	136	1769	7	41	1397	66
Future Volume (veh/h)	112	3	90	10	3	9	136	1769	7	41	1397	66
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)	0.97		0.97	0.97		0.95	1.00		0.97	1.00		0.99
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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	112	3	16	10	3	9	136	1769	7	41	1397	66
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	342	8	347	140	50	96	167	3160	13	60	2706	128
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.09	0.60	0.60	0.01	0.18	0.18
Sat Flow, veh/h	1196	36	1531	387	222	422	1774	5228	21	1774	4974	235
Grp Volume(v), veh/h	115	0	16	22	0	0	136	1147	629	41	952	511
Grp Sat Flow(s),veh/h/ln	1233	0	1531	1031	0	0	1774	1695	1858	1774	1695	1819
Q Serve(g_s), s	0.0	0.0	0.8	0.1	0.0	0.0	7.5	20.2	20.2	2.3	25.4	25.4
Cycle Q Clear(g_c), s	9.5	0.0	0.8	9.7	0.0	0.0	7.5	20.2	20.2	2.3	25.4	25.4
Prop In Lane	0.97		1.00	0.45		0.41	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	350	0	347	286	0	0	167	2049	1123	60	1844	990
V/C Ratio(X)	0.33	0.00	0.05	0.08	0.00	0.00	0.81	0.56	0.56	0.68	0.52	0.52
Avail Cap(c_a), veh/h	540	0	559	490	0	0	257	2049	1123	257	1844	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	33.6	0.0	30.2	30.6	0.0	0.0	44.4	11.8	11.8	48.9	29.1	29.1
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.1	0.0	0.0	10.8	1.1	2.0	9.0	0.7	1.3
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	2.8	0.0	0.3	0.5	0.0	0.0	4.2	9.7	10.9	1.3	12.1	13.2
LnGrp Delay(d),s/veh	34.1	0.0	30.3	30.7	0.0	0.0	55.2	12.9	13.8	57.9	29.8	30.5
LnGrp LOS	C		C	C			E	B	B	E	C	C
Approach Vol, veh/h		131			22			1912			1504	
Approach Delay, s/veh		33.6			30.7			16.2			30.8	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	64.9		27.2	13.9	58.9		27.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	35.5		36.5	14.5	35.5		36.5
Max Q Clear Time (g_c+I1), s	4.3	22.2		11.5	9.5	27.4		11.7
Green Ext Time (p_c), s	0.0	9.4		0.6	0.1	5.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	25	110	55	18	32	186	1943	66	64	1459	94
Future Volume (veh/h)	127	25	110	55	18	32	186	1943	66	64	1459	94
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)	0.98		0.95	0.98		0.95	1.00		0.94	1.00		0.96
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	127	25	110	55	18	32	186	1943	66	64	1459	94
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	330	64	282	162	57	72	98	3013	102	82	2868	185
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.60	0.60	0.05	0.59	0.59
Sat Flow, veh/h	1319	290	1276	483	258	325	1774	5038	171	1774	4867	314
Grp Volume(v), veh/h	127	0	135	105	0	0	186	1306	703	64	1016	537
Grp Sat Flow(s),veh/h/ln	1319	0	1565	1066	0	0	1774	1695	1819	1774	1695	1791
Q Serve(g_s), s	0.0	0.0	7.4	4.5	0.0	0.0	5.5	25.2	25.3	3.6	17.6	17.6
Cycle Q Clear(g_c), s	10.8	0.0	7.4	11.9	0.0	0.0	5.5	25.2	25.3	3.6	17.6	17.6
Prop In Lane	1.00		0.81	0.52		0.30	1.00		0.09	1.00		0.18
Lane Grp Cap(c), veh/h	330	0	345	290	0	0	98	2027	1088	82	1998	1055
V/C Ratio(X)	0.38	0.00	0.39	0.36	0.00	0.00	1.91	0.64	0.65	0.78	0.51	0.51
Avail Cap(c_a), veh/h	442	0	477	407	0	0	98	2027	1088	98	1998	1055
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	0.0	33.2	35.7	0.0	0.0	47.3	13.1	13.2	47.2	12.0	12.0
Incr Delay (d2), s/veh	0.7	0.0	0.7	0.8	0.0	0.0	443.5	1.6	3.0	27.9	0.9	1.8
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	3.2	0.0	3.3	2.7	0.0	0.0	14.7	12.1	13.4	2.4	8.4	9.2
LnGrp Delay(d),s/veh	35.3	0.0	34.0	36.4	0.0	0.0	490.8	14.7	16.1	75.0	13.0	13.8
LnGrp LOS	D		C	D			F	B	B	E	B	B
Approach Vol, veh/h		262			105			2195			1617	
Approach Delay, s/veh		34.6			36.4			55.5			15.7	
Approach LOS		C			D			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	64.3		26.6	10.0	63.4		26.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	50.5		30.5	5.5	50.5		30.5
Max Q Clear Time (g_c+I1), s	5.6	27.3		12.8	7.5	19.6		13.9
Green Ext Time (p_c), s	0.0	16.1		1.1	0.0	14.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	38.3
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	2089	2	0	1610
Future Vol, veh/h	0	1	2089	2	0	1610
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	1	2089	2	0	1610

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1046	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	193	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	193	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	193	-
HCM Lane V/C Ratio	-	-	0.005	-
HCM Control Delay (s)	-	-	23.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	172	113	5	11	95
Future Vol, veh/h	48	172	113	5	11	95
Conflicting Peds, #/hr	7	0	0	11	11	7
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	48	172	113	5	11	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	129	0	-	0	406	134
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	279	-
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	1457	-	-	-	601	915
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	768	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	567	899
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	760	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	848
HCM Lane V/C Ratio	0.033	-	-	-	0.125
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	242	0	0	228	0	0
Future Vol, veh/h	242	0	0	228	0	0
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	242	0	0	228	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	242	0	470	242
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	228	-
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	-	-	1324	-	552	797
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1324	-	552	797
Mov Cap-2 Maneuver	-	-	-	-	552	-
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	810	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1324	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection						
Int Delay, s/veh	2.1					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	98	0	55	63	0
Future Vol, veh/h	85	98	0	55	63	0
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	85	98	0	55	63	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	183	0	189	134
Stage 1	-	-	-	-	134	-
Stage 2	-	-	-	-	55	-
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	-	-	1392	-	800	915
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1392	-	800	915
Mov Cap-2 Maneuver	-	-	-	-	800	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	800	-	-	1392	-
HCM Lane V/C Ratio	0.079	-	-	-	-
HCM Control Delay (s)	9.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	341	36	694	660	1279	36	873	652	977	890	50
Future Volume (veh/h)	130	341	36	694	660	1279	36	873	652	977	890	50
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		0.96	1.00		0.84	1.00		0.96	1.00		0.94
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	130	341	36	694	660	1235	36	873	464	977	890	50
Adj No. of Lanes	1	2	0	3	1	2	1	2	2	2	3	0
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	151	845	88	578	546	1452	46	836	633	940	2371	133
Arrive On Green	0.08	0.26	0.26	0.12	0.29	0.29	0.03	0.24	0.24	0.27	0.48	0.48
Sat Flow, veh/h	1774	3218	337	5003	1863	2354	1774	3539	2680	3442	4907	275
Grp Volume(v), veh/h	130	186	191	694	660	1235	36	873	464	977	614	326
Grp Sat Flow(s),veh/h/ln	1774	1770	1785	1668	1863	1177	1774	1770	1340	1721	1695	1792
Q Serve(g_s), s	11.6	13.9	14.1	18.5	46.9	46.9	3.2	37.8	25.6	43.7	18.3	18.4
Cycle Q Clear(g_c), s	11.6	13.9	14.1	18.5	46.9	46.9	3.2	37.8	25.6	43.7	18.3	18.4
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	151	465	469	578	546	1452	46	836	633	940	1638	866
V/C Ratio(X)	0.86	0.40	0.41	1.20	1.21	0.85	0.78	1.04	0.73	1.04	0.37	0.38
Avail Cap(c_a), veh/h	167	465	469	578	546	1452	102	836	633	940	1638	866
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	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	48.6	48.7	70.7	56.5	30.9	77.4	61.1	56.4	58.2	26.1	26.1
Incr Delay (d2), s/veh	32.2	2.6	2.6	103.4	107.5	5.4	23.6	43.2	7.4	40.1	0.7	1.3
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	7.1	7.1	7.3	14.1	40.4	24.5	1.9	23.5	10.1	26.0	8.7	9.4
LnGrp Delay(d),s/veh	104.5	51.2	51.3	174.1	164.1	36.4	101.0	104.3	63.8	98.2	26.7	27.4
LnGrp LOS	F	D	D	F	F	D	F	F	E	F	C	C
Approach Vol, veh/h		507			2589			1373			1917	
Approach Delay, s/veh		64.9			105.9			90.5			63.3	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.2	42.3	23.0	46.5	8.7	81.8	18.1	51.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	43.7	37.8	18.5	42.0	9.2	72.3	15.1	45.4
Max Q Clear Time (g_c+I1), s	45.7	39.8	20.5	16.1	5.2	20.4	13.6	48.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	7.8	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	86.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	9	32	50	9	60	21	1239	28	46	1339	13
Future Volume (veh/h)	35	9	32	50	9	60	21	1239	28	46	1339	13
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)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.99
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	35	9	32	50	9	60	21	1239	28	46	1339	13
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	159	50	114	143	39	133	39	3340	75	64	3465	34
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.65	0.65	0.04	0.67	0.67
Sat Flow, veh/h	607	287	650	524	223	760	1774	5112	116	1774	5193	50
Grp Volume(v), veh/h	76	0	0	119	0	0	21	822	445	46	874	478
Grp Sat Flow(s),veh/h/ln	1544	0	0	1507	0	0	1774	1695	1838	1774	1695	1853
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	1.2	11.1	11.1	2.6	11.6	11.6
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.6	0.0	0.0	1.2	11.1	11.1	2.6	11.6	11.6
Prop In Lane	0.46		0.42	0.42		0.50	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	324	0	0	316	0	0	39	2215	1200	64	2262	1237
V/C Ratio(X)	0.23	0.00	0.00	0.38	0.00	0.00	0.54	0.37	0.37	0.72	0.39	0.39
Avail Cap(c_a), veh/h	582	0	0	576	0	0	115	2215	1200	133	2262	1237
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	0.0	36.6	0.0	0.0	48.4	7.9	7.9	47.7	7.5	7.5
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.7	0.0	0.0	10.9	0.5	0.9	14.0	0.5	0.9
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	1.8	0.0	0.0	3.0	0.0	0.0	0.7	5.3	5.9	1.5	5.5	6.2
LnGrp Delay(d),s/veh	35.9	0.0	0.0	37.3	0.0	0.0	59.3	8.4	8.8	61.7	8.0	8.4
LnGrp LOS	D			D			E	A	A	E	A	A
Approach Vol, veh/h		76			119			1288			1398	
Approach Delay, s/veh		35.9			37.3			9.4			9.9	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	69.8		22.1	6.7	71.2		22.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	7.5	43.5		35.5	6.5	44.5		35.5
Max Q Clear Time (g_c+I1), s	4.6	13.1		5.8	3.2	13.6		8.6
Green Ext Time (p_c), s	0.0	10.6		0.4	0.0	11.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	16	16	131	8	36	8	1142	56	65	1361	75
Future Volume (veh/h)	117	16	16	131	8	36	8	1142	56	65	1361	75
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)	0.98		0.96	0.98		0.97	1.00		0.97	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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	117	16	16	131	8	36	8	1142	56	65	1361	75
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	301	140	140	220	15	45	18	3223	158	85	3393	187
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.02	1.00	1.00	0.05	0.69	0.69
Sat Flow, veh/h	1336	836	836	942	92	268	1774	4958	243	1774	4932	272
Grp Volume(v), veh/h	117	0	32	175	0	0	8	781	417	65	936	500
Grp Sat Flow(s),veh/h/ln	1336	0	1672	1301	0	0	1774	1695	1811	1774	1695	1814
Q Serve(g_s), s	0.0	0.0	1.6	11.6	0.0	0.0	0.4	0.0	0.0	3.6	11.9	11.9
Cycle Q Clear(g_c), s	7.7	0.0	1.6	13.2	0.0	0.0	0.4	0.0	0.0	3.6	11.9	11.9
Prop In Lane	1.00		0.50	0.75		0.21	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	301	0	279	280	0	0	18	2204	1177	85	2333	1248
V/C Ratio(X)	0.39	0.00	0.11	0.62	0.00	0.00	0.45	0.35	0.35	0.77	0.40	0.40
Avail Cap(c_a), veh/h	472	0	493	459	0	0	151	2204	1177	381	2333	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	35.4	40.7	0.0	0.0	48.7	0.0	0.0	47.1	6.7	6.7
Incr Delay (d2), s/veh	0.8	0.0	0.2	2.3	0.0	0.0	17.0	0.4	0.8	13.3	0.5	1.0
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	3.0	0.0	0.8	4.8	0.0	0.0	0.3	0.1	0.3	2.1	5.6	6.2
LnGrp Delay(d),s/veh	38.7	0.0	35.6	43.0	0.0	0.0	65.8	0.4	0.8	60.3	7.2	7.7
LnGrp LOS	D		D	D			E	A	A	E	A	A
Approach Vol, veh/h		149			175			1206			1501	
Approach Delay, s/veh		38.0			43.0			1.0			9.7	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	69.5		21.2	5.5	73.3		21.2
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	21.5	35.5		29.5	8.5	48.5		29.5
Max Q Clear Time (g_c+I1), s	5.6	2.0		9.7	2.4	13.9		15.2
Green Ext Time (p_c), s	0.1	10.2		0.4	0.0	13.2		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	108	8	0	16	77	1140	9	10	1550	14
Future Vol, veh/h	5	0	108	8	0	16	77	1140	9	10	1550	14
Conflicting Peds, #/hr	22	0	12	16	0	26	12	0	16	26	0	22
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	108	8	0	16	77	1140	9	10	1550	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2235	2928	820	1981	2931	627	1586	0	0	1175	0	0
Stage 1	1599	1599	-	1325	1325	-	-	-	-	-	-	-
Stage 2	636	1329	-	656	1606	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*51	*16	273	*74	*16	*645	202	-	-	*811	-	-
Stage 1	*75	*164	-	*662	*629	-	-	-	-	-	-	-
Stage 2	*662	*629	-	*383	*163	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*32	*9	263	*29	*9	*613	198	-	-	*790	-	-
Mov Cap-2 Maneuver	*32	*9	-	*29	*9	-	-	-	-	-	-	-
Stage 1	*45	*158	-	*394	*375	-	-	-	-	-	-	-
Stage 2	*384	*375	-	*219	*157	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	44.5	69.3	2.2	0.1
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	198	-	-	199	79	* 790	-	-
HCM Lane V/C Ratio	0.389	-	-	0.568	0.304	0.013	-	-
HCM Control Delay (s)	34.3	-	-	44.5	69.3	9.6	-	-
HCM Lane LOS	D	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	1.7	-	-	3.1	1.1	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	23	0	28	1	1164	32	29	1656	5
Future Vol, veh/h	0	0	0	23	0	28	1	1164	32	29	1656	5
Conflicting Peds, #/hr	16	0	31	25	0	10	31	0	25	10	0	16
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	23	0	28	1	1164	32	29	1656	5

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	1952	2957	633	1692	0	0	1221	0	0
Stage 1	1207	1207	-	-	-	-	-	-	-
Stage 2	745	1750	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*252	*27	*645	179	-	-	*811	-	-
Stage 1	*662	*629	-	-	-	-	-	-	-
Stage 2	*391	*138	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*227	*0	*623	179	-	-	*791	-	-
Mov Cap-2 Maneuver	*227	*0	-	-	-	-	-	-	-
Stage 1	*634	*0	-	-	-	-	-	-	-
Stage 2	*368	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.1	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	179	-	-	349	* 791	-	-
HCM Lane V/C Ratio	0.006	-	-	0.146	0.037	-	-
HCM Control Delay (s)	25.2	-	-	17.1	9.7	-	-
HCM Lane LOS	D	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	11	51	1242	1563	53
Future Vol, veh/h	6	11	51	1242	1563	53
Conflicting Peds, #/hr	6	6	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	11	51	1242	1563	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2201	820	1622	0	-	0
Stage 1	1596	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*189	273	194	-	-	-
Stage 1	*103	-	-	-	-	-
Stage 2	*634	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*137	270	193	-	-	-
Mov Cap-2 Maneuver	*137	-	-	-	-	-
Stage 1	*75	-	-	-	-	-
Stage 2	*631	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.6	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	193	-	201	-	-
HCM Lane V/C Ratio	0.264	-	0.085	-	-
HCM Control Delay (s)	30.2	-	24.6	-	-
HCM Lane LOS	D	-	C	-	-
HCM 95th %tile Q(veh)	1	-	0.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	122	42	84	1143	1586	45		
Future Volume (veh/h)	122	42	84	1143	1586	45		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.97		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	122	6	84	1143	1586	45		
Adj No. of Lanes	1	1	1	3	3	0		
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	156	139	107	4181	3641	103		
Arrive On Green	0.09	0.09	0.12	1.00	0.72	0.72		
Sat Flow, veh/h	1774	1583	1774	5253	5247	144		
Grp Volume(v), veh/h	122	6	84	1143	1059	572		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1833		
Q Serve(g_s), s	6.7	0.3	4.6	0.0	12.9	12.9		
Cycle Q Clear(g_c), s	6.7	0.3	4.6	0.0	12.9	12.9		
Prop In Lane	1.00	1.00	1.00			0.08		
Lane Grp Cap(c), veh/h	156	139	107	4181	2430	1314		
V/C Ratio(X)	0.78	0.04	0.78	0.27	0.44	0.44		
Avail Cap(c_a), veh/h	506	451	239	4181	2430	1314		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	44.7	41.8	43.3	0.0	5.8	5.8		
Incr Delay (d2), s/veh	8.3	0.1	11.8	0.2	0.6	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	3.6	0.3	2.6	0.1	6.1	6.7		
LnGrp Delay(d),s/veh	53.0	41.9	55.1	0.2	6.4	6.9		
LnGrp LOS	D	D	E	A	A	A		
Approach Vol, veh/h	128			1227	1631			
Approach Delay, s/veh	52.5			3.9	6.6			
Approach LOS	D			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		86.7		13.3	10.5	76.2		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		62.5		28.5	13.5	44.5		
Max Q Clear Time (g_c+I1), s		2.0		8.7	6.6	14.9		
Green Ext Time (p_c), s		11.3		0.3	0.1	14.7		
Intersection Summary								
HCM 2010 Ctrl Delay			7.5					
HCM 2010 LOS			A					

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	0	58	2	2	9	53	1158	14	29	1557	87
Future Vol, veh/h	12	0	58	2	2	9	53	1158	14	29	1557	87
Conflicting Peds, #/hr	34	0	21	21	0	34	21	0	21	34	0	34
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	0	58	2	2	9	53	1158	14	29	1557	87

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2297	3005	877	2007	3041	654	1678	0	0	1206	0	0
Stage 1	1693	1693	-	1305	1305	-	-	-	-	-	-	-
Stage 2	604	1312	-	702	1736	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*301	*286	*565	*301	*286	*645	*711	-	-	*811	-	-
Stage 1	*580	*552	-	*662	*629	-	-	-	-	-	-	-
Stage 2	*662	*629	-	*580	*544	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*252	*238	*536	*233	*238	*604	*688	-	-	*784	-	-
Mov Cap-2 Maneuver	*252	*238	-	*233	*238	-	-	-	-	-	-	-
Stage 1	*518	*514	-	*591	*562	-	-	-	-	-	-	-
Stage 2	*580	*562	-	*488	*507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	14.1	0.5	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 688	-	-	449	408	* 784	-	-
HCM Lane V/C Ratio	0.077	-	-	0.156	0.032	0.037	-	-
HCM Control Delay (s)	10.7	-	-	14.5	14.1	9.8	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	0.1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	34	36	224	58	59	45	1080	82	47	1547	31
Future Volume (veh/h)	70	34	36	224	58	59	45	1080	82	47	1547	31
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		0.98	0.99		0.99	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	70	34	36	224	58	59	45	1080	82	47	1547	31
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	441	247	262	314	66	67	63	2541	193	65	2709	54
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.07	1.00	1.00	0.07	1.00	1.00
Sat Flow, veh/h	1265	820	868	844	218	222	1774	4819	366	1774	5131	103
Grp Volume(v), veh/h	70	0	70	341	0	0	45	759	403	47	1022	556
Grp Sat Flow(s),veh/h/ln	1265	0	1687	1284	0	0	1774	1695	1795	1774	1695	1843
Q Serve(g_s), s	0.0	0.0	3.0	22.9	0.0	0.0	2.5	0.0	0.0	2.6	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	3.0	25.9	0.0	0.0	2.5	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.51	0.66		0.17	1.00		0.20	1.00		0.06
Lane Grp Cap(c), veh/h	441	0	509	447	0	0	63	1787	946	65	1790	973
V/C Ratio(X)	0.16	0.00	0.14	0.76	0.00	0.00	0.71	0.42	0.43	0.73	0.57	0.57
Avail Cap(c_a), veh/h	509	0	599	523	0	0	186	1787	946	115	1790	973
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	25.5	34.9	0.0	0.0	45.9	0.0	0.0	45.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	5.6	0.0	0.0	13.7	0.7	1.4	14.3	1.3	2.4
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	1.5	0.0	1.4	9.7	0.0	0.0	1.4	0.2	0.4	1.5	0.3	0.7
LnGrp Delay(d),s/veh	26.1	0.0	25.6	40.5	0.0	0.0	59.6	0.7	1.4	60.2	1.3	2.4
LnGrp LOS	C		C	D			E	A	A	E	A	A

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Vol, veh/h		140			341			1207			1625	
Approach Delay, s/veh		25.8			40.5			3.2			3.4	
Approach LOS		C			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.1	57.2		34.6	8.1	57.3		34.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	44.5		35.5	10.5	40.5		35.5
Max Q Clear Time (g_c+I1), s	4.6	2.0		6.3	4.5	2.0		27.9
Green Ext Time (p_c), s	0.0	10.3		0.6	0.0	15.7		1.3

Intersection Summary		
HCM 2010 Ctrl Delay		8.1
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	12	120	12	9	4	105	926	8	41	1617	192
Future Volume (veh/h)	252	12	120	12	9	4	105	926	8	41	1617	192
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)	0.99		0.98	0.99		0.99	1.00		0.98	1.00		0.97
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	252	12	28	12	9	4	105	926	8	41	1617	192
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	371	413	344	365	270	120	132	3169	27	60	2614	310
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.07	0.61	0.61	0.07	1.00	1.00
Sat Flow, veh/h	1388	1863	1553	1355	1221	543	1774	5199	45	1774	4595	544
Grp Volume(v), veh/h	252	12	28	12	0	13	105	604	330	41	1192	617
Grp Sat Flow(s),veh/h/ln	1388	1863	1553	1355	0	1764	1774	1695	1854	1774	1695	1749
Q Serve(g_s), s	17.4	0.5	1.4	0.7	0.0	0.6	5.8	8.5	8.5	2.3	0.0	0.0
Cycle Q Clear(g_c), s	18.0	0.5	1.4	1.2	0.0	0.6	5.8	8.5	8.5	2.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.02	1.00		0.31
Lane Grp Cap(c), veh/h	371	413	344	365	0	391	132	2066	1130	60	1929	995
V/C Ratio(X)	0.68	0.03	0.08	0.03	0.00	0.03	0.79	0.29	0.29	0.68	0.62	0.62
Avail Cap(c_a), veh/h	540	639	533	530	0	605	186	2066	1130	165	1929	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	30.5	30.9	31.0	0.0	30.5	45.5	9.3	9.3	46.1	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.1	0.0	0.0	0.0	14.1	0.4	0.6	12.6	1.5	2.9
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	6.9	0.3	0.6	0.3	0.0	0.3	3.4	4.0	4.5	1.3	0.4	0.8
LnGrp Delay(d),s/veh	39.7	30.5	31.0	31.0	0.0	30.6	59.6	9.6	9.9	58.7	1.5	2.9
LnGrp LOS	D	C	C	C		C	E	A	A	E	A	A
Approach Vol, veh/h		292			25			1039			1850	
Approach Delay, s/veh		38.5			30.8			14.8			3.2	
Approach LOS		D			C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	65.4		26.7	11.9	61.4		26.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	9.3	42.9		34.3	10.5	41.7		34.3
Max Q Clear Time (g_c+I1), s	4.3	10.5		20.0	7.8	2.0		3.2
Green Ext Time (p_c), s	0.0	7.2		0.8	0.1	19.8		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		10.4
HCM 2010 LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	4	46	9	2	12	65	982	4	32	1703	37
Future Volume (veh/h)	41	4	46	9	2	12	65	982	4	32	1703	37
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)	0.97		0.96	0.97		0.95	1.00		0.99	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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	41	4	4	9	2	12	65	982	4	32	1703	37
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	300	26	267	138	45	139	83	3361	14	54	3209	70
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.64	0.64	0.03	0.63	0.63
Sat Flow, veh/h	1265	146	1513	465	256	787	1774	5228	21	1774	5122	111
Grp Volume(v), veh/h	45	0	4	23	0	0	65	637	349	32	1127	613
Grp Sat Flow(s),veh/h/ln	1412	0	1513	1509	0	0	1774	1695	1859	1774	1695	1843
Q Serve(g_s), s	1.2	0.0	0.2	0.0	0.0	0.0	3.3	7.4	7.4	1.6	16.7	16.8
Cycle Q Clear(g_c), s	2.2	0.0	0.2	1.0	0.0	0.0	3.3	7.4	7.4	1.6	16.7	16.8
Prop In Lane	0.91		1.00	0.39		0.52	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	326	0	267	322	0	0	83	2179	1195	54	2124	1154
V/C Ratio(X)	0.14	0.00	0.01	0.07	0.00	0.00	0.78	0.29	0.29	0.59	0.53	0.53
Avail Cap(c_a), veh/h	636	0	605	651	0	0	108	2179	1195	108	2124	1154
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	0.00	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	31.4	0.0	30.6	30.9	0.0	0.0	42.4	7.1	7.1	43.1	9.4	9.4
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0	23.1	0.3	0.6	7.2	0.7	1.3
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	1.0	0.0	0.1	0.5	0.0	0.0	2.1	3.6	4.0	0.9	7.9	8.8
LnGrp Delay(d),s/veh	31.6	0.0	30.6	31.0	0.0	0.0	65.5	7.4	7.7	50.3	10.1	10.7
LnGrp LOS	C		C	C			E	A	A	D	B	B
Approach Vol, veh/h		49			23			1051			1772	
Approach Delay, s/veh		31.5			31.0			11.1			11.0	
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	7.3	62.4		20.4	8.7	60.9		20.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	35.0		36.0	5.5	35.0		36.0
Max Q Clear Time (g_c+I1), s	3.6	9.4		4.2	5.3	18.8		3.0
Green Ext Time (p_c), s	0.0	7.3		0.2	0.0	10.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	24	138	71	36	36	121	1018	30	28	1651	94
Future Volume (veh/h)	99	24	138	71	36	36	121	1018	30	28	1651	94
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)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	99	24	138	71	36	36	121	1018	30	28	1651	94
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	315	52	300	150	76	57	151	3079	91	49	2704	154
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.08	0.61	0.61	0.03	0.55	0.55
Sat Flow, veh/h	1309	233	1341	420	339	255	1774	5072	149	1774	4920	280
Grp Volume(v), veh/h	99	0	162	143	0	0	121	680	368	28	1137	608
Grp Sat Flow(s),veh/h/ln	1309	0	1574	1014	0	0	1774	1695	1831	1774	1695	1809
Q Serve(g_s), s	0.0	0.0	8.5	6.5	0.0	0.0	6.4	9.4	9.4	1.5	21.6	21.6
Cycle Q Clear(g_c), s	8.4	0.0	8.5	14.9	0.0	0.0	6.4	9.4	9.4	1.5	21.6	21.6
Prop In Lane	1.00		0.85	0.50		0.25	1.00		0.08	1.00		0.15
Lane Grp Cap(c), veh/h	315	0	352	283	0	0	151	2058	1112	49	1863	994
V/C Ratio(X)	0.31	0.00	0.46	0.50	0.00	0.00	0.80	0.33	0.33	0.57	0.61	0.61
Avail Cap(c_a), veh/h	440	0	502	418	0	0	196	2058	1112	110	1863	994
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	31.9	35.6	0.0	0.0	42.7	9.2	9.2	45.6	14.5	14.5
Incr Delay (d2), s/veh	0.6	0.0	0.9	1.4	0.0	0.0	16.4	0.4	0.8	10.2	1.5	2.8
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	2.3	0.0	3.8	3.6	0.0	0.0	3.8	4.5	4.9	0.9	10.3	11.4
LnGrp Delay(d),s/veh	32.5	0.0	32.9	37.0	0.0	0.0	59.1	9.6	10.0	55.8	16.0	17.3
LnGrp LOS	C		C	D			E	A	A	E	B	B
Approach Vol, veh/h		261			143			1169			1773	
Approach Delay, s/veh		32.7			37.0			14.8			17.1	
Approach LOS		C			D			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	7.1	62.2		25.7	12.6	56.7		25.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.3	45.3		30.3	10.5	40.7		30.3
Max Q Clear Time (g_c+I1), s	3.5	11.4		10.5	8.4	23.6		16.9
Green Ext Time (p_c), s	0.0	8.5		1.2	0.1	11.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	1186	35	0	1850
Future Vol, veh/h	0	22	1186	35	0	1850
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	22	1186	35	0	1850

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	611	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	374	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	374	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	374	-
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	15.2	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	87	186	17	12	125
Future Vol, veh/h	51	87	186	17	12	125
Conflicting Peds, #/hr	6	0	0	13	13	6
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	51	87	186	17	12	125

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	216	0	-	0	410	214
Stage 1	-	-	-	-	208	-
Stage 2	-	-	-	-	202	-
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	1354	-	-	-	598	826
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	832	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1337	-	-	-	560	811
Mov Cap-2 Maneuver	-	-	-	-	560	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1337	-	-	-	780
HCM Lane V/C Ratio	0.038	-	-	-	0.176
HCM Control Delay (s)	7.8	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection						
Int Delay, s/veh	0.4					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	142	21	0	324	17	0
Future Vol, veh/h	142	21	0	324	17	0
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	142	21	0	324	17	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	477	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	324	-
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	-	-	1416	-	547	893
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1416	-	547	893
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	733	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	547	-	-	1416	-
HCM Lane V/C Ratio	0.031	-	-	-	-
HCM Control Delay (s)	11.8	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	66	33	0	108	95	0
Future Vol, veh/h	66	33	0	108	95	0
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	66	33	0	108	95	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	99	0	191	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	108	-
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	-	-	1494	-	798	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1494	-	798	976
Mov Cap-2 Maneuver	-	-	-	-	798	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	798	-	-	1494	-
HCM Lane V/C Ratio	0.119	-	-	-	-
HCM Control Delay (s)	10.1	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	738	23	434	282	964	34	551	832	1056	967	32
Future Volume (veh/h)	124	738	23	434	282	964	34	551	832	1056	967	32
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		0.98	1.00		0.89	1.00		0.97	1.00		0.98
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	124	738	23	434	282	876	34	551	707	1056	967	32
Adj No. of Lanes	1	2	0	3	1	2	1	2	2	2	3	0
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	145	949	30	442	517	1287	44	1101	840	735	2524	83
Arrive On Green	0.08	0.27	0.27	0.09	0.28	0.28	0.02	0.31	0.31	0.21	0.50	0.50
Sat Flow, veh/h	1774	3501	109	5003	1863	2490	1774	3539	2701	3442	5052	167
Grp Volume(v), veh/h	124	373	388	434	282	876	34	551	707	1056	649	350
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1668	1863	1245	1774	1770	1351	1721	1695	1828
Q Serve(g_s), s	10.7	30.2	30.2	13.4	20.0	42.8	3.0	19.7	37.9	33.1	18.3	18.4
Cycle Q Clear(g_c), s	10.7	30.2	30.2	13.4	20.0	42.8	3.0	19.7	37.9	33.1	18.3	18.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	145	480	499	442	517	1287	44	1101	840	735	1694	914
V/C Ratio(X)	0.86	0.78	0.78	0.98	0.55	0.68	0.77	0.50	0.84	1.44	0.38	0.38
Avail Cap(c_a), veh/h	149	480	499	442	517	1287	66	1101	840	735	1694	914
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	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	52.2	52.2	70.5	47.6	30.9	75.1	43.6	49.8	61.0	24.0	24.0
Incr Delay (d2), s/veh	35.5	11.8	11.4	36.6	3.9	2.8	26.1	1.6	10.0	204.3	0.7	1.2
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	6.7	16.3	16.9	7.7	10.8	15.2	1.8	9.9	15.3	36.6	8.7	9.6
LnGrp Delay(d),s/veh	105.7	63.9	63.6	107.1	51.5	33.7	101.2	45.2	59.8	265.3	24.6	25.2
LnGrp LOS	F	E	E	F	D	C	F	D	E	F	C	C
Approach Vol, veh/h		885			1592			1292			2055	
Approach Delay, s/veh		69.6			56.9			54.7			148.4	
Approach LOS		E			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.6	52.7	18.2	46.5	8.3	82.0	17.1	47.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	33.1	48.2	13.7	42.0	5.8	75.5	13.0	42.7
Max Q Clear Time (g_c+I1), s	35.1	39.9	15.4	32.2	5.0	20.4	12.7	44.8
Green Ext Time (p_c), s	0.0	4.3	0.0	3.4	0.0	8.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	90.6
HCM 2010 LOS	F

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	7	23	55	17	44	41	1944	60	89	1587	70
Future Volume (veh/h)	38	7	23	55	17	44	41	1944	60	89	1587	70
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)	0.97		0.96	0.96		0.95	1.00		0.99	1.00		0.98
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	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	38	7	23	55	17	44	41	1944	60	89	1587	70
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	0
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	198	44	98	172	59	112	58	3129	96	113	3237	143
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.03	0.62	0.62	0.06	0.65	0.65
Sat Flow, veh/h	752	222	498	629	303	570	1774	5067	156	1774	4989	220
Grp Volume(v), veh/h	68	0	0	116	0	0	41	1300	704	89	1078	579
Grp Sat Flow(s),veh/h/ln	1473	0	0	1502	0	0	1774	1695	1833	1774	1695	1818
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	2.5	26.2	26.3	5.4	18.0	18.0
Cycle Q Clear(g_c), s	3.8	0.0	0.0	6.9	0.0	0.0	2.5	26.2	26.3	5.4	18.0	18.0
Prop In Lane	0.56		0.34	0.47		0.38	1.00		0.09	1.00		0.12
Lane Grp Cap(c), veh/h	340	0	0	343	0	0	58	2093	1132	113	2200	1180
V/C Ratio(X)	0.20	0.00	0.00	0.34	0.00	0.00	0.71	0.62	0.62	0.79	0.49	0.49
Avail Cap(c_a), veh/h	488	0	0	495	0	0	116	2093	1132	202	2200	1180
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	0.0	38.2	0.0	0.0	52.7	13.1	13.1	50.8	9.9	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	15.0	1.4	2.6	11.3	0.8	1.5
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	1.8	0.0	0.0	3.1	0.0	0.0	1.5	12.5	13.9	3.0	8.6	9.5
LnGrp Delay(d),s/veh	37.3	0.0	0.0	38.8	0.0	0.0	67.7	14.4	15.6	62.1	10.7	11.4
LnGrp LOS	D			D			E	B	B	E	B	B
Approach Vol, veh/h		68			116			2045			1746	
Approach Delay, s/veh		37.3			38.8			15.9			13.6	
Approach LOS		D			D			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	11.5	72.4		26.1	8.1	75.9		26.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	12.5	50.9		33.1	7.2	56.2		33.1
Max Q Clear Time (g_c+I1), s	7.4	28.3		5.8	4.5	20.0		8.9
Green Ext Time (p_c), s	0.1	15.8		0.3	0.0	16.5		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	20	18	80	17	41	38	1851	63	108	1408	110
Future Volume (veh/h)	132	20	18	80	17	41	38	1851	63	108	1408	110
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)	0.99		0.96	0.98		0.98	1.00		0.99	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	132	20	18	80	17	41	38	1851	63	108	1408	110
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	233	123	111	152	37	58	55	3344	114	135	3401	266
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.66	0.66	0.08	0.71	0.71
Sat Flow, veh/h	1324	888	799	720	264	416	1774	5049	172	1774	4808	376
Grp Volume(v), veh/h	132	0	38	138	0	0	38	1242	672	108	993	525
Grp Sat Flow(s),veh/h/ln	1324	0	1687	1400	0	0	1774	1695	1830	1774	1695	1794
Q Serve(g_s), s	1.4	0.0	2.2	8.4	0.0	0.0	2.3	21.5	21.5	6.6	13.3	13.3
Cycle Q Clear(g_c), s	12.0	0.0	2.2	10.5	0.0	0.0	2.3	21.5	21.5	6.6	13.3	13.3
Prop In Lane	1.00		0.47	0.58		0.30	1.00		0.09	1.00		0.21
Lane Grp Cap(c), veh/h	233	0	234	246	0	0	55	2245	1212	135	2398	1269
V/C Ratio(X)	0.57	0.00	0.16	0.56	0.00	0.00	0.69	0.55	0.55	0.80	0.41	0.41
Avail Cap(c_a), veh/h	357	0	391	381	0	0	106	2245	1212	266	2398	1269
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	41.7	45.5	0.0	0.0	52.7	9.9	9.9	50.0	6.7	6.7
Incr Delay (d2), s/veh	2.2	0.0	0.3	2.0	0.0	0.0	14.0	1.0	1.8	10.1	0.5	1.0
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	4.0	0.0	1.0	4.2	0.0	0.0	1.4	10.3	11.4	3.6	6.4	6.9
LnGrp Delay(d),s/veh	48.2	0.0	42.1	47.5	0.0	0.0	66.7	10.9	11.7	60.1	7.2	7.7
LnGrp LOS	D		D	D			E	B	B	E	A	A
Approach Vol, veh/h		170			138			1952			1626	
Approach Delay, s/veh		46.8			47.5			12.3			10.9	
Approach LOS		D			D			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	12.9	77.3		19.8	7.9	82.3		19.8
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	16.5	54.5		25.5	6.6	64.4		25.5
Max Q Clear Time (g_c+I1), s	8.6	23.5		14.0	4.3	15.3		12.5
Green Ext Time (p_c), s	0.1	18.4		0.4	0.0	16.1		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1	112	2	0	18	97	1890	20	36	1437	59
Future Vol, veh/h	12	1	112	2	0	18	97	1890	20	36	1437	59
Conflicting Peds, #/hr	40	0	29	16	0	27	29	0	16	27	0	40
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	112	2	0	18	97	1890	20	36	1437	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2569	3710	817	2797	3729	1022	1536	0	0	1937	0	0
Stage 1	1579	1579	-	2121	2121	-	-	-	-	-	-	-
Stage 2	990	2131	-	676	1608	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*164	*7	274	*91	*6	*477	214	-	-	*600	-	-
Stage 1	*78	*168	-	*489	*465	-	-	-	-	-	-	-
Stage 2	*489	*465	-	*372	*162	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*88	*3	256	*22	*3	*447	206	-	-	*584	-	-
Mov Cap-2 Maneuver	*88	*3	-	*22	*3	-	-	-	-	-	-	-
Stage 1	*40	*152	-	*253	*240	-	-	-	-	-	-	-
Stage 2	*239	*240	-	*190	*146	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	115.2	32.2	1.8	0.3
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	206	-	-	138	152	* 584	-	-
HCM Lane V/C Ratio	0.471	-	-	0.906	0.132	0.062	-	-
HCM Control Delay (s)	37.1	-	-	115.2	32.2	11.6	-	-
HCM Lane LOS	E	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	2.3	-	-	6.1	0.4	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	15	0	16	1	1978	50	61	1494	8
Future Vol, veh/h	0	0	0	15	0	16	1	1978	50	61	1494	8
Conflicting Peds, #/hr	29	0	39	18	0	8	39	0	18	8	0	29
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	125	-	-
Veh in Median Storage, #	-	-	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	15	0	16	1	1978	50	61	1494	8

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	2761	3686	1040	1541	0	0	2046	0	0
Stage 1	2023	2023	-	-	-	-	-	-	-
Stage 2	738	1663	-	-	-	-	-	-	-
Critical Hdwy	5.74	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	6.64	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.04	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*157	*8	*453	213	-	-	*569	-	-
Stage 1	*465	*442	-	-	-	-	-	-	-
Stage 2	*394	*152	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	*135	*0	*442	213	-	-	*560	-	-
Mov Cap-2 Maneuver	*135	*0	-	-	-	-	-	-	-
Stage 1	*457	*0	-	-	-	-	-	-	-
Stage 2	*345	*0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.1	0	0.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	213	-	-	210	* 560	-	-
HCM Lane V/C Ratio	0.005	-	-	0.148	0.109	-	-
HCM Control Delay (s)	22	-	-	25.1	12.2	-	-
HCM Lane LOS	C	-	-	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.4	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	34	21	2023	1484	31
Future Vol, veh/h	6	34	21	2023	1484	31
Conflicting Peds, #/hr	20	20	20	0	0	20
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	135	-	-	-
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	6	34	21	2023	1484	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2391	798	1535	0	-	0
Stage 1	1520	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*364	282	214	-	-	-
Stage 1	*115	-	-	-	-	-
Stage 2	*465	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*315	271	210	-	-	-
Mov Cap-2 Maneuver	*315	-	-	-	-	-
Stage 1	*102	-	-	-	-	-
Stage 2	*456	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.2	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	210	-	277	-	-
HCM Lane V/C Ratio	0.1	-	0.144	-	-
HCM Control Delay (s)	24	-	20.2	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	26	58	1968	1485	37
Future Volume (veh/h)	75	26	58	1968	1485	37
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	75	-22	58	1968	1485	37
Adj No. of Lanes	1	1	1	3	3	0
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	88	78	75	4418	4007	100
Arrive On Green	0.05	0.00	0.04	0.87	0.79	0.79
Sat Flow, veh/h	1774	1583	1774	5253	5269	127
Grp Volume(v), veh/h	75	-22	58	1968	987	535
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1695	1695	1838
Q Serve(g_s), s	4.6	0.0	3.6	9.1	9.7	9.7
Cycle Q Clear(g_c), s	4.6	0.0	3.6	9.1	9.7	9.7
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	88	78	75	4418	2663	1444
V/C Ratio(X)	0.86	-0.28	0.77	0.45	0.37	0.37
Avail Cap(c_a), veh/h	460	410	250	4418	2663	1444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	0.0	52.1	1.5	3.6	3.6
Incr Delay (d2), s/veh	20.2	0.0	15.1	0.3	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.1	4.3	4.5	5.1
LnGrp Delay(d),s/veh	72.1	0.0	67.3	1.9	4.0	4.3
LnGrp LOS	E		E	A	A	A
Approach Vol, veh/h	53			2026	1522	
Approach Delay, s/veh	102.0			3.7	4.1	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		100.1		9.9	9.2	90.9		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		72.5		28.5	15.5	52.5		
Max Q Clear Time (g_c+I1), s		11.1		6.6	5.6	11.7		
Green Ext Time (p_c), s		28.8		0.2	0.1	15.2		

Intersection Summary		
HCM 2010 Ctrl Delay		5.3
HCM 2010 LOS		A

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	31	3	1	6	38	1991	8	42	1461	48
Future Vol, veh/h	8	0	31	3	1	6	38	1991	8	42	1461	48
Conflicting Peds, #/hr	23	0	15	24	0	32	15	0	24	32	0	23
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	110	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	31	3	1	6	38	1991	8	42	1461	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2497	3699	802	2795	3719	1064	1532	0	0	2031	0	0
Stage 1	1592	1592	-	2103	2103	-	-	-	-	-	-	-
Stage 2	905	2107	-	692	1616	-	-	-	-	-	-	-
Critical Hdwy	6.44	6.54	7.14	6.44	6.54	7.14	5.34	-	-	5.34	-	-
Critical Hdwy Stg 1	7.34	5.54	-	7.34	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.74	5.54	-	6.74	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.82	4.02	3.92	3.82	4.02	3.92	3.12	-	-	3.12	-	-
Pot Cap-1 Maneuver	*31	*5	*573	*20	*4	*445	*721	-	-	*560	-	-
Stage 1	*588	*559	-	*457	*434	-	-	-	-	-	-	-
Stage 2	*457	*434	-	*588	*559	-	-	-	-	-	-	-
Platoon blocked, %			1			1	1	-	-	1	-	-
Mov Cap-1 Maneuver	*19	*4	*548	*16	*3	*418	*705	-	-	*542	-	-
Mov Cap-2 Maneuver	*19	*4	-	*16	*3	-	-	-	-	-	-	-
Stage 1	*544	*505	-	*419	*399	-	-	-	-	-	-	-
Stage 2	*412	*399	-	*500	*505	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	83.6	$ 325	0.2	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	* 705	-	-	82	19	* 542	-	-
HCM Lane V/C Ratio	0.054	-	-	0.476	0.526	0.077	-	-
HCM Control Delay (s)	10.4	-	-	83.6	$ 325	12.2	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2	1.5	0.3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱			✥		↰	↑↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	64	26	35	155	28	76	69	1884	162	67	1406	24
Future Volume (veh/h)	64	26	35	155	28	76	69	1884	162	67	1406	24
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)	0.99		0.98	0.99		0.99	1.00		0.97	1.00		0.99
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	64	26	35	155	28	76	69	1884	162	67	1406	24
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	326	167	225	223	37	89	89	2892	247	86	3121	53
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.61	0.61	0.05	0.61	0.61
Sat Flow, veh/h	1278	710	956	752	156	377	1774	4758	407	1774	5148	88
Grp Volume(v), veh/h	64	0	61	259	0	0	69	1339	707	67	926	504
Grp Sat Flow(s),veh/h/ln	1278	0	1666	1285	0	0	1774	1695	1774	1774	1695	1846
Q Serve(g_s), s	0.0	0.0	3.6	21.2	0.0	0.0	4.8	32.0	32.4	4.7	18.5	18.5
Cycle Q Clear(g_c), s	5.8	0.0	3.6	24.8	0.0	0.0	4.8	32.0	32.4	4.7	18.5	18.5
Prop In Lane	1.00		0.57	0.60		0.29	1.00		0.23	1.00		0.05
Lane Grp Cap(c), veh/h	326	0	393	349	0	0	89	2061	1079	86	2055	1119
V/C Ratio(X)	0.20	0.00	0.16	0.74	0.00	0.00	0.78	0.65	0.66	0.78	0.45	0.45
Avail Cap(c_a), veh/h	387	0	473	418	0	0	192	2061	1079	149	2055	1119
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	37.9	47.4	0.0	0.0	58.7	15.9	16.0	58.8	13.3	13.3
Incr Delay (d2), s/veh	0.3	0.0	0.2	5.7	0.0	0.0	13.6	1.6	3.1	14.1	0.7	1.3
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	1.8	0.0	1.7	9.2	0.0	0.0	2.7	15.3	16.6	2.6	8.8	9.8
LnGrp Delay(d),s/veh	39.0	0.0	38.1	53.1	0.0	0.0	72.3	17.5	19.1	72.9	14.0	14.6
LnGrp LOS	D		D	D			E	B	B	E	B	B
Approach Vol, veh/h		125			259			2115			1497	
Approach Delay, s/veh		38.6			53.1			19.8			16.9	
Approach LOS		D			D			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	10.5	80.5		34.0	10.7	80.3		34.0
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	10.5	65.5		35.5	13.5	62.5		35.5
Max Q Clear Time (g_c+I1), s	6.7	34.4		7.8	6.8	20.5		26.8
Green Ext Time (p_c), s	0.0	20.2		0.5	0.1	13.9		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	7	95	15	5	26	193	1797	4	48	1403	203
Future Volume (veh/h)	282	7	95	15	5	26	193	1797	4	48	1403	203
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)	0.99		0.97	0.99		0.99	1.00		0.99	1.00		0.98
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	282	7	36	15	5	26	193	1797	4	48	1403	203
Adj No. of Lanes	1	1	1	1	1	0	1	3	0	1	3	0
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	416	500	414	428	69	361	224	2933	7	65	2105	304
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.13	0.56	0.56	0.04	0.47	0.47
Sat Flow, veh/h	1356	1863	1542	1341	259	1345	1774	5239	12	1774	4476	647
Grp Volume(v), veh/h	282	7	36	15	0	31	193	1163	638	48	1062	544
Grp Sat Flow(s),veh/h/ln	1356	1863	1542	1341	0	1604	1774	1695	1861	1774	1695	1734
Q Serve(g_s), s	19.6	0.3	1.7	0.8	0.0	1.4	10.7	23.0	23.0	2.7	24.2	24.2
Cycle Q Clear(g_c), s	21.0	0.3	1.7	1.1	0.0	1.4	10.7	23.0	23.0	2.7	24.2	24.2
Prop In Lane	1.00		1.00	1.00		0.84	1.00		0.01	1.00		0.37
Lane Grp Cap(c), veh/h	416	500	414	428	0	430	224	1898	1042	65	1594	815
V/C Ratio(X)	0.68	0.01	0.09	0.04	0.00	0.07	0.86	0.61	0.61	0.73	0.67	0.67
Avail Cap(c_a), veh/h	561	699	578	571	0	601	239	1898	1042	98	1594	815
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	1.00	1.00	1.00	0.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	26.9	27.4	27.3	0.0	27.3	42.8	14.7	14.7	47.7	20.4	20.4
Incr Delay (d2), s/veh	2.0	0.0	0.1	0.0	0.0	0.1	21.5	1.3	2.3	14.7	2.2	4.3
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	7.6	0.1	0.8	0.3	0.0	0.6	6.5	11.0	12.4	1.6	11.7	12.4
LnGrp Delay(d),s/veh	37.1	26.9	27.5	27.3	0.0	27.4	64.4	16.0	17.0	62.4	22.7	24.7
LnGrp LOS	D	C	C	C		C	E	B	B	E	C	C
Approach Vol, veh/h		325			46			1994			1654	
Approach Delay, s/veh		35.8			27.3			21.0			24.5	
Approach LOS		D			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.2	60.5		31.3	17.1	51.5		31.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	43.5		37.5	13.5	35.5		37.5
Max Q Clear Time (g_c+I1), s	4.7	25.0		23.0	12.7	26.2		3.4
Green Ext Time (p_c), s	0.0	12.3		0.9	0.0	6.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	3	90	10	3	9	136	1807	7	41	1434	67
Future Volume (veh/h)	114	3	90	10	3	9	136	1807	7	41	1434	67
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)	0.97		0.97	0.97		0.95	1.00		0.97	1.00		0.99
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	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	114	3	16	10	3	9	136	1807	7	41	1434	67
Adj No. of Lanes	0	1	1	0	1	0	1	3	0	1	3	0
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	342	8	349	139	50	95	167	3152	12	60	2700	126
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.09	0.60	0.60	0.01	0.18	0.18
Sat Flow, veh/h	1188	36	1531	380	220	415	1774	5228	20	1774	4977	233
Grp Volume(v), veh/h	117	0	16	22	0	0	136	1172	642	41	977	524
Grp Sat Flow(s),veh/h/ln	1224	0	1531	1015	0	0	1774	1695	1858	1774	1695	1820
Q Serve(g_s), s	0.0	0.0	0.8	0.1	0.0	0.0	7.5	21.0	21.0	2.3	26.1	26.1
Cycle Q Clear(g_c), s	9.9	0.0	0.8	10.0	0.0	0.0	7.5	21.0	21.0	2.3	26.1	26.1
Prop In Lane	0.97		1.00	0.45		0.41	1.00		0.01	1.00		0.13
Lane Grp Cap(c), veh/h	350	0	349	284	0	0	167	2044	1120	60	1839	987
V/C Ratio(X)	0.33	0.00	0.05	0.08	0.00	0.00	0.81	0.57	0.57	0.68	0.53	0.53
Avail Cap(c_a), veh/h	538	0	559	485	0	0	257	2044	1120	257	1839	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.66	0.66	0.66
Uniform Delay (d), s/veh	33.6	0.0	30.1	30.5	0.0	0.0	44.4	12.1	12.1	48.9	29.5	29.5
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.1	0.0	0.0	10.8	1.2	2.1	8.6	0.7	1.4
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	2.8	0.0	0.3	0.5	0.0	0.0	4.2	10.1	11.4	1.3	12.5	13.6
LnGrp Delay(d),s/veh	34.1	0.0	30.2	30.6	0.0	0.0	55.2	13.2	14.2	57.5	30.2	30.9
LnGrp LOS	C		C	C			E	B	B	E	C	C
Approach Vol, veh/h		133			22			1950			1542	
Approach Delay, s/veh		33.6			30.6			16.5			31.2	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	64.8		27.3	13.9	58.7		27.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	14.5	35.5		36.5	14.5	35.5		36.5
Max Q Clear Time (g_c+I1), s	4.3	23.0		11.9	9.5	28.1		12.0
Green Ext Time (p_c), s	0.0	9.2		0.7	0.1	5.2		0.1

Intersection Summary			
HCM 2010 Ctrl Delay			23.4
HCM 2010 LOS			C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	25	110	55	18	32	186	1974	66	64	1490	100
Future Volume (veh/h)	133	25	110	55	18	32	186	1974	66	64	1490	100
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)	0.98		0.95	0.98		0.95	1.00		0.94	1.00		0.96
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	133	25	110	55	18	32	186	1974	66	64	1490	100
Adj No. of Lanes	1	1	0	0	1	0	1	3	0	1	3	0
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	331	64	282	162	57	72	98	3012	100	82	2857	192
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.60	0.60	0.05	0.59	0.59
Sat Flow, veh/h	1319	290	1276	484	258	325	1774	5042	168	1774	4853	326
Grp Volume(v), veh/h	133	0	135	105	0	0	186	1326	714	64	1041	549
Grp Sat Flow(s),veh/h/ln	1319	0	1566	1067	0	0	1774	1695	1820	1774	1695	1788
Q Serve(g_s), s	0.0	0.0	7.3	4.5	0.0	0.0	5.5	25.9	26.0	3.6	18.2	18.2
Cycle Q Clear(g_c), s	11.4	0.0	7.3	11.9	0.0	0.0	5.5	25.9	26.0	3.6	18.2	18.2
Prop In Lane	1.00		0.81	0.52		0.30	1.00		0.09	1.00		0.18
Lane Grp Cap(c), veh/h	331	0	346	291	0	0	98	2025	1087	82	1996	1053
V/C Ratio(X)	0.40	0.00	0.39	0.36	0.00	0.00	1.91	0.65	0.66	0.78	0.52	0.52
Avail Cap(c_a), veh/h	442	0	478	407	0	0	98	2025	1087	98	1996	1053
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	33.2	35.6	0.0	0.0	47.3	13.3	13.3	47.2	12.2	12.2
Incr Delay (d2), s/veh	0.8	0.0	0.7	0.8	0.0	0.0	443.5	1.7	3.1	27.9	1.0	1.8
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	3.4	0.0	3.3	2.7	0.0	0.0	14.7	12.4	13.8	2.4	8.8	9.5
LnGrp Delay(d),s/veh	35.5	0.0	33.9	36.4	0.0	0.0	490.8	15.0	16.4	75.0	13.2	14.1
LnGrp LOS	D		C	D			F	B	B	E	B	B
Approach Vol, veh/h		268			105			2226			1654	
Approach Delay, s/veh		34.7			36.4			55.2			15.9	
Approach LOS		C			D			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.1	64.2		26.6	10.0	63.4		26.6
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	50.5		30.5	5.5	50.5		30.5
Max Q Clear Time (g_c+I1), s	5.6	28.0		13.4	7.5	20.2		13.9
Green Ext Time (p_c), s	0.0	16.0		1.1	0.0	14.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	30	2090	50	0	1653
Future Vol, veh/h	0	30	2090	50	0	1653
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	0	30	2090	50	0	1653

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	1070	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	186	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	186	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	186	-
HCM Lane V/C Ratio	-	-	0.161	-
HCM Control Delay (s)	-	-	28	-
HCM Lane LOS	-	-	D	-
HCM 95th %tile Q(veh)	-	-	0.6	-

Intersection						
Int Delay, s/veh	3.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	48	172	113	5	11	95
Future Vol, veh/h	48	172	113	5	11	95
Conflicting Peds, #/hr	7	0	0	11	11	7
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	48	172	113	5	11	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	129	0	-	0	406	134
Stage 1	-	-	-	-	127	-
Stage 2	-	-	-	-	279	-
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	1457	-	-	-	601	915
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	768	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	567	899
Mov Cap-2 Maneuver	-	-	-	-	567	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	760	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	848
HCM Lane V/C Ratio	0.033	-	-	-	0.125
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection						
Int Delay, s/veh	0.7					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	242	13	0	228	31	0
Future Vol, veh/h	242	13	0	228	31	0
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	242	13	0	228	31	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	255	0	477	249
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	228	-
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	-	-	1310	-	547	790
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	810	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1310	-	547	790
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	792	-
Stage 2	-	-	-	-	810	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	547	-	-	1310	-
HCM Lane V/C Ratio	0.057	-	-	-	-
HCM Control Delay (s)	12	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection						
Int Delay, s/veh	2.1					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	98	0	55	63	0
Future Vol, veh/h	85	98	0	55	63	0
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	85	98	0	55	63	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	183	0	189	134
Stage 1	-	-	-	-	134	-
Stage 2	-	-	-	-	55	-
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	-	-	1392	-	800	915
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1392	-	800	915
Mov Cap-2 Maneuver	-	-	-	-	800	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	968	-

Approach	EB		WB		NB	
HCM Control Delay, s	0		0		9.9	
HCM LOS					A	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	800	-	-	1392	-
HCM Lane V/C Ratio	0.079	-	-	-	-
HCM Control Delay (s)	9.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	341	36	694	660	1295	36	889	652	993	905	50
Future Volume (veh/h)	130	341	36	694	660	1295	36	889	652	993	905	50
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		0.96	1.00		0.84	1.00		0.96	1.00		0.94
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	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	130	341	36	694	660	1251	36	889	464	993	905	50
Adj No. of Lanes	1	2	0	3	1	2	1	2	2	2	3	0
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	151	845	88	578	546	1452	46	836	633	940	2374	131
Arrive On Green	0.08	0.26	0.26	0.12	0.29	0.29	0.03	0.24	0.24	0.27	0.48	0.48
Sat Flow, veh/h	1774	3218	337	5003	1863	2354	1774	3539	2680	3442	4913	271
Grp Volume(v), veh/h	130	186	191	694	660	1251	36	889	464	993	624	331
Grp Sat Flow(s),veh/h/ln	1774	1770	1785	1668	1863	1177	1774	1770	1340	1721	1695	1793
Q Serve(g_s), s	11.6	13.9	14.1	18.5	46.9	46.9	3.2	37.8	25.6	43.7	18.6	18.7
Cycle Q Clear(g_c), s	11.6	13.9	14.1	18.5	46.9	46.9	3.2	37.8	25.6	43.7	18.6	18.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	151	465	469	578	546	1452	46	836	633	940	1638	866
V/C Ratio(X)	0.86	0.40	0.41	1.20	1.21	0.86	0.78	1.06	0.73	1.06	0.38	0.38
Avail Cap(c_a), veh/h	167	465	469	578	546	1452	102	836	633	940	1638	866
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	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.3	48.6	48.7	70.7	56.5	31.3	77.4	61.1	56.4	58.2	26.2	26.2
Incr Delay (d2), s/veh	32.2	2.6	2.6	103.4	107.5	5.9	23.6	49.3	7.4	45.4	0.7	1.3
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	7.1	7.1	7.3	14.1	40.4	25.1	1.9	24.2	10.1	26.7	8.9	9.6
LnGrp Delay(d),s/veh	104.5	51.2	51.3	174.1	164.1	37.2	101.0	110.4	63.8	103.6	26.9	27.5
LnGrp LOS	F	D	D	F	F	D	F	F	E	F	C	C
Approach Vol, veh/h		507			2605			1389			1948	
Approach Delay, s/veh		64.9			105.8			94.6			66.1	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.2	42.3	23.0	46.5	8.7	81.8	18.1	51.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	43.7	37.8	18.5	42.0	9.2	72.3	15.1	45.4
Max Q Clear Time (g_c+I1), s	45.7	39.8	20.5	16.1	5.2	20.7	13.6	48.9
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	8.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	88.2
HCM 2010 LOS	F

Appendix C
Queue Lengths

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	65	244	44	1023	35	1364
v/c Ratio	0.27	0.16	0.77	0.31	0.33	0.27	0.45
Control Delay	32.4	15.8	49.7	48.9	8.6	37.1	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	15.8	49.7	48.9	8.6	37.1	17.8
Queue Length 50th (ft)	37	15	140	26	105	18	183
Queue Length 95th (ft)	69	44	204	m59	128	m57	317
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	411	623	500	186	3060	137	3061
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.10	0.49	0.24	0.33	0.26	0.45

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	246	12	120	12	13	105	780	40	1527
v/c Ratio	0.76	0.03	0.26	0.04	0.03	0.56	0.26	0.29	0.56
Control Delay	50.1	25.8	6.4	26.0	21.1	53.6	12.0	48.7	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.1	25.8	6.4	26.0	21.1	53.6	12.0	48.7	16.2
Queue Length 50th (ft)	147	6	0	6	4	64	89	26	193
Queue Length 95th (ft)	209	18	39	18	18	117	147	m58	152
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	477	639	612	477	609	204	3027	168	2738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.02	0.20	0.03	0.02	0.51	0.26	0.24	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	137	143	95	903	28	1471
v/c Ratio	0.58	0.42	0.79	0.49	0.25	0.21	0.47
Control Delay	51.0	13.7	60.9	47.7	6.6	44.6	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	13.7	60.9	47.7	6.6	44.6	11.7
Queue Length 50th (ft)	53	13	73	55	46	16	165
Queue Length 95th (ft)	97	61	131	101	128	43	265
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	356	586	381	215	3565	132	3156
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.23	0.38	0.44	0.25	0.21	0.47

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	705	363	254	512	34	428	644	779	930
v/c Ratio	0.49	0.74	0.82	0.26	0.62	0.52	0.27	1.07	1.06	0.37
Control Delay	79.8	56.8	85.2	44.7	19.4	100.3	40.8	91.6	107.9	24.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	56.8	85.2	44.7	19.4	100.3	40.8	91.6	107.9	24.4
Queue Length 50th (ft)	72	343	130	106	212	35	119	~581	~445	212
Queue Length 95th (ft)	129	420	#180	147	323	#82	152	#829	#576	247
Internal Link Dist (ft)		505		1143			608			867
Turn Bay Length (ft)	135		265			325			400	
Base Capacity (vph)	148	954	441	974	826	66	1581	603	733	2530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.74	0.82	0.26	0.62	0.52	0.27	1.07	1.06	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	50	175	59	1751	42	1310
v/c Ratio	0.38	0.18	0.75	0.44	0.51	0.36	0.38
Control Delay	52.2	20.3	63.5	64.5	11.5	63.2	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	20.3	63.5	64.5	11.5	63.2	10.5
Queue Length 50th (ft)	47	10	122	46	238	33	162
Queue Length 95th (ft)	87	44	189	90	359	70	251
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	309	492	414	191	3453	151	3437
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.10	0.42	0.31	0.51	0.28	0.38

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	270	7	95	15	31	193	1500	47	1415
v/c Ratio	0.78	0.01	0.20	0.04	0.07	0.70	0.51	0.35	0.63
Control Delay	49.6	23.6	4.0	24.5	10.9	46.2	26.1	51.0	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	23.6	4.0	24.5	10.9	46.2	26.1	51.0	23.6
Queue Length 50th (ft)	160	3	0	7	2	117	351	29	246
Queue Length 95th (ft)	224	13	24	20	22	#207	423	66	346
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	509	698	657	525	615	285	2935	134	2252
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.01	0.14	0.03	0.05	0.68	0.51	0.35	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	120	105	132	1754	64	1409
v/c Ratio	0.67	0.38	0.52	0.44	0.54	0.39	0.51
Control Delay	57.1	14.7	38.6	43.2	12.0	48.9	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	14.7	38.6	43.2	12.0	48.9	15.3
Queue Length 50th (ft)	73	14	48	77	215	39	189
Queue Length 95th (ft)	124	60	95	139	330	79	257
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	374	551	394	301	3252	164	2749
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.22	0.27	0.44	0.54	0.39	0.51

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	99	349	574	611	936	36	791	482	610	878
v/c Ratio	0.69	0.38	1.00	0.58	1.06	0.41	0.66	0.85	0.65	0.37
Control Delay	94.9	48.8	106.1	50.9	76.7	87.3	58.4	40.5	55.3	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.9	48.8	106.1	50.9	76.7	87.3	58.4	40.5	55.3	27.8
Queue Length 50th (ft)	102	155	216	291	~1042	37	276	235	292	217
Queue Length 95th (ft)	169	206	#304	361	#1317	79	327	#434	361	256
Internal Link Dist (ft)		701		1151			725			500
Turn Bay Length (ft)	135		265			325			400	
Base Capacity (vph)	167	916	576	1049	885	101	1201	565	937	2374
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.38	1.00	0.58	1.06	0.36	0.66	0.85	0.65	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	67	320	35	1042	37	1363
v/c Ratio	0.23	0.14	0.83	0.27	0.37	0.31	0.48
Control Delay	27.5	13.7	50.0	48.9	10.2	40.3	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	13.7	50.0	48.9	10.2	40.3	20.6
Queue Length 50th (ft)	34	15	183	21	109	20	185
Queue Length 95th (ft)	64	42	261	m50	130	59	318
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	402	625	497	185	2827	125	2823
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.11	0.64	0.19	0.37	0.30	0.48

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	245	12	120	12	13	105	783	39	1569
v/c Ratio	0.76	0.03	0.26	0.04	0.03	0.56	0.26	0.29	0.57
Control Delay	49.9	25.8	6.4	26.0	21.1	53.5	12.0	46.7	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	25.8	6.4	26.0	21.1	53.5	12.0	46.7	17.4
Queue Length 50th (ft)	146	6	0	6	4	64	89	25	205
Queue Length 95th (ft)	208	18	39	18	18	116	147	m52	208
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	477	639	612	477	609	204	3030	167	2739
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.02	0.20	0.03	0.02	0.51	0.26	0.23	0.57

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	94	137	143	95	905	28	1507
v/c Ratio	0.58	0.42	0.79	0.49	0.25	0.21	0.48
Control Delay	51.4	13.7	60.9	47.7	6.6	44.6	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	13.7	60.9	47.7	6.6	44.6	11.8
Queue Length 50th (ft)	54	13	73	55	46	16	171
Queue Length 95th (ft)	98	61	131	101	128	43	273
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	356	586	381	215	3565	132	3156
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.23	0.38	0.44	0.25	0.21	0.48

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	705	363	254	513	34	429	644	794	945
v/c Ratio	0.49	0.74	0.82	0.26	0.62	0.52	0.27	1.07	1.08	0.37
Control Delay	79.8	56.8	85.2	44.7	19.4	100.3	40.8	92.2	113.8	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	56.8	85.2	44.7	19.4	100.3	40.8	92.2	113.8	24.5
Queue Length 50th (ft)	72	343	130	106	213	35	120	~582	~462	216
Queue Length 95th (ft)	129	420	#180	147	326	#82	153	#831	#593	252
Internal Link Dist (ft)		505		1143			608			867
Turn Bay Length (ft)	135		265			325			400	
Base Capacity (vph)	148	954	441	974	826	66	1581	602	733	2530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.74	0.82	0.26	0.62	0.52	0.27	1.07	1.08	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	58	226	54	1817	56	1309
v/c Ratio	0.30	0.16	0.80	0.42	0.57	0.43	0.40
Control Delay	44.5	19.5	63.5	64.1	15.4	64.4	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	19.5	63.5	64.1	15.4	64.4	13.0
Queue Length 50th (ft)	45	15	162	42	295	44	183
Queue Length 95th (ft)	82	49	235	84	440	87	279
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	314	500	408	191	3195	155	3247
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.12	0.55	0.28	0.57	0.36	0.40

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	274	7	95	15	31	193	1540	46	1445
v/c Ratio	0.78	0.01	0.20	0.04	0.07	0.70	0.53	0.35	0.65
Control Delay	49.5	23.4	4.0	24.3	10.8	46.3	26.4	51.2	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	23.4	4.0	24.3	10.8	46.3	26.4	51.2	24.1
Queue Length 50th (ft)	163	3	0	7	2	117	361	28	255
Queue Length 95th (ft)	226	12	24	20	22	#211	435	65	356
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	509	698	657	525	615	284	2926	131	2240
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.01	0.14	0.03	0.05	0.68	0.53	0.35	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	127	120	105	132	1787	64	1434
v/c Ratio	0.68	0.37	0.50	0.44	0.55	0.39	0.53
Control Delay	57.0	14.2	36.8	43.6	12.6	48.9	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	14.2	36.8	43.6	12.6	48.9	15.6
Queue Length 50th (ft)	78	14	48	77	225	39	196
Queue Length 95th (ft)	129	59	94	140	346	79	263
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	375	551	402	298	3225	164	2730
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.22	0.26	0.44	0.55	0.39	0.53

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	99	349	574	611	952	36	807	482	620	889
v/c Ratio	0.69	0.38	1.00	0.58	1.08	0.41	0.67	0.85	0.66	0.37
Control Delay	94.9	48.8	106.1	50.9	82.8	87.3	58.7	40.8	55.6	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.9	48.8	106.1	50.9	82.8	87.3	58.7	40.8	55.6	27.9
Queue Length 50th (ft)	102	155	216	291	~1078	37	283	236	298	220
Queue Length 95th (ft)	169	206	#304	361	#1353	79	334	#436	368	260
Internal Link Dist (ft)		701		1151			725			500
Turn Bay Length (ft)	135		265			325			400	
Base Capacity (vph)	167	916	576	1049	885	101	1201	564	937	2376
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.38	1.00	0.58	1.08	0.36	0.67	0.85	0.66	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	70	341	45	1046	47	1365
v/c Ratio	0.22	0.14	0.85	0.32	0.38	0.38	0.50
Control Delay	26.7	13.8	51.4	50.1	10.7	42.8	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	13.8	51.4	50.1	10.7	42.8	21.7
Queue Length 50th (ft)	33	16	195	27	110	27	186
Queue Length 95th (ft)	64	44	283	m62	130	70	320
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	400	628	495	185	2763	129	2745
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.11	0.69	0.24	0.38	0.36	0.50

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	252	12	120	12	13	105	818	41	1596
v/c Ratio	0.76	0.03	0.26	0.04	0.03	0.56	0.27	0.30	0.59
Control Delay	49.9	25.4	6.3	25.7	20.8	54.0	12.4	46.8	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	25.4	6.3	25.7	20.8	54.0	12.4	46.8	17.8
Queue Length 50th (ft)	150	6	0	6	4	64	95	26	210
Queue Length 95th (ft)	214	18	38	18	18	117	157	m52	221
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	477	639	612	477	609	203	3005	168	2721
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.02	0.20	0.03	0.02	0.52	0.27	0.24	0.59

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	137	143	95	933	28	1531
v/c Ratio	0.61	0.42	0.79	0.49	0.26	0.21	0.49
Control Delay	53.4	13.7	60.9	47.7	6.7	44.6	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	13.7	60.9	47.7	6.7	44.6	11.9
Queue Length 50th (ft)	57	13	73	55	48	16	175
Queue Length 95th (ft)	103	61	131	101	132	43	280
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	356	586	381	215	3566	132	3156
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.23	0.38	0.44	0.26	0.21	0.49

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	705	363	254	527	34	443	644	804	955
v/c Ratio	0.49	0.74	0.82	0.26	0.64	0.52	0.28	1.07	1.10	0.38
Control Delay	79.8	56.8	85.2	44.7	20.7	100.3	40.9	92.2	118.0	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	56.8	85.2	44.7	20.7	100.3	40.9	92.2	118.0	24.6
Queue Length 50th (ft)	72	343	130	106	232	35	124	~582	~473	219
Queue Length 95th (ft)	129	420	#180	147	348	#82	157	#831	#605	255
Internal Link Dist (ft)		505		1143			608			867
Turn Bay Length (ft)	135		265			325			400	
Base Capacity (vph)	148	954	441	974	822	66	1581	602	733	2530
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.74	0.82	0.26	0.64	0.52	0.28	1.07	1.10	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	61	259	69	1824	67	1311
v/c Ratio	0.27	0.16	0.83	0.49	0.59	0.50	0.42
Control Delay	41.2	19.2	64.7	65.7	17.1	68.4	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	19.2	64.7	65.7	17.1	68.4	15.0
Queue Length 50th (ft)	43	17	188	54	326	53	202
Queue Length 95th (ft)	80	50	269	101	443	101	296
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	315	503	404	191	3081	151	3100
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.12	0.64	0.36	0.59	0.44	0.42

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	282	7	95	15	31	193	1579	48	1487
v/c Ratio	0.79	0.01	0.19	0.04	0.07	0.70	0.57	0.37	0.67
Control Delay	48.8	22.7	3.9	23.7	10.5	47.0	28.2	52.1	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	22.7	3.9	23.7	10.5	47.0	28.2	52.1	25.0
Queue Length 50th (ft)	167	3	0	7	2	117	371	29	269
Queue Length 95th (ft)	231	12	24	20	21	#219	446	67	371
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	509	698	657	525	615	281	2778	130	2214
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.01	0.14	0.03	0.05	0.69	0.57	0.37	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	120	105	132	1818	64	1471
v/c Ratio	0.69	0.36	0.48	0.45	0.57	0.39	0.54
Control Delay	56.9	13.9	35.5	43.9	13.0	48.9	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	13.9	35.5	43.9	13.0	48.9	16.0
Queue Length 50th (ft)	81	14	48	77	235	39	206
Queue Length 95th (ft)	134	59	93	141	360	79	272
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	376	551	409	296	3206	164	2713
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.22	0.26	0.45	0.57	0.39	0.54

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	99	349	574	611	968	36	823	482	636	904
v/c Ratio	0.69	0.38	1.00	0.58	1.09	0.41	0.69	0.86	0.68	0.38
Control Delay	94.9	48.8	106.1	50.9	89.2	87.3	59.1	41.4	56.2	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.9	48.8	106.1	50.9	89.2	87.3	59.1	41.4	56.2	28.1
Queue Length 50th (ft)	102	155	216	291	~1113	37	290	239	308	225
Queue Length 95th (ft)	169	206	#304	361	#1389	79	341	#440	378	265
Internal Link Dist (ft)		701		1151			725			500
Turn Bay Length (ft)	135		265			325			400	
Base Capacity (vph)	167	916	576	1049	885	101	1201	562	937	2376
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.38	1.00	0.58	1.09	0.36	0.69	0.86	0.68	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	65	244	44	1139	35	1577
v/c Ratio	0.27	0.16	0.77	0.31	0.37	0.27	0.52
Control Delay	32.4	15.8	49.7	49.2	8.7	37.3	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	15.8	49.7	49.2	8.7	37.3	19.0
Queue Length 50th (ft)	37	15	140	26	112	18	211
Queue Length 95th (ft)	69	44	204	m60	136	m50	372
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	411	623	500	186	3064	137	3062
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.10	0.49	0.24	0.37	0.26	0.52

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	246	12	120	12	13	105	896	40	1740
v/c Ratio	0.76	0.03	0.26	0.04	0.03	0.56	0.30	0.29	0.63
Control Delay	50.1	25.8	6.4	26.0	21.1	53.6	12.3	48.0	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.1	25.8	6.4	26.0	21.1	53.6	12.3	48.0	17.9
Queue Length 50th (ft)	147	6	0	6	4	64	105	26	221
Queue Length 95th (ft)	209	18	39	18	18	117	172	m52	206
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	477	639	612	477	609	204	3030	168	2743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.02	0.20	0.03	0.02	0.51	0.30	0.24	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	162	143	121	1018	28	1685
v/c Ratio	0.57	0.47	0.88	0.55	0.29	0.21	0.57
Control Delay	50.4	13.1	78.6	47.8	6.9	44.6	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	13.1	78.6	47.8	6.9	44.6	14.3
Queue Length 50th (ft)	53	13	75	70	54	16	212
Queue Length 95th (ft)	97	64	#146	120	147	43	336
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	357	600	334	234	3564	132	2964
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.27	0.43	0.52	0.29	0.21	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	124	761	434	282	949	34	536	832	1031	974
v/c Ratio	0.84	0.80	0.98	0.55	0.69	0.52	0.49	0.79	1.41	0.39
Control Delay	109.6	59.7	108.4	52.8	25.1	100.3	45.2	35.6	234.2	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.6	59.7	108.4	52.8	25.1	100.3	45.2	35.6	234.2	24.8
Queue Length 50th (ft)	126	378	158	245	305	35	232	285	~718	224
Queue Length 95th (ft)	#245	459	#236	346	382	#82	292	381	#854	261
Internal Link Dist (ft)		505		1143			608			867
Turn Bay Length (ft)	135		265		200	325		200	400	
Base Capacity (vph)	148	954	441	513	1376	66	1100	1054	733	2527
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.80	0.98	0.55	0.69	0.52	0.49	0.79	1.41	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	50	175	59	1973	42	1429
v/c Ratio	0.38	0.18	0.75	0.44	0.57	0.36	0.42
Control Delay	52.2	20.3	63.5	64.5	12.5	63.2	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	20.3	63.5	64.5	12.5	63.2	10.9
Queue Length 50th (ft)	47	10	122	46	287	33	183
Queue Length 95th (ft)	87	44	189	90	431	70	282
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	309	492	414	191	3458	151	3438
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.10	0.42	0.31	0.57	0.28	0.42

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	270	7	95	15	31	193	1722	47	1534
v/c Ratio	0.78	0.01	0.20	0.04	0.07	0.70	0.59	0.35	0.68
Control Delay	49.6	23.6	4.0	24.5	10.9	44.9	27.5	51.0	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	23.6	4.0	24.5	10.9	44.9	27.5	51.0	24.9
Queue Length 50th (ft)	160	3	0	7	2	117	415	29	277
Queue Length 95th (ft)	224	13	24	20	22	#205	485	66	388
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	509	698	657	525	615	285	2935	134	2256
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.01	0.14	0.03	0.05	0.68	0.59	0.35	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	135	105	186	1976	64	1528
v/c Ratio	0.67	0.41	0.56	0.49	0.61	0.39	0.60
Control Delay	57.1	14.1	40.9	41.9	13.1	48.9	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	14.1	40.9	41.9	13.1	48.9	18.7
Queue Length 50th (ft)	73	14	49	105	260	39	240
Queue Length 95th (ft)	124	63	96	#211	397	79	287
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	374	560	367	377	3257	164	2540
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.24	0.29	0.49	0.61	0.39	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	130	377	694	660	1263	36	857	652	967	929
v/c Ratio	0.82	0.41	1.20	1.23	0.87	0.41	1.03	0.68	1.03	0.39
Control Delay	106.1	49.5	164.9	165.9	35.6	87.3	96.4	22.7	93.6	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.1	49.5	164.9	165.9	35.6	87.3	96.4	22.7	93.6	28.3
Queue Length 50th (ft)	135	169	~311	~858	503	37	~500	125	~556	233
Queue Length 95th (ft)	#246	222	#400	#1105	606	79	#637	206	#692	273
Internal Link Dist (ft)		701		1151			725			500
Turn Bay Length (ft)	135		265		200	325		200	400	
Base Capacity (vph)	167	917	576	536	1454	101	836	955	937	2370
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.41	1.20	1.23	0.87	0.36	1.03	0.68	1.03	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	67	320	35	1158	37	1576
v/c Ratio	0.23	0.14	0.83	0.27	0.41	0.31	0.56
Control Delay	27.5	13.7	50.0	49.2	10.2	38.7	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	13.7	50.0	49.2	10.2	38.7	22.0
Queue Length 50th (ft)	34	15	183	21	117	19	213
Queue Length 95th (ft)	64	42	261	m52	137	m53	374
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	402	625	497	185	2830	125	2823
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.11	0.64	0.19	0.41	0.30	0.56

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	245	12	120	12	13	105	899	39	1782
v/c Ratio	0.76	0.03	0.26	0.04	0.03	0.56	0.30	0.29	0.65
Control Delay	49.9	25.8	6.4	26.0	21.1	53.5	12.3	45.8	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	25.8	6.4	26.0	21.1	53.5	12.3	45.8	19.0
Queue Length 50th (ft)	146	6	0	6	4	64	105	25	232
Queue Length 95th (ft)	208	18	39	18	18	116	172	m46	262
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	477	639	612	477	609	204	3033	167	2743
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.02	0.20	0.03	0.02	0.51	0.30	0.23	0.65

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	94	162	143	121	1020	28	1721
v/c Ratio	0.58	0.47	0.88	0.55	0.29	0.21	0.58
Control Delay	50.8	13.1	78.6	47.8	6.9	44.6	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	13.1	78.6	47.8	6.9	44.6	14.5
Queue Length 50th (ft)	54	13	75	70	54	16	219
Queue Length 95th (ft)	98	64	#146	120	147	43	346
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	357	600	334	234	3564	132	2961
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.27	0.43	0.52	0.29	0.21	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	124	761	434	282	950	34	537	832	1046	989
v/c Ratio	0.84	0.80	0.98	0.55	0.69	0.52	0.49	0.79	1.43	0.39
Control Delay	109.6	59.7	108.4	52.8	25.1	100.3	45.2	35.6	242.5	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.6	59.7	108.4	52.8	25.1	100.3	45.2	35.6	242.5	24.9
Queue Length 50th (ft)	126	378	158	245	306	35	233	285	~734	228
Queue Length 95th (ft)	#245	459	#236	346	384	#82	292	381	#871	266
Internal Link Dist (ft)		505		1143			608			867
Turn Bay Length (ft)	135		265		200	325		200	400	
Base Capacity (vph)	148	954	441	513	1375	66	1100	1054	733	2528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.80	0.98	0.55	0.69	0.52	0.49	0.79	1.43	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	58	226	54	2039	56	1428
v/c Ratio	0.30	0.16	0.80	0.42	0.64	0.43	0.44
Control Delay	44.5	19.5	63.5	64.1	16.8	64.4	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	19.5	63.5	64.1	16.8	64.4	13.5
Queue Length 50th (ft)	45	15	162	42	357	44	207
Queue Length 95th (ft)	82	49	235	84	528	87	313
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	314	500	408	191	3200	155	3247
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.12	0.55	0.28	0.64	0.36	0.44

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	274	7	95	15	31	193	1762	46	1564
v/c Ratio	0.78	0.01	0.20	0.04	0.07	0.70	0.60	0.35	0.70
Control Delay	49.5	23.4	4.0	24.3	10.8	45.0	27.8	51.2	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	23.4	4.0	24.3	10.8	45.0	27.8	51.2	25.4
Queue Length 50th (ft)	163	3	0	7	2	117	429	28	287
Queue Length 95th (ft)	226	12	24	20	22	#210	495	65	398
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	509	698	657	525	615	284	2926	131	2244
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.01	0.14	0.03	0.05	0.68	0.60	0.35	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	127	135	105	186	2009	64	1553
v/c Ratio	0.68	0.40	0.53	0.51	0.62	0.39	0.61
Control Delay	57.0	13.7	38.6	43.0	13.7	48.9	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	13.7	38.6	43.0	13.7	48.9	18.8
Queue Length 50th (ft)	78	14	48	106	272	39	246
Queue Length 95th (ft)	129	62	95	#220	416	79	294
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	375	560	377	367	3230	164	2539
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.24	0.28	0.51	0.62	0.39	0.61

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	130	377	694	660	1279	36	873	652	977	940
v/c Ratio	0.82	0.41	1.20	1.23	0.88	0.41	1.04	0.68	1.04	0.40
Control Delay	106.1	49.5	164.9	165.9	36.6	87.3	101.1	22.8	96.3	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.1	49.5	164.9	165.9	36.6	87.3	101.1	22.8	96.3	28.4
Queue Length 50th (ft)	135	169	~311	~858	517	37	~518	126	~567	236
Queue Length 95th (ft)	#246	222	#400	#1105	622	79	#656	206	#704	277
Internal Link Dist (ft)		701		1151			725			500
Turn Bay Length (ft)	135		265		200	325		200	400	
Base Capacity (vph)	167	917	576	536	1453	101	836	954	937	2371
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.41	1.20	1.23	0.88	0.36	1.04	0.68	1.04	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	70	70	341	45	1162	47	1578
v/c Ratio	0.22	0.14	0.85	0.32	0.42	0.38	0.57
Control Delay	26.7	13.8	51.4	51.0	10.7	41.2	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	13.8	51.4	51.0	10.7	41.2	23.1
Queue Length 50th (ft)	33	16	195	27	117	26	216
Queue Length 95th (ft)	64	44	283	m61	138	m67	376
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	400	628	495	185	2766	129	2745
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.11	0.69	0.24	0.42	0.36	0.57

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	252	12	120	12	13	105	934	41	1809
v/c Ratio	0.76	0.03	0.26	0.04	0.03	0.56	0.31	0.30	0.66
Control Delay	49.9	25.4	6.3	25.7	20.8	54.0	12.7	45.7	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	25.4	6.3	25.7	20.8	54.0	12.7	45.7	19.4
Queue Length 50th (ft)	150	6	0	6	4	64	112	26	236
Queue Length 95th (ft)	214	18	38	18	18	117	182	m47	276
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	477	639	612	477	609	203	3006	168	2725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.02	0.20	0.03	0.02	0.52	0.31	0.24	0.66

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	162	143	121	1048	28	1745
v/c Ratio	0.61	0.47	0.88	0.55	0.29	0.21	0.59
Control Delay	52.7	13.1	78.6	47.8	7.0	44.6	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.7	13.1	78.6	47.8	7.0	44.6	14.7
Queue Length 50th (ft)	57	13	75	70	56	16	224
Queue Length 95th (ft)	103	64	#146	120	152	43	353
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	357	600	334	234	3564	132	2961
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.27	0.43	0.52	0.29	0.21	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	124	761	434	282	964	34	551	832	1056	999
v/c Ratio	0.84	0.80	0.98	0.55	0.70	0.52	0.50	0.79	1.44	0.40
Control Delay	109.6	59.7	108.4	52.8	26.0	100.3	45.5	35.6	248.1	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.6	59.7	108.4	52.8	26.0	100.3	45.5	35.6	248.1	25.0
Queue Length 50th (ft)	126	378	158	245	318	35	240	285	~745	231
Queue Length 95th (ft)	#245	459	#236	346	397	#82	300	381	#882	269
Internal Link Dist (ft)		505		1143			608			867
Turn Bay Length (ft)	135		265		200	325		200	400	
Base Capacity (vph)	148	954	441	513	1371	66	1100	1054	733	2528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.80	0.98	0.55	0.70	0.52	0.50	0.79	1.44	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	61	259	69	2046	67	1430
v/c Ratio	0.27	0.16	0.83	0.49	0.66	0.50	0.46
Control Delay	41.2	19.2	64.7	65.7	18.7	68.4	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	19.2	64.7	65.7	18.7	68.4	15.6
Queue Length 50th (ft)	43	17	188	54	394	53	228
Queue Length 95th (ft)	80	50	269	101	531	101	332
Internal Link Dist (ft)		432	288		168		254
Turn Bay Length (ft)				135		110	
Base Capacity (vph)	315	503	404	191	3087	151	3101
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.12	0.64	0.36	0.66	0.44	0.46

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	282	7	95	15	31	193	1801	48	1606
v/c Ratio	0.79	0.01	0.19	0.04	0.07	0.70	0.65	0.37	0.73
Control Delay	48.8	22.7	3.9	23.7	10.5	45.6	29.7	52.1	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	22.7	3.9	23.7	10.5	45.6	29.7	52.1	26.6
Queue Length 50th (ft)	167	3	0	7	2	117	444	29	302
Queue Length 95th (ft)	231	12	24	20	21	#219	505	67	#426
Internal Link Dist (ft)		629			265		856		642
Turn Bay Length (ft)						300		125	
Base Capacity (vph)	509	698	657	525	615	281	2778	130	2215
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.01	0.14	0.03	0.05	0.69	0.65	0.37	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	135	105	186	2040	64	1590
v/c Ratio	0.69	0.40	0.50	0.52	0.64	0.39	0.63
Control Delay	56.9	13.4	36.9	43.8	14.2	48.9	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	13.4	36.9	43.8	14.2	48.9	19.1
Queue Length 50th (ft)	81	14	48	106	283	39	255
Queue Length 95th (ft)	134	62	94	#227	432	79	304
Internal Link Dist (ft)		246	238		293		378
Turn Bay Length (ft)	100			300		125	
Base Capacity (vph)	376	560	385	359	3207	164	2539
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.24	0.27	0.52	0.64	0.39	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	130	377	694	660	1295	36	889	652	993	955
v/c Ratio	0.82	0.41	1.20	1.23	0.89	0.41	1.06	0.68	1.06	0.40
Control Delay	106.1	49.5	164.9	165.9	37.7	87.3	106.2	22.8	101.0	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.1	49.5	164.9	165.9	37.7	87.3	106.2	22.8	101.0	28.5
Queue Length 50th (ft)	135	169	~311	~858	530	37	~537	126	~585	241
Queue Length 95th (ft)	#246	222	#400	#1105	636	79	#675	206	#722	282
Internal Link Dist (ft)		701		1151			725			500
Turn Bay Length (ft)	135		265		200	325		200	400	
Base Capacity (vph)	167	917	576	536	1453	101	836	954	937	2371
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.41	1.20	1.23	0.89	0.36	1.06	0.68	1.06	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Appendix D
Parking Counts

	Mountain View						
	The Shadows Apartments	Central Park Apartments	Park Place Apartments	North Park Apartments	Avalon Mountain View	Avalon Towers on the Peninsula	Madera Apartments
Count Date	2/14/2012	2/14/2012	2/16/2012	2/16-17/2012	2/23/2012	3/6/2012	6/25-26/2013
1 bedroom units	92	68	181	98	117	90	116
2 bedroom units	64	204	186	90	75	115	87
3 bedroom units	24	82	6	0	56	6	
4 bedroom units							
Total Apartment Units	**180**	**354**	**373**	**188**	**248**	**211**	**203**
Total Bedrooms	292	722	571	278	435	338	290
Bedrooms to units ratio	1.62	2.04	1.53	1.48	1.75	1.60	1.43
Total Parking Spaces	341	696	511	324	426	529	313
Parking spaces to units ratio	1.89	1.97	1.37	1.72	1.72	2.51	1.54
Parking spaces to bedrooms ratio							
Occupied parking spaces	**219**	**490**	**339**	**215**	**301**	**247**	**206**
Percent Occupied	64%	70%	66%	66%	71%	47%	66%
Occupied spaces to units ratio	**1.22**	**1.38**	**0.91**	**1.14**	**1.21**	**1.17**	**1.01**
Occupied spaces to bedrooms ratio	**0.75**	**0.68**	**0.59**	**0.77**	**0.69**	**0.73**	**0.71**

	Cupertino					
	Markham Apartments	**Siena Apartments**	**Arioso Apartments**	**Archstone Cupertino**	**Biltmore Apartments**	**Hamptons Apartments**
Count Date	10/22/2011	10/22/2011	10/27/2011	2/16/2012	2/16/2012	2/16/2012
1 bedroom units	259	36	81	145	78	130
2 bedroom units	245	92	120	152	93	170
3 bedroom units	0	0	0	14	8	42
4 bedroom units	0	0	0	0	0	0
Total Apartment Units	**504**	**128**	**201**	**311**	**179**	**342**
Total Bedrooms	749	220	321	491	288	596
Bedrooms to units ratio	1.49	1.72	1.60	1.58	1.61	1.74
Total Parking Spaces				529	353	588
Parking spaces to units ratio				1.70	1.97	1.72
Parking spaces to bedrooms ratio						
Occupied parking spaces	**575**	**182**	**275**	**385**	**276**	**478**
Percent Occupied				73%	78%	81%
Occupied spaces to units ratio	**1.14**	**1.42**	**1.37**	**1.24**	**1.54**	**1.40**
Occupied spaces to bedrooms ratio	**0.77**	**0.83**	**0.86**	**0.78**	**0.96**	**0.80**

	San Mateo		Santa Clara				
	The Metropolitan	**Altaire Apartments**	**Hearth North**	**Hearth South**	**Cobalt**	**Park Central**	**Mansion Grove**
Count Date	7/27/2011 & 7/27/2011		9/19/2017-9/21/2017				
1 bedroom units	115	5	129	114	118	85	502
2 bedroom units	91	2	160	145	104	88	494
3 bedroom units	12	63					4
4 bedroom units	0	33					
Total Apartment Units	**218**	**103**	**289**	**259**	**222**	**173**	**1000**
Total Bedrooms	333	330	449	404	326	261	1502
Bedrooms to units ratio							
Total Parking Spaces			474	462	378	345	1227
Parking spaces to units ratio							
Parking spaces to bedrooms ratio							
Occupied parking spaces	**305**	**194**	**352**	**317**	**274**	**212**	**1317**
Percent Occupied							
Occupied spaces to units ratio	**1.40**	**1.88**	**1.22**	**1.22**	**1.23**	**1.23**	**1.32**
Occupied spaces to bedrooms ratio	**0.92**	**0.59**	**0.78**	**0.78**	**0.84**	**0.81**	**0.88**

	The Plaza, Foster City	Township, Redwood City	Colonnade, Los Altos
Count Date		3/7/2017-3/9/2017	
1 bedroom units	150	71	100
2 bedroom units	138	58	67
3 bedroom units	19	3	0
4 bedroom units			
Total Apartment Units	**307**	**132**	**167**
Total Bedrooms	483	196	234
Bedrooms to units ratio			
Total Parking Spaces			
Parking spaces to units ratio			
Parking spaces to bedrooms ratio			
Occupied parking spaces	**442**	**140**	**191**
Percent Occupied			
Occupied spaces to units ratio	**1.44**	**1.06**	**1.14**
Occupied spaces to bedrooms ratio	**0.92**	**0.71**	**0.82**

Appendix M
Climate Action Plan Checklist

CITY OF MILLBRAE
CEQA GHG EMISSIONS ANALYSIS
COMPLIANCE CHECKLIST

CLIMATE ACTION PLAN CONSISTENCY CHECKLIST for Future Development[1]

The City of Millbrae has adopted a Climate Action Plan (CAP) that establishes 2025 and 2030 greenhouse gas (GHG) emissions targets and provides strategies to establish a trajectory towards achieving those targets. The CAP includes specific measures to achieve the short-term communitywide emissions reduction targets of 32 percent below 2005 levels by 2025 and 49 percent below 2005 levels by 2030. This is consistent with California's goal of reducing GHG emissions to 40 percent below 1990 levels (Senate Bill 32) by 2030 and provides substantial progress towards achieving the State's long-term GHG reduction goal of carbon neutrality (Executive Order B-55-18) by 2045. The City Council, City staff, and community will continue to develop an approach to meet the State's long-term goal of carbon neutrality.

Over the years, the City has implemented many environmental programs. The CAP establishes the continuation of some programs, expansion of other programs, and implementation of new programs to reduce GHG emissions.

Per the 2020 Millbrae CAP, the Millbrae GHG Emissions Inventory will be updated at least every three years but ideally annually if assistance from the San Mateo County RICAPS climate program is available. In addition, the CAP will be updated periodically with annual reviews of progress on implementation of specific CAP measures and with respect to meeting emissions reduction targets.

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15183.5, a lead agency may determine that a project's or plan's incremental contribution to a cumulative effect is not cumulatively considerable if it complies with the requirements in a previously adopted plan or mitigation program under specified circumstances. In order for the 2020 Millbrae CAP to be considered a qualified GHG reduction strategy and provide for CEQA streamlining of GHG analysis for future development, the CAP must identify those measures that are applicable to future development projects. The 2020 Millbrae CAP includes measures that are applicable to existing developments, municipal government operations, as well as voluntary and mandatory measures to be applied to future development for public and private projects. Mandatory GHG reduction programs that are applicable to future development are summarized in the following CEQA GHG Emissions Compliance Checklist (referred to herein as the CEQA GHG Checklist). This CEQA GHG Checklist identifies applicable regulations, applicability, requirements, and monitoring and reporting required by those regulations. The purpose of the CEQA GHG Checklist is to assist with determining project or plan consistency with the CAP and provide a streamlined

[1] Future development refers to any project or plan that is subject to discretionary review and triggers environmental review pursuant to CEQA.

review process for proposed future development projects that are subject to discretionary review and trigger environmental review pursuant to the CEQA.

This CEQA GHG Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that future development is consistent with CAP assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects or plans that are consistent with the CAP as determined through the use of this CEQA GHG Checklist may rely on the programmatic CAP Initial Study-Negative Declaration GHG emissions analysis for the respective project- and cumulative-level GHG emissions impacts analysis. Inconsistency with any of the applicable-by-land use-type measures in this CEQA GHG Checklist would make a Plan/Project inconsistent with the overall CEQA GHG Checklist. **Projects that are identified as not consistent with the CAP through the use of this CEQA GHG Checklist must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to BAAQMD GHG emissions thresholds or other GHG emissions thresholds determined appropriate by the City and incorporation of the CAP measures in this CEQA GHG Checklist to the extent feasible.**

Cumulative GHG emissions associated with construction from a land use development project are generally orders of magnitude lower than the operational emissions from a project, because construction emissions are generally short in duration compared to the project's overall lifetime, and thus can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail large quantities of cut and fill that could result in construction-related GHG emissions that may be considered significant. Thus, the City retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require more detailed quantitative CEQA GHG emissions analysis and respective mitigation.

This CEQA GHG Checklist may be periodically updated to incorporate new GHG reduction techniques, to comply with later amendments to the CAP, or to reflect changes in other sustainability-focused local, State, or federal laws, regulations, ordinances, and programs. At a minimum, this CEQA GHG Checklist will be updated as needed to be consistent with CAP update timing.

APPLICATION SUBMITTAL REQUIREMENTS

The CEQA GHG Checklist is required to accompany the City's Environmental Determination Application Checklist, whether supported by private or government (local of State) funding, proposed within the City limits. The CEQA GHG Checklist is designed to assist the applicant in identifying the minimum CAP and other applicable sustainability-focused requirements specific to a proposed project or plan. However, it may be necessary to supplement the completed CEQA GHG Checklist with supporting materials, calculations, or certifications to demonstrate compliance with CAP and other applicable sustainability-focused requirements. If the minimum CAP and other applicable sustainability-focused requirements are not already clearly committed to as part of the CEQA project description, the completed CEQA GHG Checklist will be included in the respective project or plan conditions of approval.

GENERAL PROJECT INFORMATION

Contact Information:	
Project or Plan Name: 1100 El Camino Real Project	
Address:	
Applicant Name and Co.:	
Contact Phone:	**Contact Email:**
Was a consultant retained to complete this checklist? Yes☒ No☐ If Yes, complete the following:	
Consultant Name: Company Name:	Contact Phone: Contact Email:
Project Information	
What is the size of the project site or plan area (acres)? **Gross: __________________________** **Net: ____________________________**	
Identify all applicable proposed land uses: ☐ Residential (indicate # of single-family dwelling units): ____ ☐ Residential (indicate # of multi-family dwelling units): ____ ☐ Commercial (indicate total square footage, gross and net): ____ ☐ Municipal (indicate total square footage, gross and net): ____ ☐ Other (describe): ____	
Project description. This description should be consistent with the project description that will be used for the CEQA document. The description may be attached to the GHG Checklist if there are space constraints.	

COMPLIANCE CHECKLIST TABLE

Section 1: LAND USE CONSISTENCY			
Regulation	**Requirements**	**Project/Plan Compliance**	**Required Explanation [2]**
General Plan	1a. Does the project include a land use and/or zoning amendment? If “No”, proceed to Section 2 – CAP Measures Consistency. If “Yes”, proceed to question 1b.	Yes☒ No☐ N/A☐	The project is consistent with general plan land use designations and does not require a land use or zoning amendment.
General Plan	1b. Does the land use and/or zoning amendment result in an equivalent or less GHG-intensive project when compared to the existing conditions? If “No”, the applicant must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to BAAQMD GHG emissions thresholds or other GHG emissions thresholds determined appropriate by the City and incorporation of the CAP measures in this CEQA GHG Checklist to the extent feasible.	Yes☐ No☐ N/A☐	

[2] Every question included in this checklist is required to be answered with explanation of either: 1) how it will be achieved, 2) why it will not be achieved, or 3) why it is not applicable.

Section 2: CAP MEASURES CONSISTENCY			
Regulation	**Requirements**	**Project/Plan Compliance**	**Required Explanation**
Land Use			
Smart Growth			
Climate Action Plan (Measure 23)	2. **All Project Types. Smart Growth.** Will the Project/Plan include infill, transportation-oriented, and/or mixed-use development that meets or exceeds the maximum density allowed under the existing zoning and General Plan land use designation?	Yes☒ No☐ N/A☐	The proposed project involves the development of a high-density apartment complex and future hotel on a 6.7-acre infill site. The proposed project is a transit priority project as defined by PRC Section 21155(b). The proposed project would be served by the ECR SamTrans bus route, which is a high-quality transit corridor that provides service along El Camino Real every 15-minutes on weekdays and stops at the Millbrae BART/Caltrain station, Palo Alto Transit Center, Daly City BART station, and SFO
Green Building Standards			
Climate Action Plan (Measure 2)	3a. **Residential Green Building Ordinance.** Will the Project/Plan include construction and operational commitment to comply with the latest version of CALGreen Code for residential new construction and remodels? (mandatory requirement)	Yes☒ No☐ N/A☐	The proposed apartment complex would comply with the Title 24 CALGREEN requirements by incorporating building materials, fixtures, and landscaping that promote energy efficiency and water conservation.
Climate Action Plan (Measure 1)	3b. **Commercial Green Building Ordinance.** Will the Project/Plan include construction and operational commitment to comply with the latest version of CALGreen Code for commercial new construction and remodels? (mandatory requirement)	Yes☒ No☐ N/A☐	The future hotel would comply with the Title 24 CALGREEN requirements by incorporating building materials, fixtures, and landscaping that promote energy efficiency and water conservation
Climate Action Plan (Measure 19)	3c **Municipal Green Building Policy.** Will the Project/Plan include construction and operational commitment to comply with CALGreen Code and City Reach Codes for building electrification and to achieve LEED Silver or Gold status (or equivalent) for municipal new construction and remodels? (mandatory requirement)	Yes☐ No☐ N/A☒	The project is not a municipal building.

Energy			
Energy Efficiency			
Climate Action Plan (Measure 3)	4a. **Residential Energy Efficiency Incentives and Rebates.** Will the Project/Plan strive to participate in residential energy efficiency programs (including BayREN Home+ program, San Mateo County Energy Watch, and PG&E efficient appliance rebates) and conduct residential energy audits?	Yes☒ No☐ N/A☐	The proposed apartment complex will use Energy Efficient appliances and will seek any available rebates associated with their use.
Climate Action Plan (Measure 4)	4b. **Commercial Energy Efficiency Programs.** Will the Project/Plan strive to participate in commercial energy efficiency programs and demand response programs (including SMC Energy Watch and PG&E appliance rebates, 0% energy efficiency financing, and demand response programs) and conduct commercial energy audits?	Yes☒ No☐ N/A☐	The future hotel will use Energy Efficient appliances and will seek any available rebates associated with their use.
Climate Action Plan (Measure 17)	4c. **Municipal Buildings Energy Efficiency.** Will the Project/Plan strive to participate in San Mateo County Energy Watch, leverage benchmarking to identify opportunities for energy-efficient upgrades and track energy performance, as well as conduct municipal energy audits?	Yes☐ No☐ N/A☒	The project is not a municipal building.
Climate Action Plan (Measure 5)	5a. **Residential Energy Conservation Program.** Will the Project/Plan comply with the most recent residential energy conservation ordinance by meeting minimum energy-efficiency standards upon the sale of the building, if required?	Yes☒ No☐ N/A☐	The project will comply with all local ordinances effective at the time of construction
Climate Action Plan (Measure 6)	5b. **Commercial Energy Conservation Program.** Will the Project/Plan comply with the most recent commercial energy conservation ordinance by meeting minimum energy-efficiency standards upon the sale of the building, if required?	Yes☒ No☐ N/A☐	The project will comply with all local ordinances effective at the time of construction

Climate Action Plan (Measure 14)	6. **<u>All Project Types.</u> Street Lighting.** Will the Project/Plan include efficient street, signal, park, and parking lot lighting?	Yes☒ No☐ N/A☐	All exterior lighting would be compliant with Title 24 CALGREEN requirements.
Climate Action Plan (Measure 15)	7. **Municipal Environmentally Preferred Energy Purchasing Policy.** Will the Project/Plan include Energy Star equipment as part of sustainable purchasing?	Yes☐ No☐ N/A☒	The project is not a municipal building.
Climate Action Plan (Measure 7)	8. **<u>All Project Types.</u> Tree Planting Program.** Will the Project/Plan provide shade trees for buildings with eastern, western, or southern exposures?	Yes☒ No☐ N/A☐	The proposed project would result in a net increase of 335 trees onsite, including trees along the buildings eastern, western, and southern exposures.
	Renewable Energy		
Climate Action Plan (Measure 11)	9a. **Residential & Commercial Participation in Community Choice Aggregation.** Will the Project/Plan strive to retain Peninsula Clean Energy as the energy provider and encourage occupants to opt for the 100% renewable energy option (highly recommended)?	Yes☒ No☐ N/A☐	The proposed project will review Peninsula Clean Energy as a potential energy provider at the time the energy provider is being selected.
Climate Action Plan (Measure 16)	9b. **Municipal Participation in Community Choice Aggregation.** Will the Project/Plan participate in ECO100 (100% renewable) electricity service through PCE for municipal projects (mandatory)?	Yes☐ No☐ N/A☒	The project is not a municipal building.

Climate Action Plan (Measure 10)	10a. **Residential Buildings Solar Requirement.** Will the Project/Plan strive to participate in bulk purchase program such as the Peninsula SunShares Program (voluntary) and include installation of a solar PV system at time of construction for residential new construction and remodels (mandatory)? Please refer to ordinance 783	Yes☒ No☐ N/A☐	The proposed project would comply with the City's Building Code and prepare the proposed apartment complex and future hotel for installation of rooftop solar panels.
Climate Action Plan (Measure 12)	10b. **Commercial Buildings Solar Requirement.** Will the Project/Plan include installation of a solar PV system at time of construction for commercial new construction (mandatory)?	Yes☒ No☐ N/A☐	The proposed project would comply with the City's Building Code and prepare the future hotel for installation of rooftop solar panels.
Climate Action Plan (Measure 18)	10c. **Municipal Buildings Solar Requirement.** Will the Project/Plan include installation of a solar PV system at time of construction for municipal new construction and remodels (mandatory)?	Yes☐ No☐ N/A☒	The project is not a municipal building.
Climate Action Plan (Measure 13)	11. **<u>All Project Types.</u> Pairing Battery Storage with Solar PV Systems.** Will the Project/Plan strive to provide education and outreach regarding the benefits of pairing battery storage with solar PV systems to related businesses, residents, and contractors?	Yes☒ No☐ N/A☐	The proposed project has researched the benefits pairing battery solar with solar PV.
Building Electrification			
Climate Action Plan (Measure 9)	12a. **Residential & Commercial All-Electric Ordinance.** Will the Project/Plan include all-electric residential or commercial new construction and/or remodels, including for electric lighting, heating, cooking, and water heating (mandatory)?	Yes☒ No☐ N/A☐	The Start Year under the CAP is 2021 with multifamily projects entitled within the year of adoption to be exempt. The proposed multi-family residential project is also exempt from the City's all-electric ordinance per the Settlement Agreement but will nonetheless use all electric equipment with the exception of water heating. The future hotel would be required to comply with the City's adopted all-electric ordinance
Climate Action Plan (Measure 8)	12b. **<u>All Project Types.</u> Electrical Panel Upgrades in *Existing* Buildings.** Will the Project/Plan leverage incentives/resources by PCE, BayREN, and PG&E to upgrade *existing* residential and commercial buildings to be all-electric, including solar PV, battery storage, air source heat pumps, heat pump water heaters, electric dryers, electric stoves, and electric vehicles?	Yes☐ No☐ N/A☒	The project includes only new development.

Vehicle Electrification			
Climate Action Plan (Measure 31)	13a. <u>**All Project Types.**</u> **EV Charging Infrastructure in *Existing* Buildings.** Will the Project/Plan leverage incentives from PCE to include charging infrastructure at existing public properties, multi-unit dwellings, and workplaces?	Yes☐ No☐ N/A☒	The project includes only new development.
Climate Action Plan (Measure 32)	13b. <u>**All Project Types.**</u> **EV Charging Infrastructure in New Construction.** Will the Project/Plan comply with the most recent City Reach Code for residential and commercial buildings new construction related to provision of parking spaces designed to accommodate electric vehicle charging equipment and clean air vehicles (EVs, PHEVs) (mandatory)? Refer to ordinance 783	Yes☒ No☐ N/A☐	The proposed apartment complex would equip 17 parking spaces with charging stations for electric vehicles. The future hotel would be subject to the City's applicable requirements at the time of the development entitlement application
Transportation			
Alternative Transportation			
Climate Action Plan (Measure 30)	14. <u>**All Project Types**</u>. **Shuttle Program.** If not proximate to transit hubs or lines, will the Project/Plan connect to transit via shuttle service as requested by the City?	Yes☒ No☐ N/A☐	The project site is adjacent to the El Camino Real corridor, which is a high-quality transit corridor as the SamTrans ECR bus route provides bus transit service along the El Camino Real corridor arrives every 15 minutes during weekdays. Therefore, shuttle service would not be required.
Climate Action Plan (Measure 28)	15a. <u>**All Project Types.**</u> **Bike Sharing.** Will the Project/Plan accommodate shared bike service as requested by the City?	Yes☒ No☐ N/A☐	As part of the proposed project's transportation demand management plan, the project will provide 10 shared use bikes for residents. Information packets will also be provided to residents including additional information the bike share program.
Climate Action Plan (Measure 33)	15b. <u>**All Project Types.**</u> **Shared Electric Bikes and Scooters.** Will the Project/Plan modify existing infrastructure to accommodate shared electric bikes and scooters via provision of dedicated off-street parking spaces and on-street corrals as requested bv the City?	Yes☒ No☐ N/A☐	As requested by the City, the project has widened the existing public sidewalk and designed several public use areas along the new Entry Drive and Center Street that can accommodate shared bikes and scooters.

Active Transportation			
Climate Action Plan (Measure 24)	16a. **<u>All Project Types.</u> Walkable/Bikeable Street Landscape.** Will the Project/Plan design the urban landscape to make walking and biking more desirable, including via provision of bike lanes, bike parking, traffic calming, beautification, etc.?	Yes☒ No☐ N/A☐	The proposed project would exceed the requirements of Section 10.05.2120 of the Millbrae Municipal Code and provide 60 long-term and 12 short-term bicycle parking spaces for residents and visitors for a total of 72 bicycle parking spaces. Long-term bicycle parking spaces would be provided in two dedicated storage rooms located on the ground floor and first level of the parking garage, and bicycle racks would be provided along Center Street for short-term parking. The ground floor of the apartment complex would also include a bike station for maintenance and repairs. The future hotel component would also be subject to the requirements of Section 10.05.2120 of the Millbrae Municipal Code and required to provide at least 19 bicycle parking spaces (10 percent of vehicle parking provided) for future hotel guests
Climate Action Plan (Measure 25)	16b. **<u>All Project Types.</u> Safe Routes to School.** Will the Project/Plan establish bike trails and safe pedestrian routes to local schools (infrastructure)?	Yes☒ No☐ N/A☐	The proposed project includes several improvements along Center Street including sidewalk connections and crosswalks that will improve the safety of pedestrian routes through the project area.
Commuting & Vehicle Sharing			
Climate Action Plan (Measure 35)	17a. **Municipal Employee Commuting Program.** Will the Project/Plan promote and incentivize public transportation, carpooling, biking, etc. for municipal new construction and remodels?	Yes☐ No☐ N/A☒	The project is not a municipal building.
Climate Action Plan (Measure 29)	17b. **<u>All Project Types</u>. Car Sharing.** Will the Project/Plan open a car sharing station or provide car sharing parking as requested by the City?	Yes☒ No☐ N/A☐	The proposed project includes a new entry drive isle connecting El Camino Real and Center Street. Along this entry drive isle, the project has also planned several parking spaces that can be used for car sharing parking.

Waste			
Materials Recycling & Composting			
Climate Action Plan (Measure 37)	18a. **Residential & Commercial Landfill Diversion Rate Goal.** Will the Project/Plan meet current legislation to recycle, and increase participation in recycling programs and weekly collection of recyclables and organic waste to achieve 85 percent diversion from landfill (mandatory)?	Yes☒ No☐ N/A☐	The proposed project would include onsite recycling, which would comply with federal, state, and local statutes, including the City's Recycling and Waste Prevention Program.
Climate Action Plan (Measure 39)	18b. **Commercial Organics Recycling Ordinance.** Will the Project/Plan require that all businesses and multi-family complexes with more than five units to sort and recycle organic material in order to comply with AB 1826 (mandatory)?	Yes☒ No☐ N/A☐	The proposed project would provide recycling and green waste services as required by state and local objectives to reduce solid waste.
Climate Action Plan (Measure 42)	18c. **Municipal Zero Waste Policy.** Will the Project/Plan implement on-site methods to achieve 95 percent waste diversion from landfills?	Yes☐ No☐ N/A☒	The project is not a municipal building.
Green Materials			
Climate Action Plan (Measure 40)	19a. **Municipal Environmentally Preferred Purchasing Policy**. Will the Project/Plan implement sustainable purchasing policy to reduce energy and waste, conserve water, and increase recycling?	Yes☐ No☐ N/A☒	The project is not a municipal building.
Climate Action Plan (Measure 38)	19b. **<u>All Project Types.</u> Sustainable Food Service Ware.** Will the Project/Plan comply with the most recent Sustainable Food Service Ware ordinance to require that all food ware is compostable and to reduce the use of other single-use items in food services (mandatory)?	Yes☒ No☐ N/A☐	The project will comply with all local ordinances
Climate Action Plan (Measure 41)	19c. **Municipal Sustainable Vendor Policy for Events.** Will the Project/Plan include a plan to work with event organizers for recycling cardboard, paper, containers and food/organics at public events, and for using	Yes☐ No☐ N/A☒	The project is not a municipal building.

	compostable/recyclable food service ware (mandatory)?		
Water			
Water Use Efficiency			
Climate Action Plan (Measure 5)	20a. **Residential** **Energy/Water Conservation Program.** Will the Project/Plan meet minimum water-efficiency standards (mandatory)?	Yes☒ No☐ N/A☐	The project will comply with all local ordinances and efficiency standards effective at the time of construction
Climate Action Plan (Measure 6)	20b. **Commercial** **Energy/Water Conservation Program.** Will the Project/Plan meet minimum water-efficiency standards (mandatory)?	Yes☒ No☐ N/A☐	The project will comply with all local ordinances and efficiency standards effective at the time of construction
Climate Action Plan (Measure 20)	21a. **All Project Types. Water Conservation Incentives.** Will the Project/Plan strive to install and maintain water-efficient appliances and fixtures?	Yes☒ No☐ N/A☐	The proposed project would incorporate appliances and fixtures that promote water conservation.
Climate Action Plan (Measure 21)	21b. **All Project Types. Water Efficient Landscape Ordinance and Indoor Water Efficiency Requirements.** Will the Project/Plan implement the State Model Water Efficient Landscape Ordinance (MWELO) and CALGreen indoor water efficiency requirements (mandatory)?	Yes☒ No☐ N/A☐	The proposed project would provide 53,010 square feet of new landscaping. The new landscape plantings would consist of drought-resistant shrubs and shade trees in accordance with the City's Model Water Efficient Landscape Ordinance
Water Recycling			
Climate Action Plan (Measure 22)	22. **All Project Types. "Graywater Ready".** Will the Project/Plan strive to include development that is built "graywater ready" for new construction?	Yes☒ No☐ N/A☐	The proposed project would include a stub out to provide future connection to the City's graywater system when available, for use for outdoor landscaping. The proposed buildings would connect to the City's municipal sewer system
Overall Sustainability			
Green Businesses			

Climate Action Plan (Measure 43)	23. **Commercial & Municipal Green Business Program.** Will the Project/Plan strive to be a certified Bay Area Green Business and implement respective sustainable practices?	Yes ☒ No ☐ N/A ☐	The future hotel will review the respective sustainable practices that are applicable during at that time.

The proposed project would include a stub out to provide future connection to the City's graywater system when available, for use for outdoor landscaping. The proposed buildings would connect to the City's municipal sewer system