City of Palo Alto 1700 Embarcadero Road Auto Dealership Project

Final Initial Study – Mitigated Negative Declaration



Environmental Scientists

May 2016

Planners

Engineers

1700 Embarcadero Road Auto Dealership Project

Final Initial Study – Mitigated Negative Declaration

Prepared by:

City of Palo Alto

250 Hamilton Avenue Palo Alto, California 94301 Contact: Jodie Gerhardt, Current Planning Manager (650) 329-2575

Prepared with the assistance of:

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

May 2016

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Final Initial Study-Mitigated Negative Declaration Table of Contents

Initial Stud	lv	1
1.	Project Title	1
2.	Lead Agency Name and Address	1
3.	Contact Person and Phone Number	1
4.	Project Location	1
5.	Project Sponsor Name and Address	1
6.	Comprehensive Plan Designation	1
7.	Zoning	4
9.	Description of Project	4
10.	Surrounding Land Uses and Setting	12
11.	Other Public Agencies Whose Approval is Required	12
Environ	mental Factors Potentially Affected	17
Determi	nation	18
Environ	mental Checklist	19
I.	Aesthetics	19
II.	Agriculture and Forest Resources	24
III.	Air Quality	25
IV.	Biological Resources	32
V.	Cultural Resources	36
VI.	Geology and Soils	37
VII.	Greenhouse Gas Emissions	41
VIII	. Hazards and Hazardous Materials	45
IX.	Hydrology and Water Quality	50
Х.	Land Use and Planning	55
XI.	Mineral Resources	58
XII.	Noise	59
XIII.	. Population and Housing	65
XIV	. Public Services	66
XV.	Recreation	68
XVI	. Transportation/Traffic	69
XVI	I. Utilities and Service Systems	78
XVI	II. Mandatory Findings of Significance	82
Reference	ces	84
Biblio	graphy	84
Person	ns Contacted	86

List of Figures

Figure 1	Regional Location	2
Figure 2	Project Site Location	3
Figure 3	Proposed Site Plan	6
Figure 4a	Proposed Building Elevations	7

Figure 4b	Proposed Building Elevations	9
Figure 5	Site Photos	.13
Figure 6a	Photographs of Adjacent Land Uses	.14
Figure 6b	Photographs of Adjacent Land Uses	. 15
Figure 7	Photographs of Baylands Nature Preserve	.16
Figure 8	Visual Simulation of Proposed Project from the Baylands Nature Preserve	. 21

List of Tables

Table 1	Project Characteristics	5
Table III-1	Health Effects Associated with Non-Attainment Criteria Pollutants	26
Table III-2	Thresholds of Significance for Air Pollutants and Precursors	28
Table III-3	Estimated Construction Average Daily Air Pollutant Emissions	30
Table III-4	Estimated Project Operational Emissions	30
Table VII-1	Existing Annual GHG Emissions	43
Table VII-2	Estimated Construction-Related GHG Emissions	43
Table VII-3	Proposed Project Annual GHG Emissions	44
Table XII-1	Palo Alto Land Use Compatibility for Community Noise Environments	61
Table XII-2	Vibration Source Levels for Construction Equipment	63
Table XII-3	Construction Equipment Noise Emission Levels	64
Table XVI-1	Project Trip Generation Estimates	71
Table XVI-2	Existing Intersection Level of Service Summary	72
Table XVI-3	Background Intersection Level of Service Summary	72
Table XVI-4	Cumulative (2020) Intersection Level of Service Summary	72
Table XVI-5	Transit Vehicle Delay	77
Table XVII-1	Estimated Wastewater Generation	79
Table XVII-2	City of Palo Alto Supply/Demand Balance (AFY)	80
Table XVII-3	Estimated Solid Waste Generation	81

Appendices

- Appendix A Air Quality and Greenhouse Gas Modeling Results
- Appendix B Historic Resource Evaluation
- Appendix C Geotechnical Investigation
- Appendix D Phase I Environmental Site Assessment
- Appendix E Project Traffic Impact Analysis and May 2016 Supplemental Traffic Memorandum
- Appendix F Mitigation Monitoring and Reporting Program
- Appendix G Response to Comments on the Draft IS-MND

INITIAL STUDY

This document is the Final Initial Study – Mitigated Negative Declaration (IS-MND) for the 1700 Embarcadero Road Auto Dealership Project. The Draft IS-MND circulated for a public review period that began on April 22, 2016, and concluded on May 12, 2016. Responses to comments on the Draft IS-MND are shown in Appendix G. In certain instances the text of the Final IS-MND has been modified in response to comments received. None of the changes made identify new significant impacts or significant impacts of increased severity as compared to what was identified in the Draft IS-MND. Changes made in the Final IS-MND are shown in strikethrough for deleted text and <u>underline</u> for added text.

1.	Project Title:	1700 Embarcadero Road Auto Dealership Project
2.	Lead Agency Name and Address:	City of Palo Alto 250 Hamilton Avenue Palo Alto, California 94301
3.	Contact Person and Phone Number:	Jodie Gerhardt, Current Planning Manager, (650) 329-2575
4.	Project Location:	The project site is located at 1700 Embarcadero Road (APN 008- 03-084), which is on the southeast corner of Embarcadero Road and East Bayshore Road in the northeastern portion of the City of Palo Alto in Santa Clara County. The project site encompasses 110,642 square feet (2.54 acres). Figure 1 shows the site's regional location and Figure 2 shows the location in its immediate context.
5.	Project Sponsor Name and Address:	Deeg Snyder, Gensler 5420 LBJ Freeway Suite 1100 Dallas TX, 75240

6. Comprehensive Plan Designation

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

In addition, the Comprehensive Plan identifies the site within the East Bayshore Employment District. According to the Comprehensive Plan Land Use and Community Design Element, Employment Districts are relatively large areas of the City dominated by low-rise office, high technology, light industrial and other job-generating land uses but containing relatively few retail and service uses. The broad land use goal for these areas is to impart a stronger sense of community to those who work or live here and to strengthen the connections between these areas and the rest of the City. Other goals are to improve bicycle and pedestrian circulation, expand the provision of services, and improve visual quality.

1700 Embarcadero Road Auto Dealership Project Initial Study – Mitigated Negative Declaration



Regional Location



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7. Zoning

Service Commercial (CS) District. As described in the Palo Alto Municipal Code (PAMC) in Chapter 18.16, the CS District is intended to create and maintain areas accommodating citywide and regional services that may be inappropriate in neighborhood or pedestrian-oriented shopping areas, and which generally require automotive access for customer convenience, servicing of vehicles or equipment, loading or unloading, or parking of commercial service vehicles.

Site and Design (D) Review Combining District. The property is within the Site and Design Review (D) combining district and adjacent to the Baylands, which requires heightened review due to the sensitive environment. The site and design review combining district is intended to provide a process for review and approval of development in environmentally and ecologically sensitive areas, including established community areas which may be sensitive to negative aesthetic factors, excessive noise, increased traffic or other disruptions, in order to assure that use and development will be harmonious with other uses in the general vicinity, will be compatible with environmental and ecological objectives, and will be in accord with the Palo Alto Comprehensive Plan.

8. Other Applicable Policy Documents

Additionally, the site is included within the City's Baylands Master Plan. They Baylands Master Plan, originally adopted in 1978 and last updated in 2008, includes the history, environmental setting, and adopted planning goals and policies for the Baylands area. The project site is located within the area called "Privately Owned Lands" within the Master Plan. Privately-owned lands in the Baylands area consist of approximately 90 acres of industrial research, office, and commercial uses concentrated along Embarcadero Road and East Bayshore Frontage Road. The Privately Owned Lands chapter of the Master Plan (chapter 13) describes this area and provides private lands policies. Activities in this area must comply with the policies contained in this element and with policies stated in the "Overall," "Flood Control," and "Access and Circulation" chapters of the Master Plan.

9. Description of Project

The proposed project would involve demolition of an existing 17,942-square foot single-story commercial building built in 1968 (formerly Ming's Chinese Cuisine and Bar, now vacant) and construction and operation of a new three-story, approximately 61,510 square-foot auto dealership with roof deck parking. The building would integrate sales and administrative offices, customer parking, vehicle merchandise storage, and vehicle service/repair areas on multiple floors. The first floor would include the showroom, sales offices, and vehicle service/repair area. The second floor would include additional offices, an employee break room/training area, and parking. The third floor would include locker rooms, a vehicle service/repair areas, parts and tools storage areas, and parking. The rooftop would include additional parking.

Other on-site features would include a detached car wash facility, customer parking, vehicle merchandise display, solid waste/recycling facilities, and landscaping. The site includes an

approximate 80-foot wide easement to accommodate overhead high voltage electric transmission lines parallel to East Bayshore Road, and a sub-surface storm drain line. Surface improvements such as landscaping, driveways and parking, are allowed within the easement. The proposed project would preserve the electric tower currently located at the northwestern corner of the project site. The proposed auto dealership building would be sited to provide an approximately 47-foot front setback (Embarcadero Road), a 60-foot rear setback (and five feet for the detached vehicle carwash building), a 56-foot interior (east) side setback, and an 80-foot street (west) side setback (East Bayshore Road) accommodating the utility easement.

The applicant is requesting a zoning change to add the Auto Dealership Combining (AD) District Overlay to the project site, and a Design Enhancement Exception (DEE) to deviate from the "build-to-line" requirement.

Table 1 summarizes the characteristics of the proposed project. Figure 3 shows the proposed site plan and Figure 4a-b shows the proposed building elevations.

Project Characteristics				
	Existing Use	Proposed Project		
Assessor's Parcel No.		008-03-084		
Project Site Size	110,6	642 sf (2.54 acres)		
Building Floor Area	17,942 sf 61,510 sf			
Parking Spaces	king Spaces Approximately 200 Site/Ground Floor: 1 King Spaces Approximately 200 Third Floor: 30 Roof: 80 Total Provided			
Floor Area Ratio (FAR) 0.137:1		0.555:1		
Building Height	Restaurant: One Story	Auto Dealership Building: Three Stories, 50 Feet Max Height Detached Carwash: One Story, 20 Feet Max Height		

Table 1Project Characteristics

Parking and Site Access

The proposed project would include a total of 219 parking spaces, 43 of which would be surface parking spaces. An additional 66 spaces would be provided on the second floor, 30 on the third floor, and 80 parking spaces on the roof deck. Internally, four elevators would carry vehicles through floors one through three and vehicular ramps would allow access to the rooftop deck parking area.

Vehicular access would be provided from an existing driveway on Embarcadero Road and an existing driveway on East Bayshore Road. Inbound and outbound movements would be allowed at both access points and would be controlled by stop-signs. Pedestrians would access the proposed auto dealership building from the west or south side.





SOUTH ELEVATION SCALE: 1/16" = 1'-0" 2

Proposed Building Elevations

Figure 4a City of Palo Alto



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Mercedes-Benz of Palo Alto

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 FINISH FLOOR ELEVATION

 10.68'

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SCALE: 1/16" = 1'-0"

4

WEST ELEVATION

Η

(8)

(9)

- 19

20

- 11 (12)



(13

Proposed Building Elevations



Landscaping

According to an Arborist Report prepared by Skender Construction (August 3, 2015), there are a total of 63 existing trees within the project site. Of the 63 trees, 36 would be preserved during construction period. The 36 trees to be preserved include Chinese Elm, Loquat, Privot, Blue Gum Eucalyptus, and Iron Bark Eucalyptus. The trees to be removed include Chinese Elm and Iron Bark Eucalyptus.

New trees would be planted on the project site, including two Flax Leaf PaperBark street trees on Embarcadero Road, four Crape Myrtle and Purple Leaf Plum trees, 12 London Plane trees, seven Marina Arbutus, and seven Canary Island Pine and Bradford Pear trees.

Additional landscaping would include foundation shrubs and perennials (Manzanita Hybrids, Dwarf Bottlebrush, Fortnight Lily, Silverberry, Pineapple Guava, Yaupon, Angelwing Jasmine, Juniper, Glossy Privet, Red Fringe Flower, India Hawthorn, and White Shrub Rose), groundcovers (Prostate Cotoneaster, Creeping Mahonia, Prostrate Juniper, and Green Lavender Cotton), bio-swale groundcover (California Meadow Sedge), and ornamental grasses (Feathered Reed Grass, Cape Rush, California Fescue, Blue Oat Grass, Red Fountain Grass, Dwarf Fountain Grass, and Deep Grass).

Utilities

The City of Palo Alto Utilities department (CPAU) provides electric, natural gas, refuse, recycled water, storm drain, wastewater collection, treatment and disposal. Water would be provided by the San Francisco Public Utilities Commission (SFPUC). Police and fire protection services would be provided by the City of Palo Alto.

Construction and Grading

Development of the proposed project is expected to occur over approximately 14 months. The total amount of soil that would be imported is between 3,500 cubic yards (CY) and 5,000 depending on what can be used from the site utility excavation.

Green Building Features

In addition to State building code requirements, the City of Palo Alto has adopted more stringent green building regulations. For non-residential projects, the City has adopted CALGreen Tier 1 for tenant improvements and renovations and CALGreen Tier 2 for new construction. In accordance with the City's Green Building Ordinance, the proposed project would satisfy requirements for CALGreen Tier 2.

The proposed building would include insulated metal panel, high efficiency glass with protective bird coatings, insulation of mechanical heating and cooling, as well as passive ventilation strategies to maximize the building's energy performance.

The carwash structure would include a recycled water recapture system.

10. Surrounding Land Uses and Setting

The relatively flat, generally square project site is currently developed with a 17,942 square-foot single-story commercial restaurant building (formerly Ming's Chinese Cuisine and Bar, now vacant) and surface parking areas with non-native landscape trees and a decorative pond on the corner of East Bayshore Road and Embarcadero Road. The existing building is located in the northerly portion of the site. Surface parking can be found on all sides of the building. The site includes an approximately 80-foot wide easement to accommodate overhead high voltage electric transmission lines at the northwest corner of the site parallel to East Bayshore Road, and a sub-surface storm drain line. Figure 5 shows photos of the existing site.

The project site is located in northeastern Palo Alto in a neighborhood characterized by office park and commercial uses. A Palo Alto Embarcadero Shuttle (line E) and Stanford University Marguerite shuttle line TECH stop is located at the northeast corner of the project site on Embarcadero Road. The site is bordered by Embarcadero Road to the north, East Bayshore Road to the west, professional offices to the south, and an Audi automobile dealership to the east. The Audi dealership is currently being remodeled and will include a new 7,380 square foot showroom, 1,036 square foot service area, and a 3,139 square foot covered drop-off area. Across the street on Embarcadero Road are professional offices and to the west across the street on East Bayshore Road are medical offices. Figure 6a-b shows photos of the surrounding uses.

The Baylands Nature Preserve ("Baylands") is located approximately 250 feet from the southeast corner of the project site. Bounded by Mountain View and East Palo Alto, the 1,940-acre Baylands is one of the largest tracts of undisturbed marshland remaining in the San Francisco Bay (City of Palo Alto, 2016). Fifteen miles of multi-use trails provide access to a unique mixture of tidal and fresh water habitats (City of Palo Alto, 2016). The project site is included within the City's Baylands Master Plan and located within the "Privately Owned Lands." Figure 7 shows photos of the Baylands near the project site.

11. Other Public Agencies Whose Approval is Required

The proposed project would require the following discretionary approvals by the City of Palo Alto. No other public agency discretionary approvals are required.

- Site and Design Review, per Palo Alto Municipal Code (PAMC) Section 18.30 (G);
- A Zone Change, per PAMC Section 18.80.030, to apply the Auto Dealership Combining (AD) District, to allow the proposed use, additional FAR and other development standards for auto dealerships;
- Architectural Review, per PAMC Section 18.76.020; and
- A Design Enhancement Exception, per PAMC Section 18.76.050, for the proposed deviation from the "build-to" line (percentage of building along the front setback) requirement within CS district.



Photo 1: Front of project site from Embarcadero Road looking south



Photo 2: Western side of project site from East Bayshore Road looking east

Site Photographs



Photo 1: New Audi Dealership building east of project site



Photo 2: Office building across Embarcadero Road north of project site

Photographs of Adjacent Land Uses



Photo 1: Office building across East Bayshore Road west of project site



Photo 2: Office building south of project site

Photographs of Adjacent Land Uses





Photo 1: View looking north from the Renzel Trail southeast of the project site



Photo 2: View of Baylands Nature Preserve near the project site from Renzel Trail

Photographs of the Baylands Nature Preserve

Figure 7

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is "Potentially Significant" or "Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

Aesthetics	Agriculture and Forest Resources	Air Quality
Biological Resources	Cultural Resources	Geology/Soils
Greenhouse Gas Emissions	Hazards & Hazardous Materials	Hydrology/Water Quality
Land Use/Planning	Mineral Resources	Noise
Population/Housing	Public Services	Recreation
Transportation/Traffic	Utilities/Service Systems	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

- □ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- □ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- □ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

4/20/16 Date

ENVIRONMENTAL CHECKLIST

The City of Palo Alto has adopted CEQA thresholds that augment the thresholds contained in the *State CEQA Guidelines* Appendix G checklist. The following checklist is based on the City's thresholds as well as the Appendix G checklist. This checklist has been formulated by the City to determine the potential for the project to result in significant environmental effects.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
I.	AESTHETICS				
	Would the Project:				
a)	Have a substantial adverse effect on a scenic vista?			-	
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			•	
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?			-	
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				

a) *LESS THAN SIGNIFICANT IMPACT*. The project site is located in a fully urbanized area of Palo Alto that is developed primarily with commercial land uses near the Baylands and adjacent to properties that are tangent to the Baylands. The project site and its surrounding areas are currently developed with structures, surface parking, power lines, and mature trees and other landscaping. The topography of the area is generally flat. Building heights in the immediate vicinity range from one to three stories and are a mix of architectural styles that are consistent with the Baylands Design Guidelines. The project site is currently developed with a one-story commercial restaurant building and surface parking. The proposed project would involve the construction of two new buildings, one three-story auto dealership building and a one-story detached carwash.

The City of Palo Alto's CEQA thresholds state that a proposed project would have a significant impact if it would "have a substantial adverse effect on a public view or view corridor" or if the proposed project would violate existing Comprehensive Plan policies regarding visual resources. According to Policy Program L-71 from the Land Use and Design Chapter of the City of Palo Alto Comprehensive Plan, roads with high scenic value are Sand Hill Road, University Avenue, Embarcadero Road, Page Mill Road, Oregon Expressway, Interstate 280, Arastradero Road (west of Foothill Expressway), Junipero Serra Boulevard/Foothill Expressway, and Skyline Boulevard. These roads are to be maintained as local scenic routes. The project site is on

Embarcadero Road which, past (northeast of) the project site, afford scenic views of the Palo Alto Golf Course and ultimately of the Baylands, the south bay and the hills of the East Bay. None of these scenic views are currently available through the project site. Views to the Baylands from Embarcadero Road adjacent to the site are already blocked by existing development and mature trees. Given this, the project would not block views of the Baylands, bay or distant hills. Therefore, the proposed project would not have a substantial adverse effect on identified scenic views or vistas or on a public view or view corridor.

b) *LESS THAN SIGNIFICANT IMPACT*. There are no rock outcroppings or historic buildings on the site; however, there are 63 trees on the site. Of these, 27 (Chinese Elm and Iron Bark Eucalyptus) would be removed. Although they have value as visual resources, these trees are not considered protected trees by the City of Palo Alto Tree Protection Ordinance, and the proposed project would involve planting additional street trees on both East Bayshore Road and Embarcadero Road to replace the trees to be removed. The most prominent trees visible from and along Embarcadero and East Bayshore roads would be retained, including the two large elm trees on Embarcadero at the site's main frontage. Impacts to scenic resources would be less than significant.

c) LESS THAN SIGNIFICANT IMPACT. The visual character of the area surrounding the project site includes one- to three-story office park and commercial development. The Palo Alto Golf Course is approximately 600 feet east of the project site. The proposed project involves the construction of a new three-story auto dealership building and a detached one-story carwash as well as surface parking and landscaping. The proposed project would increase the massing and intensity of development on the project site (see Figure 4). As such, the proposed project would represent a change in the visual character of the site. However, the existing visual character and quality of the site, characterized by a one-story commercial building, surface parking and landscaping, are considered low to moderate. Figure 8 shows a visual simulation of the proposed project from the Renzel Trail within the Baylands Nature Preserve. This trail is part of the larger San Francisco Bay Trail and connects to Embarcadero Road via an additional planned segment on Faber Place. As shown, the proposed project appears be generally consistent with the size and scale of the adjacent two-story office building bordering the project site to the south and two-story auto dealership located to the east. In addition, the proposed project would be consistent with the FAR and height allowances for the CS(AD) zone in accordance with the Palo Alto Municipal Code (PAMC) (see Section X, Land Use and Planning). The project site is visible from portions of other nearby trails and bike routes such as the freeway overcrossing portion of the St. Francis Drive-Embarcadero Road Crossing-Baylands connector trail and the segment of the Geng Road bike lane adjacent to the Geng Road/Embarcadero Road intersection. However, the existing views of urban development from these limited segments would not change substantially with the project's redevelopment of the site with an incrementally larger building.

Assuming the Design Enhancement Exemption is granted (see Section X, *Land Use and Planning*, for further explanation) the proposed structure would be set back approximately 40feet from Embarcadero Road. This is a greater setback than the existing building on site. Though the height of the on-site structures would increase from one to three stories, the setback would retain some of the elements of the existing visual character – such as surface parking and landscaping, including trees, fronting Embarcadero Road - and by locating the building with





Visual Simulation of Proposed Project from the Baylands Nature Preserve

Source: Company, Date

Figure 8 *City of Palo Alto*

increased setback would help reduce the perceived scale of the building from Embarcadero Road and East Bayshore Road.

As mentioned above in subsection (b), the proposed project would increase the number of street trees and planted trees on the project site and would involve additional landscaping, which would soften the appearance of the new larger building.

The project components require Major Architectural Review under PAMC Section 18.76.020. Therefore, it would be subject to review by the City's Architectural Review Board. The purposes of the City's architectural review process are to:

- Promote orderly and harmonious development in the city;
- Enhance the desirability of residence or investment in the city;
- Encourage the attainment of the most desirable use of land and improvements;
- Enhance the desirability of living conditions upon the immediate site or in adjacent areas; and
- Promote visual environments which are of high aesthetic quality and variety and which, at the same time, are considerate of each other.

This process helps ensure that approved projects are consistent with the City's adopted goals, policies and guidelines related to architectural and site design.

The project site is also within the Site and Design Review combining district. Therefore, it would be subject to review by the City's Planning and Transportation Commission. The purpose of this process is to provide a process for review and approval of development in environmentally and ecologically sensitive areas, including established community areas which may be sensitive to negative aesthetic factors, in order to assure that use and development will be harmonious with other uses in the general vicinity and will be in accord with the Palo Alto Comprehensive Plan.

Based on the discussion above and with the required Major Architectural Review and Site and Design Review and approval, the proposed auto dealership building and carwash structure would not significantly degrade the existing visual character or quality of the site and its surroundings. Impacts related to visual character and quality would be less than significant.

d) *LESS THAN SIGNIFICANT IMPACT*. The project site is in an urbanized area with relatively high levels of existing lighting. The existing lighting on the site and adjacent commercial and roadway uses generate light and glare along all sides of the property. Primary sources of existing light at the project site and adjacent to the project site include lighting associated with the existing commercial buildings including building mounted lighting, parking lot lighting and headlights from vehicles on nearby streets. The primary source of glare adjacent to the project site is the sun's reflection from metallic and glass surfaces on buildings and on vehicles parked on adjacent streets and in adjacent parking areas.

The proposed project would incorporate exterior lighting in the form of pedestrian walkway lighting, parking lot lighting, and other safety related lighting. Additionally, interior lighting would be visible through the proposed building's windows. Although auto dealership lighting typically has a higher intensity than a typical commercial use, these light sources would not

have a significant impact on the night sky, as they would only incrementally add to the existing background light levels already present as a result of the surrounding street lighting and urban development. In addition, the proposed project would be required to adhere to the standards in PAMC Section 18.23.030, which requires exterior lighting in parking areas, pathways, and common open space to "be designed to achieve the following: (1) provide for safe and secure access on the site, (2) achieve maximum energy efficiency, and (3) reduce impacts or visual intrusions on abutting or nearby properties from spillover and architectural lighting that projects upward." According to the proposed project's photometric plan, lighting associated with the proposed project would be directed towards the site. Minimal light spillover would occur on adjacent uses to the east and south. Lighting impacts would be less than significant.

According to the City's CEQA thresholds, a significant impact would also occur if the proposed project would "substantially shadow public space (other than public streets and adjacent sidewalks) between 9:00 AM and 3:00 PM from September 21 to March 21." The proposed auto dealership structure is three stories high in height; therefore, it may cast shadows in the immediate area. Additionally, the detached carwash structure would be approximately 20 feet high. However, surrounding structures are similar in height (two to four stories) to the proposed structures. There are no public open space areas (besides public streets and sidewalks) adjacent to the project site. Other shadow-sensitive uses include nurseries, outdoor-oriented retail uses (e.g., certain restaurants), or routinely useable outdoor spaces associated with recreational, institutional, or residential land uses. These uses are considered sensitive because sunlight is important to their function, physical comfort, and/or commerce. There are no shadow-sensitive uses surrounding the project site. Impacts would be less than significant.

	Potentially Significant		
Potentially Significant Impact	Unless Mitigation Incorporated	Less than Significant Impact	No Impact

II. AGRICULTURE AND FOREST RESOURCES

-- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project: and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. -- Would the project:

- a) Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?
- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- Result in the loss of forest land or conversion of forest land to non-forest use?
- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?



a-e) *NO IMPACT*. The Land Use and Design Chapter of the City's Comprehensive Plan show the various farmland types throughout the City. The project site is not identified as any farmland type or enrolled in Williamson Act contracts, or support forest land or resources. The project site is not located on or adjacent to agricultural land or forest land and the proposed project would not involve any development that could result in the conversion of farmland to non-agricultural uses. For these reasons, the project would have no impact with respect to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use; conflict with existing agricultural zoning or Williamson Act contracts; result in the loss of forest land or conversion of forest land to non-forest use; or other conversion of farmland to non-agricultural use.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
III.	AIR QUALITY				
	Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?			•	
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			•	
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			■	
d)	Expose sensitive receptors to substantial pollutant concentrations?			•	
e)	Create objectionable odors affecting a substantial number of people?				

Air Quality Standards and Attainment

The project site is located within the San Francisco Bay Area Air Basin (the Basin), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). As the local air quality management agency, the BAAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether or not the standards are met or exceeded, the Basin is classified as being in "attainment" or "non-attainment." Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in noncompliance. The BAAQMD is in non-attainment for the state and federal ozone standards, the state and federal $PM_{2.5}$ (particulate matter up to 2.5 microns¹ in size) standards and the state PM_{10} (particulate matter up to 10 microns in size) standards and is required to prepare a plan for improvement (BAAQMD, "Air Quality Standards and Attainment Status" webpage, accessed July 2015). The health effects associated with criteria pollutants for which the Basin is in non-attainment are described in Table III-1.

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM ₁₀)	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma). ^a
Suspended particulate matter (PM _{2.5})	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma. ^a

Table III-1 Health Effects Associated with Non-Attainment Criteria Pollutants

Source: U.S. EPA, http://www.epa.gov/airquality/urbanair/, accessed November 21, 2014. ^a More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: EPA, Air Quality Criteria for Particulate Matter, October 2004.

Air Quality Management

The Bay Area 2010 Clean Air Plan (CAP) provides a plan to improve Bay Area air quality and protect public health. The legal impetus for the CAP is to update the most recent ozone plan, the Bay Area 2005 Ozone Strategy, to comply with state air quality planning requirements as codified in the California Health & Safety Code. Although steady progress in reducing ozone levels in the Bay Area has been made, the region continues to be designated as non-attainment for both the one-hour and eight-hour state ozone standards as noted previously. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. Under these circumstances, state law requires the CAP to include all feasible measures to reduce emissions of ozone precursors and reduce transport of ozone precursors to neighboring air basins (BAAQMD, September 2010).

In 2006, the U.S. Environmental Protection Agency (U.S. EPA) tightened the national 24-hour $PM_{2.5}$ standard regarding short-term exposure to fine particulate matter from 65 μ g/m³ (micrograms per cubic meter) to $35 \,\mu g/m^3$. Based on air quality monitoring data for years 2006-2008 showing that the region was slightly above the standard, U.S. EPA designated the Bay Area as non-attainment for the 24-hour national standard in December 2008. This triggered the

¹ One micron equals one-millionth of a meter; i.e. 10⁻⁶

requirement for the Bay Area to prepare a State Implementation Plan (SIP) submittal to demonstrate how the region would attain the standard. However, data for both the 2008-2010 and the 2009-2011 cycles showed that Bay Area PM_{2.5} levels currently meet the standard. On October 29, 2012, the U.S. EPA issued a proposed rule-making to determine that the Bay Area now attains the 24-hour PM_{2.5} national standard. Based on this, the Bay Area is required to prepare an abbreviated SIP submittal which includes an emission inventory for primary (directly-emitted) PM_{2.5}, as well as precursor pollutants that contribute to formation of secondary PM in the atmosphere; and amendments to the BAAQMD New Source Review (NSR) to address PM_{2.5} (adopted December 2012).² However, key SIP requirements to develop a plan to attain the standard) will be suspended as long as monitoring data continues to show that the Bay Area attains the standard.

In addition to preparing the "abbreviated" SIP submittal, the BAAQMD has prepared a report entitled "Understanding Particulate Matter: Protecting Public Health in the San Francisco Bay Area" (2012). The report will help to guide the BAAQMD's on-going efforts to analyze and reduce PM in the Bay Area in order to better protect public health. The Bay Area will continue to be designated as "non-attainment" for the national 24-hour PM_{2.5} standard until such time as the Air District elects to submit a "redesignation request" and a "maintenance plan" to the U.S. EPA, and the U.S. EPA approves the proposed redesignation.

Air Emission Thresholds

On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds contained in the BAAQMD's 2010 CEQA Guidelines. The court did not determine whether the thresholds were valid on the merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the District to set aside the thresholds and cease dissemination of them until the Air District had complied with CEQA. The Air District has appealed the Alameda County Superior Court's decision. The Court of Appeal of the State of California, First Appellate District, reversed the trial court's decision. The Court of Appeal's decision was appealed to the California Supreme Court, which granted limited review, and the matter is currently pending there (BAAQMD, "Updated CEQA Guidelines" webpage, updated January 16, 2014). In view of the trial court's order which remains in place pending final resolution of the case, BAAQMD is no longer recommending that the thresholds be used as a generally applicable measure of a project's significant air quality impacts.

As such, lead agencies need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Lead agencies may rely on the BAAQMD's CEQA Guidelines (updated May 2012) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures. However, the BAAQMD has been ordered to set aside the thresholds and is no longer recommending that these thresholds be used as a general measure of a project's significant air quality impacts. Lead agencies may continue to rely on the BAAQMD's 1999 Thresholds of Significance and to make determinations regarding the significance of an

 $^{^{2}}$ PM is made up of particles that are emitted directly, such as soot and fugitive dust, as well as secondary particles that are formed in the atmosphere from chemical reactions involving precursor pollutants such as oxides of nitrogen (NO_x), sulfur oxides (SO_x), volatile organic compounds (VOCs), and ammonia (NH₃).

individual project's air quality impacts based on substantial evidence in the record for that project.

For this Initial Study, the City of Palo Alto has determined that the BAAQMD's significance thresholds in the updated May 2011 CEQA Guidelines for project operations within the San Francisco Bay Area Air Basin are the most appropriate thresholds for use in determining air quality impacts of the proposed project. These thresholds are lower than the 1999 BAAQMD thresholds, and thus use of the thresholds in the May 2011 CEQA Guidelines is more conservative. Therefore, these thresholds are considered reasonable for use in this Initial Study. Table III-3 presents the significance thresholds for construction and operational-related criteria air pollutant and precursor emissions being used for the purposes of this analysis. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. For the purposes of this analysis, the proposed project would result in a significant impact if construction or operational emissions would exceed any of the thresholds shown in Table III-2:³

Pollutant/ Precursor	Maximum Annual Emissions (tpy)	Average Daily Emissions (Ibs/day)
ROG	10	54
NO _X	10	54
PM ₁₀	15	82
PM _{2.5}	10	54

Table III-2	
Thresholds of Significance for Air Pollutants and	d
Precursors	

Source: Table 2-2, Bay Area Air Quality Management District, CEQA Air Quality Guidelines, May 2011.

Notes: tpy = tons per year; lbs/day = pounds per day; NO_X = oxides of nitrogen; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.

In addition, a significant air quality impact would occur if the project design or project construction does not incorporate control measures recommended by the BAAQMD to control emissions during construction (as listed in Table 8-1 of the BAAQMD CEQA Guidelines).

a) *LESS THAN SIGNIFICANT IMPACT*. Vehicle use, energy consumption, and associated air pollutant emissions are directly related to population growth. A project may be inconsistent with the applicable air quality plan if it would result in either population or employment growth that exceeds growth estimates included in the plan. Such growth would generate emissions not accounted for in the applicable air quality plan emissions budget. Therefore, projects need to be evaluated to determine whether they would generate population and employment growth and, if so, whether that growth would exceed the growth rates included in the applicable air quality plan. The most recent and applicable adopted air quality plan is

 $^{^{3}}$ Note the thresholds for PM₁₀ and PM_{2.5} apply to construction exhaust emissions only.

the 2010 Clean Air Plan (CAP). Therefore, consistent with the City's CEQA thresholds, the proposed project would result in a significant impact if it would conflict with or obstruct with implementation of the 2010 CAP.

Given the nature of the proposed project, it would not substantially induce population growth directly as it does not include or directly facilitate the construction of new housing. The proposed auto dealership building would incrementally increase employment opportunities in Palo Alto. As discussed in Section XIII, *Population and Housing*, the proposed project would increase employment by an estimated 14 jobs. According to the Association of Bay Area Government's employment growth projections for the City of Palo Alto, there would be approximately 104,430 employees in 2015 and 112,560 employees by 2025 (City of Palo Alto, 2009). The incremental addition of approximately 14 employees would not result in a substantial change in employment growth in Palo Alto. As a result, a substantial change in employment growth beyond the forecasts. Impacts related to conflict or obstruction of applicable air quality plans would be less than significant.

b, c) *LESS THAN SIGNIFICANT IMPACT*. The proposed project would generate temporary construction emissions (direct emissions) and long-term operational emissions (direct and indirect emissions). Emissions associated with the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2. Complete CalEEMod results and assumptions can be viewed in Appendix A.

Construction Emissions

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction vehicles, in addition to reactive organic gases (ROG) that would be released during the drying phase upon application of architectural coatings. The proposed project would be required to comply with all BAAQMD rules and regulations regarding construction emission control measures.

Development of the proposed project is expected to occur over approximately 14 months. The total amount of soil that would be imported is between 3,500 CY and 5,000 CY depending on what can be used from the site utility excavation. The more conservative amount of 5,000 CY was applied to CalEEMod.

Table III-3 summarizes the estimated maximum daily emissions of pollutants during construction on the project site. As shown in the table, the BAAQMD thresholds would not be exceeded. Therefore, impacts would be less than significant.

	Average Daily Emissions (lbs/day)							
	ROG	NOx	со	PM10	PM _{2.5}	SOx		
Average Daily Emissions ^a	8.33	38.63	29.97	16.27	9.64	< 0.01		
BAAQMD Thresholds	54	54	N/A	82	54	N/A		
Threshold Exceeded?	No	No	N/A	No	No	N/A		

 Table III-3

 Estimated Construction Average Daily Air Pollutant Emissions

See Table 2.1 "Overall Construction-Mitigated" of annual emissions CalEEMod worksheets in Appendix A.

Long-Term Emissions

Long-term emissions associated with project operation, as shown in Table III-4, would include emissions from vehicle trips (mobile sources), natural gas and electricity use (energy sources), and landscape maintenance equipment, consumer products and architectural coating associated with onsite development (area sources).

Emissions would not exceed BAAQMD thresholds for any criteria pollutant. Consequently, the impact of the proposed project's operational emissions on regional air quality under thresholds (b) and (c) would be less than significant.

Sources	Estimated Emissions (Ibs/day)							
	ROG	NOx	СО	PM ₁₀	PM _{2.5}	SOx		
Area	3.51	<0.01	<0.01	<0.01	<0.01	0.00		
Energy	<0.01	0.44	0.38	<0.01	<0.01	<0.01		
Mobile	9.92	14.74	76.66	8.00	2.25	0.11		
Total Emissions (Ibs/day)	13.48	15.23	77.04	8.05	2.30	0.11		
BAAQMD Thresholds	54	54	N/A	82	54	N/A		
Threshold Exceeded?	No	No	N/A	No	No	N/A		

 Table III-4

 Estimated Project Operational Emissions

Source: Calculations were made in CalEEMod. See Table 2.2 "Unmitigated Operational" in CalEEMod annual emissions worksheets in Appendix A. Estimated operational emissions do not take into account emissions reductions from removal of existing uses on site, therefore, this analysis is conservative.

Note: numbers may not add up due to rounding.

Carbon Monoxide

According to the City's CEQA thresholds, CO modeling should occur when

- a) project CO emissions exceed 550 pounds per day or 100 tons per year; or
- *b) project traffic would impact intersections of roadway links operating at Level of Service (LOS) D, E, or F, or would cause LOS to decline to D, E, or F; or*
- *c) the project would increase traffic volumes on nearby roadways by 10% or more.*

As discussed above and in Section XVI, *Transportation/Traffic*, the proposed project would not meet any of the criteria outlined above. Therefore, CO impacts would be less than significant.

d) *LESS THAN SIGNIFICANT IMPACT*. Certain population groups are more sensitive to air pollution than the general population; in particular, children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest sensitive receptor to the project site is the school (Hope Technology) approximately 500 feet south of the project site.

As discussed above under subpart (b, c) of this section, the proposed project would not exceed BAAQMD thresholds for any pollutant; therefore, it would not expose sensitive receptors to substantial pollutant concentrations. According to the City's CEQA thresholds, the proposed project would have a significant impact if it would expose sensitive receptors to substantial levels of toxic air contaminants (TAC). The proposed project involves retail sales and repair service operation with ancillary carwash for customers of the dealership or service department and would not emit substantial levels of TACs. TAC emissions are mostly associated with industrial sources, manufacturing uses, as well as with diesel exhaust. The proposed project would not involve any industrial or manufacturing processes. As discussed in Section VIII, Hazards and Hazardous Materials, the proposed project may involve the use, storage, disposal or transportation of hazardous materials but these would be subject to hazardous materials regulations and would not be expected to emit substantial amounts of TACs. The proposed project may involve heavy truck usage associated with deliveries and trash hauling; however, heavy truck usage would be similar to other retail sales and repair service operation with ancillary carwash for internal use and would not result in substantial TAC emissions. In addition, there are no sensitive uses within the vicinity of the site; the closest sensitive receptor to the project site is the school (Hope Technology) approximately 500 feet south of the project site. Impacts would be less than significant.

e) *LESS THAN SIGNIFICANT IMPACT*. Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. The proposed auto dealership project involves retail sales and repair service operation with ancillary carwash for internal use. These types of uses would not generate objectionable odors that would affect a substantial number of people. Therefore, impacts related to odor are less than significant.
		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IV.	BIOLOGICAL RESOURCES				
	Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		•		
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			•	
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			■	
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			•	
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			•	
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				

a,) POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED. The project site is located in an urbanized area of Palo Alto, but near the Baylands, and has been graded and developed/paved for the existing building and surface parking lot. The proposed project would involve the demolition of the existing commercial building and the construction of a new threestory, auto dealership building, surface parking, and a detached carwash. There is ornamental

landscaping around the perimeter of the existing building and the site. The project site does not contain open land or native vegetation.

Special Status Species

For the purpose of this analysis, special status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA) or those listed or proposed for listing as rare, threatened, or endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA). No federal-or-state-listed endangered, threatened, rare, or otherwise sensitive flora or fauna were observed at the project site. The salt marsh harvest mouse and the California clapper rail, both on the federal endangered species list, are permanent Baylands residents. However, the project site is 250 feet away from the nearest Baylands habitat and does not contain native or extensive vegetation or other suitable habitat for sensitive or special status species. No direct impacts to special status species would occur.

Migratory Birds

A total of 63 trees are located on the site. Of the 63 trees, 36 would be preserved. The 36 trees to be preserved include Chinese Elm, Loquat, Privot, Blue Gum Eucalyptus, and Iron Bark Eucalyptus. The 27 trees to be removed include Chinese Elm and Iron Bark Eucalyptus. The 36 trees to be preserved have an overall health and structure rating of fair to good based on Tree Care Industry Association, 2012 standards. On-site trees may support nesting birds protected under the Migratory Bird Treaty Act. The removal of approximately 27 trees and construction adjacent to the remaining trees may affect protected nesting birds. Therefore, *Mitigation Measure BIO-1* is required to protect nesting birds.

Indirect Impacts to Wildlife

The project site is located approximately 250 feet from the boundary of the Baylands Nature Preserve. The proposed project could indirectly affect wildlife or wildlife habitat through water, noise, dust or light pollution. As discussed below under Item 'c,' water quality impacts to Baylands habitat would be less than significant. As discussed in Section III, Air Quality, air quality impacts would be less than significant. As discussed in Section XII, Noise, noise impacts would be less than significant. Therefore, water, dust, or noise pollution would not adversely affect wildlife or habitat associated with the Baylands. As discussed in Section I, Aesthetics, the proposed project would increase the amount and intensity of lighting compared to existing conditions. However, lighting would be directed towards the project site. Relatively small amounts of light spillover to adjacent properties towards the Baylands would occur, as shown on the project photometric plan (on file at Planning Division offices). This spillover would affect the closest border of the adjacent property, which is a developed site and not part of the Baylands. In addition, there are buildings, parking areas, and mature trees between the project site and the Baylands which would block visibility of the light sources from the Baylands. Therefore, no significant light impacts on the Baylands would occur. The proposed project would not have significant indirect effects related to water quality, noise, or lighting on birds, fish, or mammals in the Baylands Nature Preserve. Impacts would be less than significant.

Mitigation Measure

The following mitigation measure would be required to reduce impacts to protected nesting birds. With implementation of Mitigation Measure BIO-1, impacts would be less than significant.

BIO-1 Nesting Bird Protection. To avoid disturbance of nesting and special-status birds, activities related to the project, including, but not limited to, tree removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (typically February through August in the project region). If construction must begin within the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 3 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted within the Project Boundary, including a 300-foot buffer (500-foot for raptors), on foot, and within inaccessible areas (i.e., private lands) afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the area. If nests are found, an avoidance buffer (which is dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.

b) *LESS THAN SIGNIFICANT IMPACT*. The project site does not contain any riparian habitat or sensitive natural communities. Habitat impacts would be less than significant.

c) *LESS THAN SIGNIFICANT IMPACT*. The National Wetlands Inventory (NWI) was reviewed to determine if any wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the proposed survey area (United States Department of the Interior, Fish & Wildlife Service 2015).

A 118-acre fresh water emergent wetland, the Baylands, is located approximately 250 feet from the southeast corner of the project site border. The Baylands is one of the most significant areas of native marsh vegetation, endangered species habitat, and habitat for waterfowl and shorebirds in the South Bay. Undisturbed, this area can provide a complete food web. The Baylands has a PEM1CH designation, which signifies the area is an impounded, seasonally flooded wetlands dominated by persistent herbaceous vegetation. However, the proposed project would not directly impact the Baylands habitat. The project site is about 250 feet away from the boundary of the Baylands.

Potential indirect effects to the wetland habitat related to lighting are discussed above under subsection (a, b, d). Other indirect effects include potential water quality impacts (such as from

erosion during construction or stormwater runoff from the site). As discussed in Section VI, *Geology and Soils,* with required compliance with existing regulations impacts associated with soil erosion and the loss of topsoil would be less than significant. As discussed in Section IX, *Hydrology and Water Quality,* compliance with listed requirements would ensure that the proposed project would not increase stormwater pollutants or cause erosion such that the water quality of the Baylands would be impacted. Therefore, the construction and operation of the proposed project would not result in indirect effects to wetland function or habitat. Impacts would be less than significant.

d) *LESS THAN SIGNIFICANT IMPACT*. The project site is not located within any known regional wildlife movement corridors or any other sensitive biological areas as indicated by the United States Fish & Wildlife Service Critical Habitat Portal or California Department of Fish & Wildlife Biogeographic Information and Observations System. The project site does not contain a native wildlife nursery site. Impacts would be less than significant.

e) *LESS THAN SIGNIFICANT IMPACT*. According to the City's CEQA thresholds, a significant impact would occur if the project would conflict with the City's Tree Preservation Ordinance. The purpose of the City of Palo Alto Tree Preservation Ordinance (PAMC Chapter 18.10) is to promote the health, safety, welfare, and quality of life of the residents of the city through the protection of specified trees located on private property within the city, and the establishment of standards for removal, maintenance, and planting of trees. In establishing these procedures and standards, it is the City's intent to encourage the preservation of trees.

Under the Tree Preservation and Management Ordinance, discretionary development approvals for property containing protected trees will include appropriate conditions providing for the protection of such trees during construction and for maintenance of the trees thereafter. "Protected tree" is defined as any tree of the species *Quercus agrifolia* (Coast Live Oak) or *Quercus lobata* (Valley Oak). There are a total of 63 existing trees identified to be within site improvements. Of the 63 trees, 36 trees would be preserved, including 17 Chinese Elm, one Loquat, one Privot, three Blue Gum Eucalyptus, and eight Iron Bark Eucalyptus. The trees to be removed include Chinese Elm and Iron Bark Eucalyptus, none of which are protected under the Palo Alto Tree Preservation Ordinance, are located on or adjacent to the project site.

The PAMC regulates specific types of trees on public and private property for the purpose of avoiding their removal or disfigurement without first being reviewed and permitted by the City. Although 27 trees would be removed, none are considered protected trees. Therefore, impacts would be less than significant.

f) *NO IMPACT*. The project site is not within an approved Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
V.	CULTURAL RESOURCES				
	Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?			•	
b)	Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?			•	
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			•	
d)	Disturb any human remains, including those interred outside of formal cemeteries?				

a) *LESS THAN SIGNIFICANT IMPACT*. The proposed project would involve the demolition of the former Ming's Restaurant building at 1700 Embarcadero Road, constructed in 1968. A Historic Resource Evaluation was prepared by M-Group on December 4, 2015. M-Group reviewed archival information for the subject property and review of records available at the Palo Alto Historical Society and the City of Palo Alto Development Center. A field survey was undertaken by M-Group Preservation Specialist Lilly Bianco on November 12, 2015 to perform photographic documentation and evaluate the level of integrity of the building. The evaluation identifies the building as a "neo-electric commercial building" and concludes that it is not eligible for listing on the California Register of Historic Resources based on its failure to meet one or more of the four significance criterion. More details of the findings can be found in the report, included in its entirety as Appendix B to this document. Impacts to historic resources from demolition of the existing building would be less than significant.

b-d) *LESS THAN SIGNIFICANT IMPACT*. The project site is within a highly urbanized area and is currently developed with a commercial restaurant building and surface parking. According to the Archaeologically Sensitive Areas Map in the Cultural Resources element of the City's Comprehensive Plan, the project site is not within a sensitivity area (City of Palo Alto Comprehensive Plan Update, 2014).

The proposed project would include some below-grade construction including an elevator shaft pit, removal of existing structures and paving and constructing new foundations, utility trenches and surface paving. The site has been previously graded and disturbed during construction of the existing surface parking lot and structure. As a result, the possibility of encountering undisturbed subsurface cultural or paleontological resources is considered low. In the unlikely event that such un-documented resources are unearthed during construction, applicable regulatory requirements pertaining to the handling and treatment of such resources would be followed. If archaeological or paleontological resources are identified, as defined by Section 21083.2 of the Public Resources Code, the site would be required to be treated in accordance with the provisions of Section 21083.2 of the Public Resources Code as appropriate. If human remains are unearthed, State Health and Safety Code Section 7050.5 require that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. Impacts would be less than significant with adherence to existing regulatory requirements.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VI.	GEOLOGY AND SOILS				
	Would the project:				
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?				•
				_	
	ii) Strong seismic ground shaking?			-	
	iii) Seismic-related ground failure, including liquefaction?		•		
	iv) Landslides?				
b)	Result in substantial soil erosion or the loss of topsoil?				
c)	Be located on a geologic unit or soil that is unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?		•		
d)	Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial risks to life or property?			•	
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				•

Romig Engineers, Inc. prepared a geotechnical investigation for the proposed project in August 2015 (see Appendix C). The discussion below is based primarily on the analysis and conclusions of this study.

a.i) *NO IMPACT*. The project site is not located within an area that has been identified as having a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (State of California Department of Conservation, 2015). No known fault lines cut through the site. The closest active fault is the San Andreas fault, located approximately 7.5 miles southwest of the project site. Therefore, the likelihood of surface rupture occurring from active faulting at the site is remote (Romig Engineers, Inc., 2015). No impact would occur.

a.ii) *LESS THAN SIGNIFICANT IMPACT*. As with any site in the Bay Area region, the project site is susceptible to strong seismic ground shaking in the event of a major earthquake. The faults considered most likely to produce large earthquakes in the area include the San Andreas, San Gregorio, Hayward, and Calaveras faults. The San Gregorio fault is located approximately 18 miles southwest of the site. The Hayward and Calaveras faults are located approximately 12 and 18 miles northeast of the site, respectively. These faults are capable of producing strong seismic ground shaking at the project site.

The Seismic Hazards Identification Program of Chapter 16.42 of the PAMC addresses public safety by identifying those buildings in Palo Alto which exhibit structural deficiencies and by accurately determining the severity and extent of those deficiencies in relation to their potential for causing loss of life or injury. Such a seismic hazards identification program is consistent with California Health and Safety Code Sections 19160 - 19169 and is necessary to implement the Palo Alto Comprehensive Plan's Environmental Resources Policy 14, Program 47 (City of Palo Alto, 2015).

The State of California requires that buildings and structures be designed in accordance with the seismic design provisions included in the California Building Code (CBC) and in ASCE 7-10, "Minimum Design Loads for Buildings and Other Structures." With modern construction techniques and adherence to geology and soil provisions set forth in CBC, Chapters 16 and 18) impacts would be less than significant.

a.iii, c) **POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED**. According to the City's CEQA thresholds, a significant impact would also occur if the proposed project would "expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques."

Liquefaction is a phenomenon where saturated sand and silt take on the characteristics of a liquid during the intense shaking of an earthquake. The highest hazard areas are concentrated in regions of man-made landfill, especially fill that was placed many decades ago in areas that were once submerged bay floor. Such areas along the Bay margins are found in San Francisco, Oakland and Alameda Island, as well as other places around San Francisco Bay. Other potentially hazardous areas include larger stream channels, which produce the loose young soils that are particularly susceptible to liquefaction. Lateral spreading is the horizontal movement or spreading of soil toward an open face. When soils located on a sloping site liquefy, they tend to flow downhill. The potential for failure from lateral spreading is highest in

areas where the groundwater table is high and where relatively soft, where recent alluvial deposits exist, and in areas with liquefaction risks. Per the Geology, Soils, and Seismicity Chapter of the Comprehensive Plan Update's liquefaction susceptibility map, the project site is located in a "very high" liquefaction susceptibility part of the City. The geotechnical investigation prepared for the proposed project included a liquefaction evaluation to evaluate the potential for earthquake-induced liquefaction of the soils at the site. The evaluation concluded that the soils found between depths of 15 and 45 feet below ground surface could liquefy and cause ground surface settlement between approximately 2.5 to 3.7 inches at the ground surface (Romig Engineers, Inc., 2015). Therefore, *Mitigation Measure GEO-1* is required to reduce potential impacts related to liquefaction. Though there is liquefaction risk associated with the project site, according to the Geotechnical Investigation, since there are no open faces or steep creek banks in the immediate site area, there is a low potential for lateral spreading to occur at the site.

Mitigation Measure

The following mitigation measure would be required to reduce impacts related to liquefaction. With implementation of *Mitigation Measure GEO-1*, the likelihood of significant damage to the proposed buildings from liquefaction would be reduced and the proposed project would not expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques. Impacts would be less than significant.

- **GEO-1 Geotechnical Design Considerations.** The recommendations included in the 2015 *Geotechnical Investigation* conducted by Romig Engineers, Inc. (Appendix C) related to soil engineering shall be incorporated into the proposed project grading and building plans. The recommendations are related to:
 - Foundation design;
 - *Surface improvements;*
 - Slabs-on-grade;
 - Retaining walls;
 - Vehicle pavements; and,
 - Earthwork.

a.iv) *NO IMPACT*. Earthquakes can trigger landslides that may cause injuries and damage to many types of structures. Landslides are typically a hazard on or near slopes or hillside areas, rather than generally level areas like the project site and vicinity. According to the State of California Landslides map, the project site is not located within an earthquake-induced landslide hazard zone (State of California Department of Conservation, 2015). The project site is generally flat and is not at risk of a landslide. Therefore, no impact would occur.

b) *LESS THAN SIGNIFICANT IMPACT*. The project site is developed and generally level, which limits the potential for substantial soil erosion. The grading and excavation phase when soils are exposed has the highest potential for erosion. Ground-disturbing activities that would occur with implementation of the proposed project would include site-specific grading for foundations, building pads, access roads, and utility trenches. Temporary erosion could occur

during project construction. The proposed project would be required to comply with erosion control standards administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB) through the National Pollutant Discharge Elimination System (NPDES) permit process, which requires implementation of nonpoint source control of stormwater runoff. Such controls would be included as best management practices (BMPs) identified in Stormwater Pollution Prevention Plans (SWPPP) for future development at the project site.

The California Stormwater Quality Association (CASQA) *BMP Handbook for Construction* (2009) is typically used for guidance in drafting project-specific BMPs for erosion control, amongst other stormwater issues. For example, CASQA Measure WE-1 (Wind Erosion Control) identifies a variety of BMPs to stabilize exposed surfaces and minimize activities that suspend to track dust particles (CASQA, 2009). This is commonly achieved by applying soil binders or water to disturbed surfaces.

In addition, the Air Quality Management District (AQMD) with jurisdiction over the project site, the Bay Area AQMD, specifies measures that are aimed at air quality control but also address the minimization or avoidance of erosion and topsoil lost. The Conservation Element (Section 9.6.3) of the BAAQMD CEQA Guidelines includes the following BMPs relevant to the avoidance of erosion and topsoil degradation:

- Include PM₁₀ control measures as conditions of approval for subdivision maps, site plans, and grading permits;
- Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas; and
- Condition grading permits to require that graded areas be stabilized from the completion of grading to the commencement of construction (BAAQMD, 2012).

With compliance with above listed requirements, impacts of the proposed development associated with soil erosion and the loss of topsoil would be less than significant.

d) *LESS THAN SIGNIFICANT IMPACT*. Per the Geology, Soils, and Seismicity Chapter of the Comprehensive Plan Update, the project site is located in the eastern part of Palo Alto, where the prevalent soil types include Urban-Land Stevenscreek, Flaskan, Hangerone, and Clear Lake complexes, and Urban-Land Orthents and Botella soils. These soils are typically well to moderately-well drained, and they are characterized by low runoff. One exception is the Urban-Land hangerone complex, which is poorly drained. The Botella complex soils are generally composed of deep or very deep, well-drained clay loams, whereas Urban-Land Orthents are very deep, poorly drained, texturally heterogeneous soils.

A number of widely used treatments are available to mitigate expansive soils, including soil grouting, recompaction, and replacement with a non-expansive material. CBC Section 1808.6 requires special foundation design for buildings constructed on expansive soils. If the soil is not removed or stabilized, then foundations must be designed to prevent uplift of the supported structure or to resist forces exerted on the foundation due to soil volume changes or shall be isolated from the expansive soil. Compliance with CBC requirements would ensure protection of structures and occupants from impacts related to expansive soils. Impacts would be less than significant.

Under the City's CEQA thresholds, a significant impact would also occur if the project would result in siltation. As discussed in Section IX, *Hydrology and Water Quality*, the proposed project would not result in substantial siltation. Impacts would be less than significant.

e) *NO IMPACT*. The proposed projects would be connected to the local wastewater treatment system. Septic systems would not be used. No impact would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VII.	GREENHOUSE GAS EMISSIONS				
	Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				
b)	Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHGs), gases that trap heat in the atmosphere, analogous to the way in which a greenhouse retains heat. Common GHG include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), fluorinated gases, and ozone. GHGs are emitted by both natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heatabsorption potential than CO₂, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆) (Cal EPA, 2015).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (Cal EPA, 2015). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the CEQA Guidelines for the feasible mitigation of GHG emissions and analysis of the effects of GHG emissions. The adopted CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the

discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence on climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (State CEQA Guidelines, Section 15355).

The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). Neither the State nor the City of Palo Alto have adopted GHG emissions thresholds, and no GHG emissions reduction plan with established GHG emissions reduction strategies has yet been adopted. The BAAQMD adopted significance thresholds for GHGs in June 2010 (Table 6). For land use development projects (residential, commercial, industrial), the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year (MT/year) of CO₂E; or 4.6 MT CO₂E per service population (residents + employees) per year.

a) *LESS THAN SIGNIFICANT IMPACT*. The project's proposed construction activities, energy use, daily operational activities, and mobile sources (traffic) would generate GHG emissions. CalEEMod was used to calculate emissions resulting from project construction and long-term operation. Project-related construction emissions are confined to a relatively short period of time in relation to the overall life of the proposed project. Therefore, construction-related GHG emissions were amortized over a 30-year period to determine the annual construction-related GHG emissions over the life of the project.

GHG emissions associated with construction emissions and operational emissions from the proposed project were estimated using CalEEMod (see Appendix A for model output) and are discussed below. CalEEMod does not calculate N₂O emissions related to mobile sources. As such, N₂O emissions were calculated based on the existing uses VMT using calculation methods provided by the California Climate Action Registry General Reporting Protocol (January 2009).

Existing Conditions

The project site currently is developed with a vacant 17,942 square foot restaurant. Although it is currently vacant, the restaurant could be reopened at any time without discretionary approval from the City. Therefore, emissions from the existing restaurant use were taken into account in this analysis. Existing GHG emissions from the project site were calculated in CalEEMod. Table VII-1 shows the existing emissions.

Emission Sources	Annual Emissions
Existing Operational	
Area	<0.01 metric tons CO ₂ E
Energy	304 metric tons CO ₂ E
Solid Waste	97 metric tons CO ₂ E
Water	12 metric tons CO ₂ E
Existing Mobile	
CO ₂ and CH ₄	1,276 metric tons CO ₂ E
N ₂ O	60 metric tons CO ₂ E
Existing GHG Emissions	1,749 metric tons CO₂E

Table VII-1 Existing Annual GHG Emissions

See Appendix A for CalEEMod Results.

Construction Emissions

As shown in Table VII-2, emissions of CO₂E units generated by construction of the proposed project are estimated at 961 metric tons. When amortized over a 30-year period (the assumed life of the project), CO₂E construction emissions would be approximately 32 metric tons CO₂E per year.

Table VII-2 Estimated Construction-Related GHG Emissions

	Annual Emissions
Total	961 metric tons CO ₂ E
Amortized over 30 years	32 metric tons per year CO₂E

See Appendix A for CalEEMod Results.

Operational Indirect and Stationary Direct Emissions

Operational Emissions include area sources (consumer products, landscape maintenance equipment, and painting), energy use (electricity and natural gas), solid waste, electricity to deliver water, and transportation emissions. Operational Emissions were calculated using CalEEMod. In accordance with AB 939, it was assumed that the proposed project would achieve at least a 50% waste diversion rate. Trips associated with the prosed project would include employee and visitor trips to and from the project site as well as ancillary trips such as test drives. CalEEMod does not specifically state that test drives are included in the trip generation assumptions for the dealership. However, in general the trip generation calculations in CalEEMod are very conservative. For example, based on standard inputs, CalEEMod assumed 3,863 trips per day whereas the traffic study estimated 102 AM peak hour trips and 149 PM peak hour trips (see Section XVI, *Transportation/Traffic*). Therefore, CalEEMod assumes more trips than if the PM peak hour trips occurred every hour (149 trips * 24 hours = 3,576 trips). Consequently, although test drives are not explicitly factored in, the model is conservative such that ancillary trips are accounted for.

Table VII-3 combines the construction, operational and mobile GHG emissions associated with onsite development for the proposed project. As shown in Table VII-1, existing conditions include the emission of 1,749 metric tons of CO₂E annually.

Construction emissions associated with construction activity (approximately 961 metric tons of CO_2E) are amortized over 30 years (the anticipated life of the project). As shown in Table VIII-3, the proposed project would result in a net increase of 333 metric tons of CO_2E . Although development facilitated by the proposed project would generate additional GHG emissions beyond existing conditions, because the total amount of net GHG emissions would be lower than the threshold of 1,100 metric tons CO_2E per year, impacts from GHG emissions would be less than significant.

Emission Source	Annual Emissions (CO ₂ E)
Project Construction	32 metric tons
Project Operational Area Energy Solid Waste Water	< 0.01 metric tons 236 metric tons 108 metric tons 14 metric tons
Project Mobile CO ₂ and CH ₄ N ₂ O	1,608 metric tons 84 metric tons
Project Subtotal	2,082 metric tons
Existing Conditions Subtotal ¹	(1,749 metric tons)
Total Net Emissions (Project-Existing)	333 metric tons

Table VII-3 Proposed Project Annual GHG Emissions

¹ See Table 6

() denotes subtractions

Sources: See Appendix A for calculations and for GHG emission factor assumptions.

b) *LESS THAN SIGNIFICANT IMPACT*. Senate Bill 375, signed in August 2008, requires the inclusion of sustainable communities' strategies (SCS) in regional transportation plans (RTPs) for the purpose of reducing GHG emissions. The Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) adopted an SCS that meets greenhouse gas reduction targets. Plan Bay Area 2040 is a state-mandated, integrated long-range transportation, land-use and housing plan that would support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the nine-county San Francisco Bay Area (Plan Bay Area, 2016). The SCS builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. Plan Bay Area 2040 would be updated every four years to reflect new priorities. A goal of the SCS is to "promote access to housing, jobs and transportation for all Bay Area residents, particularly low-income and lower-middle-income Bay Area residents" (Plan Bay Area, 2016).

The project site is currently occupied by a commercial building, formerly the Ming's Restaurant, and parking area, consisting of approximately 17,492 square feet (sf) of commercial floor area on the subject site. The remainder of the site is an asphalt parking lot. There are currently no residents living at the project site. The proposed auto dealership development would provide

jobs for Bay Area residents. According to the project applicant, the proposed project would generate an estimated 63 jobs (25 techs, 5 support tech staff, 10 salesmen, 4 finance, 5 management positions, 4 service advisors, 4 valet positions, 4 carwash and detail positions, and 2 reception positions). Additionally, the proposed auto dealership would add temporary construction jobs during demolition and construction. Therefore, the project would be consistent with this goal.

Another goal of the SCS is to "grow economic productivity in the Bay Area by 2% annually" (Plan Bay Area, 2016). The proposed project would involve additional job opportunities and car and auto repair sales. As a result, the proposed project would help grow economic productivity in the Bay Area.

According to *The Impacts of Sea-Level Rise on the California Coast*, prepared by the California Climate Change Center (CCCC) (May 2009), climate change has the potential to induce sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. However, the <u>The project site is located approximately a mile from the San Francisco Bay and approximately 17 miles from the coast of the Pacific Ocean. According to the Cal-Adapt website, it is within a potential inundation area for flooding due to sea level rise and is not at risk for inundation from sea level rise (California Energy Commission, Cal-Adapt website, 2015). However, the proposed project itself would not contribute to the effect of sea level rise and would not increase the risk of on-site or off-site flooding.</u>

As mentioned, according to BAAQMD GHG significance thresholds, a proposed project's GHG emissions would be less than significant if it is less than 1,100 metric tons per year (MT/year) of CO₂e and the proposed project is consistent with an adopted regional GHG reduction plan such as Plan Bay Area 2040. The proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and would be consistent with the objectives of the RTP/SCS, AB 32, SB 97 and SB 375. Therefore, impacts would be less than significant.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VIII	. HAZARDS AND HAZARDOUS MATERIALS				
	Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			•	

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
VII	I. HAZARDS AND HAZARDOUS MATERIALS				
	Would the project:				
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?			•	
d)	Be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			-	
e)	For a project located within 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 result in a safety hazard for people residing or working in the project area?			•	
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			•	
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			•	
h)	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				•

a, b) *LESS THAN SIGNIFICANT IMPACT*. Potential effects regarding hazards and hazardous materials from the project could come from construction and operational activities. Both activities are described further below.

Construction Activities

The use of heavy construction equipment, the transport of material to support construction, or the disturbance of any pre-existing hazards underground or in existing buildings or structures being demolished during construction has the potential to create impacts related to hazards or hazardous materials.

Construction of the proposed project would require the limited use of heavy machinery and construction equipment, such as a grader, front loader, and dump truck. The operation of these vehicles and machinery could result in a spill or accidental release of hazardous materials, including fuel, engine oil, engine coolant, and lubricants. Because the proposed project would disturb a project site that is over one acre in size (2.54), the applicant would be required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) to comply with Clean Water Act NPDES requirements. Compliance with these requirements would include preparation of a Storm Water Pollution Prevention Plan, which would specify Best Management Practices to quickly contain and clean up any accidental spills or leaks. Due to the medium-term construction period (approximately 14 months), the relatively small size of the project site (approximately 2.54 acres in total), and the minimal amount of construction equipment and associated hazardous materials to be used in construction of the proposed project, the potential for an accidental release of hazardous materials to harm the public or the environment would be minor. This potential would be further reduced through compliance with applicable regulations.

Ground-disturbing activities that would occur with implementation of the proposed project would include site-specific grading for foundations, building pads, access roads, and utility trenches. The total amount of soil that would be imported would be between 3,500 and 5,000 cubic yards depending on what could be used from the site utility excavation. As discussed under subsection (d) below, the project site is not included on a list of hazardous material sites. There is no evidence of contamination at the project site; therefore, the proposed project would not involve the release of contaminated soil during grading and excavation.

Construction activities may include the temporary transport, storage, and use of potentially hazardous materials including fuels, lubricating fluids, cleaners, solvents or contaminated soils. The transport of any hazardous materials would be subject to federal, state and local regulations, which would assure that risks associated with the transport hazardous materials are minimized. In addition, construction activities that transport hazardous materials would be required to transport such materials along designated roadways within the County, thereby limiting risk of upset.

Implementation of the proposed project would require demolition of an existing on-site building, which due to its age (approximately 48 years old), may contain asbestos, PCBs, and/or lead-based paint. Structures built before the 1970s (1968) typically contained asbestos containing materials (ACM). Because the building was constructed before the time of the federal ban on the manufacture of PCBs, it is possible that light ballasts in the onsite building contains PCBs. Demolition of this structure could result in health hazard impacts to workers if not remediated prior to construction activities. However, demolition and construction activities would be required to adhere to BAAQMD Regulation 11, Rule 2, which governs the proper handling and disposal of ACM for demolition, renovation, and manufacturing activities in the Bay Area, and California Occupational Safety and Health Administration (CalOSHA) regulations regarding lead-based materials. The California Code of Regulations, §1532.1, requires testing, monitoring, containment, and disposal of lead-based materials, such that exposure levels do not exceed CalOSHA standards. DTSC has classified PCBs as a hazardous waste when concentrations exceed 50 parts per million in non-liquids, and the DTSC requires that materials containing those concentrations of PCBs be transported and disposed of as hazardous waste. Any light ballast that is removed would be evaluated for the presence of PCBs and managed appropriately. With adherence to BAAQMD, CalOSHA, and DTSC policies regarding ACM, lead-based paint, and PCBs, impacts would be less than significant.

Operational Activities

Once construction is complete, the operation phase of the project would include the daily activities of an automobile dealership, automobile services business, and carwash that could involve the use, storage, disposal or transportation of hazardous materials. These materials would not be substantially different from commercial and industrial chemicals and solvents already in general and wide use throughout the region and project area specific to automobile uses and other administrative offices. The surrounding area is known for automotive uses, and the proposed project would not differ substantially from existing nearby uses and activities. Two auto dealerships (Audi of Palo Alto and Anderson Honda) and an auto body repair shop (Matthews-Carlsen Body Works) are located nearby.

The project site has a zoning designation of CS and a Comprehensive Plan land use designation of Service Commercial. The proposed auto dealership building would not be allowed under this designation and zoning. The proposed project would include a request to allow a zoning change for the Auto Dealership (AD) overlay. According to PAMC Chapter 18.30.020, the (AD) combining district may be combined with a CS district. The proposed auto dealership use would be permitted within the CS(AD) combining district.

As with any automotive activities that involve the storage and use of hazardous materials, onsite activity involving hazardous substances (such as the petrochemicals, polymers, and basic inorganics), and the transport, storage and handling of these substances must adhere to applicable local, state, and federal safety standards, ordinances, and regulations, including a Hazardous Materials Business Plan (HMBP). Businesses that are engaged in the use, sale, storage, or transport of hazardous substances are monitored by various local (e.g., Santa Clara County DEH and the Palo Alto Fire Department) and State (e.g., Department of Toxic Substance Control) entities. Auto-related uses would be required to store hazardous materials in designated areas designed to prevent accidental release into the environment. Potentially hazardous waste produced during operation would also be collected, stored and disposed of in accordance with applicable laws and regulations. Compliance with existing laws and regulations governing the transport, use, release and storage of hazardous materials and wastes, including the required SWPPP and HMBP, would reduce impacts related to exposure of the public or environment to hazardous materials to less than significant.

c) *LESS THAN SIGNIFICANT IMPACT*. Hope Technology School, located approximately 0.1 miles south on East Bayshore Road, is the closest existing school to the project site. However, as mentioned above (a, b) the proposed project would comply with existing laws and regulations governing the transport, use, release and storage of hazardous materials and wastes, including the required SWPPP and HMBP. Additionally, the proposed uses would be similar to existing uses adjacent to the site along Embarcadero Road (Audi of Palo Alto and Anderson Honda). According to the City's CEQA thresholds, a significant impact would also occur if the proposed project would construct a school on a property that is subject to hazardous materials

contamination, emissions, or accidental release. The proposed project does not involve construction of a school. Therefore, impacts would be less than significant.

d) *LESS THAN SIGNIFICANT IMPACT*. Romig Engineers completed a Phase I Environmental Site Assessment (ESA) for the project site on June 11, 2013 (included in this document as Appendix D). According to the study, the State and local file review materials did not reveal any underground storage tanks, hazardous materials use or any contaminant problems reported for the property addresses. The City, County and State agency file reviews did not reveal the presence of an aboveground storage tank (AST), motor oil or fuel underground storage tank (UST), pits, lagoons or use or suspect disposal on the property or nearby sites with groundwater or soil vapor incidents that would likely impact the property. Additionally, a review of federal and state environmental generator and spill lists revealed that several leaking underground storage tanks (LUST) and groundwater contaminant cases have been reported in the general site area. However, the identified spills are being investigated or closed by the State or Federal agencies, or are located far enough from the site as to have little likelihood of impacting the site.

Anderson Honda, located within 1,000 feet east of the project site, is currently a Cleanup Program Site (Case #: 43S1123). The potential contaminants of concern are diesel, waste oil/motor/hydraulic/lubricating. The potential media of concern is other groundwater (uses other than drinking water), soil. Anderson Honda is currently in compliance with the San Francisco Bay Regional Water Quality Control Board, who is overseeing site investigation and cleanup of unregulated discharges adversely affecting the State's waters. The project site is not included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment. Impacts would be less than significant.

e, f) *LESS THAN SIGNIFICANT IMPACT*. The Palo Alto Airport of Santa Clara County (PAO) is the closest airport to the project site. PAO is a 103-acre facility with a single runway, parallel taxiway, and a building area located approximately 0.2 miles east of the project site. The airport primarily serves small general aviation aircraft. The project site is located within the airport safety and traffic pattern zones (Palo Alto Airport Master Plan Report, 2006). The project consists of the construction of a new auto dealership building and detached carwash. However, neither would be more than 50 feet (auto dealership max height 50 feet) or four stories (auto dealership 3 stories) in height. Additionally the existing building is two stories. The proposed structures on site would be similar in height to surrounding development. Therefore, the project area. The project is not located within the vicinity of a private airstrip. Therefore, a less than significant impact related to airport safety would occur.

g) *LESS THAN SIGNIFICANT IMPACT*. The proposed project does not involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No streets would be closed, rerouted or substantially altered. The project involves the refurbishment of two existing entryways to the project site, which would be required to be reviewed and approved by the Palo Alto Fire Department to ensure safety emergency access is provided. Therefore, impacts would be less than significant.

h) *NO IMPACT*. The project site is within an urban area in Palo Alto. According to the Comprehensive Plan, the project site is not adjacent to or within the vicinity to wildlands. As a result, there would be no risk of exposing people or structures to a significant risk of loss, injury or death involving wild land fires. No impact would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX.	HYDROLOGY AND WATER QUALITY				
	Would the project:				
a)	Violate any water quality standards or waste discharge requirements?			-	
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre- existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			•	
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			-	
d)	Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?			-	
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			-	
f)	Otherwise substantially degrade water quality?			-	
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			-	

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
IX.	HYDROLOGY AND WATER QUALITY				
	Would the project:				
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			-	
i)	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				
i)	Posult in inundation by soliche, teunami				
1)	or mudflow?				

a, e, f) *LESS THAN SIGNIFICANT IMPACT*. The project site is located within the San Francisco Bay Hydrologic Region (HR) and is subject to the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). Within the San Francisco Bay HR, the project site is located within the South Bay Hydrologic Planning Area, as defined by the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin. The Basin Plan defines beneficial uses and water quality objectives (which together are known as water quality standards) for waters in the region. The SFBRWQCB also defines waste discharge requirements for discharges that could affect water quality for waters of the State, including groundwater. No named waterbodies cross the project site. However, the Basin Plan defines beneficial uses for several nearby waterbodies (SFBRWQCB, 2015).

San Francisquito Creek, which is located approximately 0.3 mile northwest of the project site, supports beneficial uses for cold and warm freshwater water habitat (COLD and WARM), fish migration (MIGR), fish spawning (SPWN), wildlife habitat (WILD), and contact and noncontact water recreation (REC-1 and REC-2). The designated beneficial uses of San Francisquito Creek are impaired by pesticides, sediment, and trash.

Matadero Creek and Mayfield Slough are located approximately 0.7 mile southeast of the project site. Matadero Creek supports beneficial uses for COLD, MIGR, preservation of rare and endangered species (RARE), SPWN, WARM, WILD, REC-1, and REC-2. Mayfield Slough supports beneficial uses for estuarine habitat (EST), MIGR, RARE, WILD, REC-1, and REC-2. The three waterbodies listed above all drain to the Palo Alto Harbor & Baylands, which supports beneficial uses for EST, MIGR, RARE, WILD, REC-1 and REC-2. The beneficial uses of Matadero Creek are impaired by pesticides and trash.

The project site is generally flat and currently entirely developed and paved. On-site runoff occurs as overland flow across the existing pavement and generally flows to the south and east. This overland flow is eventually captured by the City's storm drain system and conveyed to the nearest waterway and eventually to the San Francisco Bay. Off-site runoff is transported

beneath the project site via storm drains that eventually convey the stormwater runoff to the San Francisco Bay. The proposed project includes the installation of bio-swales along the western and southern perimeters of the project site. These bio-swales would capture some stormwater from the site, slowing the rate of stormwater runoff, promoting infiltration, and capturing pollutants. Therefore, the proposed project would improve on-site stormwater retention and treatment compared to existing conditions.

In addition, the project would be required to comply with Chapter 16.11.030 of the PAMC, which addresses stormwater pollution prevention. These stormwater regulations require new development projects to implement permanent stormwater pollution prevention measures to control the sources of stormwater pollutants.

Additionally, as part of Section 402 of the Clean Water Act, the U.S. Environmental Protection Agency has established regulations under the National Pollution Discharge Elimination System (NPDES) program to control both construction and operation (occupancy) storm water discharges.

In California, the State Water Quality Control Board administers the NPDES permitting program and is responsible for developing permitting requirements. The project would be required to comply with the NPDES permitting system. Under the conditions of the permit, the project applicant would be required to eliminate or reduce non stormwater discharges to waters of the nation, develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the project construction activities, and perform inspections of the storm water pollution prevention measures and control practices to ensure conformance with the site SWPPP. The state permit prohibits the discharge of materials other than storm water discharges, and prohibits all discharges that contain a hazardous substance in excess of reportable quantities established at 40 Code of Federal Regulations (CFR) 117.3 or 40 CFR 302.4. The state permit also specifies that construction activities must meet all applicable provisions of Sections 301 and 402 of the Clean Water Act (CWA). Conformance with Section 402 of the CWA would ensure that the proposed project does not violate water quality standards or waste discharge requirements, provide a substantial additional source of polluted runoff, or otherwise substantially degrade water quality.

With compliance with these requirements and installation of on-site bio-swales, impacts would be less than significant. The proposed project would not increase stormwater pollutants or cause erosion such that the water quality of the nearby waterbodies would be impacted.

b) *LESS THAN SIGNIFICANT IMPACT*. As discussed in Section XVII, *Utilities and Service Systems*, the proposed project would receive its water from the San Francisco Public Utilities Commission (SFPUC). The Regional Water System collects water from the Tuolumne River in the Sierra Nevada and from protected local watersheds in the East Bay and Peninsula. Development under the proposed project would not include installation of new groundwater wells, or use of groundwater from existing wells. Additionally, the project site is currently almost entirely impermeable. Implementation of the proposed project would not alter existing permeability conditions. Therefore, development under the proposed project would not result in a net deficit in aquifer volume or a lowering of the groundwater table.

c, d) *LESS THAN SIGNIFICANT IMPACT*. According to the City's CEQA thresholds, a significant impact would occur if the project would cause bank instability. The proposed project would not alter the course of a stream or river and would not cause stream bank instability. San Francisquito Creek is located 0.3 mile northwest of the proposed project site and does not flow through or adjacent to the site. Additionally, Matadero Creek and Mayfield Slough are located approximately 0.7 mile the south of the project site and do not flow through or adjacent to the site. The area is currently developed, and construction of the proposed project would not alter the course of these waterways or any other stream or river (no other surface water features are identified in the project area). The area is largely paved, and proposed development would not introduce new paved areas to the extent that the rate or amount of surface runoff would substantially increase.

The project site is connected to an existing stormwater drainage system located in the City of Palo Alto San Francisco Bay Watershed. Stormwater runoff in the project area is currently flowing directly to the San Francisco Bay. The project site is currently nearly entirely developed and paved with some landscaping. As described above under subsection (a, e, f), the proposed project would not increase the amount of impervious surface area compared to existing conditions. In addition, the City of Palo Alto is a participating agency in the Santa Clara Valley Urban Runoff Pollution Prevention Program ("Program"). The City must meet the provisions of the Municipal Regional Stormwater Permit by ensuring that new development and redevelopment mitigate water quality impacts to stormwater runoff both during the construction and operation of projects. The Program's Permit Provision C.3 contains requirements for controlling the potential impacts of land development on stormwater quality and flow. Projects that create or replace 10,000 square feet or more of impervious surface must include appropriate site design measures, pollutant source controls and treatment control measures. Projects that produce increases in runoff peak flows, volumes and durations that may cause erosion in downstream receiving water must also include hydromodification control measures. The proposed project would involve replacing more than 10,000 square feet of impervious surfaces and would be subject to these requirements.

The proposed project would not substantially alter the drainage pattern of the site such that substantial erosion, siltation, or flooding would occur. In addition, the proposed project would not alter any drainage features associated with the Baylands. Impacts would be less than significant.

g-i) *LESS THAN SIGNIFICANT IMPACT*. The project site is located within Flood Zone AE10.5, a Special Flood Hazard Area (SFHA) where the flood waters are "ponded," with a more or less level surface like a lake (City of Palo Alto Online Parcel Reports, 2016; FEMA, Flood Insurance Rate Map 06085C0030H, 2009). The largest AE zone in Palo Alto is an area predicted to be flooded by extraordinary bay tides overtopping the levees around the Baylands and reaching a height of nearly eight feet above sea level. This AE zone covers a large area generally from Middlefield Road to the bay. Some properties within this area have an elevation as low as 2.1 feet above sea level, meaning the predicted flood would be some six feet deep.

The proposed auto dealership building would have an elevated finished floor slab on a series of piers to establish the required height above sea level per FEMA standards. Since the project site is within the AE10.5 zone, the base flood elevation for the project site is 10.5 feet above mean sea

level (MSL). The finished floor elevation for the proposed project would be at 10.68 feet MSL. Therefore, the building would be above the floor elevation. FEMA requires an elevation certificate, which shows new buildings in all identified SFHAs are properly elevated. This elevation information is needed to show compliance with the floodplain management ordinance (FEMA, 2016). Communities participating in the Community Rating System (CRS) are required to use the FEMA Elevation Certificate (FEMA, 2016). As a community participating in the National Flood Insurance Program, Palo Alto is required to impose the federal rules regarding construction in an SFHH (Palo Alto, 2016). Pursuant to Chapter 16.52 Flood Hazard Regulations, the proposed project would comply with PAMC Section 16.52.130 Standards of Construction. The elevated floor design would allow the site to be naturally drained to Best Management Practices (BMP) surface treatments located around the perimeter of the site. Additionally, the carwash structure is designed as a slab on grade with drainage in accordance with the City's required openings at the base for water to pass through in case of flooding. As a result, potential flood hazards to habitable structures would be less than significant.

Levees were built in the Baylands to drain the wetlands. Flooding in the AE Zone is due to potential overtopping of the Bayfront levees in the event of an extremely high tide (Palo Alto, 2016). Because the levees lack required freeboard (additional height above the estimated high water level) and were not constructed in accordance with current engineering standards, FEMA does not consider these levees to be adequate protection from a high tide event that has a one percent (100-year) probability of occurring (Palo Alto, 2016). The Flood Insurance Rate Maps were prepared under the assumption that the levees will overtop or fail and that the area in the AE 10.5 Zone will be flooded by tidal water to an elevation of ten and one-half feet above sea level (which is not the same as a depth of ten and one-half feet) (Palo Alto, 2016). However, pursuant to Chapter 16.52 Flood Hazard Regulations, the proposed project would be required to comply with PAMC Section 16.52.130, Standards of Construction.

As a result, the project would not expose people or structures to a significant loss, injury, or death involving flooding, including flooding as a result of the failure of a levee. In addition, the project site is not within a damn inundation zone (Palo Alto Comprehensive Plan, Natural Environment Element, 2007). Impacts would be less than significant.

j) *LESS THAN SIGNIFICANT IMPACT*. The project site is located approximately a mile from the San Francisco Bay and approximately 17 miles from the coast of the Pacific Ocean. The risk of a tsunami is negligible due to the distance from the Pacific Ocean. According to the City of Palo Alto's Natural and Urban Environment and Safety Element, mudflows and seiches are not identified as issues for the city. In addition, the nearest body of water that could experience a seiche event is the San Francisco bay, which is located approximately a mile east of the project site. However, due to various physical barriers (i.e. buildings) between the Bay and the project site, a seiche in the Bay would not have potential to affect the project site. The project site is flat and surrounded by commercial development away from crests and very steep ridges. Therefore, the project site is located in a low hazard area for tsunami, seiche, and mudflow. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
LAND USE AND PLANNING				
Would the project:				
Physically divide an established community?				
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			•	
Conflict with an applicable habitat conservation plan or natural community				
	 LAND USE AND PLANNING Would the project: Physically divide an established community? Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? Conflict with an applicable habitat conservation plan or natural community conservation plan? 	Potentially Significant Impact LAND USE AND PLANNING Would the project: Physically divide an established community? Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? Conflict with an applicable habitat conservation plan or natural community conservation plan?	Potentially Significant ImpactPotentially Significant Unless Mitigation IncorporatedLAND USE AND PLANNING Would the project:Physically divide an established community?Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?Conflict with an applicable habitat conservation plan or natural community conservation plan 2	Potentially Significant Unless Mitigation IncorporatedLess than Significant ImpactLAND USE AND PLANNING Would the project:

a) *NO IMPACT*. The proposed project would involve the demolition of an existing 17,942sqaure foot restaurant building and associated surface parking lot and the construction and operation of two new buildings: a three-story auto dealership building with parking and a detached carwash. The project site is located on Embarcadero Road in a fully urbanized area of Palo Alto near the Baylands. Implementation of the proposed project would continue the existing commercial development pattern in the vicinity, and would not cut off connected neighborhoods or land uses from each other. No new roads, linear infrastructure or other development features are proposed that would divide an established community or limit movement, travel or social interaction between established land uses.

b) LESS THAN SIGNIFICANT IMPACT.

City of Palo Alto Comprehensive Plan

The project site has a Comprehensive Plan land use designation of Service Commercial. As described in the City of Palo Alto's Comprehensive Plan, the CS land use designation allows for facilities providing citywide and regional services and relying on customers arriving by car. Typical uses include auto services and dealerships, motels, lumberyards, appliance stores, and restaurants. Thus the proposed land use is consistent with this designation.

The Comprehensive Plan identifies the Embarcadero Corridor, in the Baylands, as the "East Bayshore Employment District." Goal B-6 calls for "Thriving Employment Districts at East Bayshore/San Antonio Road Area and Bayshore Corridor that Complement the City's Business and Neighborhood Centers." The supportive text for Goal B-6 goes on to say that "These Districts are an essential part of the local economic base. They provide thousands of jobs, create a customer base for many Palo Alto businesses, and generate revenues to the City through property and sales taxes. Keeping these areas economically healthy and viable will require local policies that recognize market realities and respond to the needs of local businesses." Additionally, Policy L-46 states to "Maintain the East Bayshore and San Antonio Road/Bayshore Corridor areas as diverse businesses and light industrial districts." The proposed project involves an auto dealership that would provide increased employment opportunities and sales tax revenue and would be generally consistent with these goals and policies of the Comprehensive Plan.

City of Palo Alto Zoning Ordinance

The project site is zoned Service Commercial (CS). The proposed auto dealership building would not be allowed under this designation and zoning. The proposed project includes a request to apply the Auto Dealership (AD) overlay to the site. According to PAMC Chapter 18.30.020, the AD combining district may be combined with a CS district and the CS(AD) combining district permits auto dealerships. Assuming the request to add the AD overlay is approved, the proposed project and use would be consistent with the zoning designation.

Pursuant to PAMC Section 18.16.060, Development Standards, the maximum floor area ratio for auto dealership uses is 0.4 to 1, with an additional 0.2:1 FAR permitted exclusively for auto showroom space, for a total FAR of 0.6:1. The maximum height allowed is 50 feet. The proposed auto dealership building would have a FAR of 0.56:1 and a maximum height of 50 feet. Therefore, the proposed project would be consistent with the FAR and height requirements in the PAMC. The proposed project would also meet parking requirements in accordance with PAMC 18.52 and 18.54 (see Section XVI, *Transportation/Traffic*).

The applicant is also requesting a Design Enhancement Exception (DEE) per PAMC Section 18.76.050 to deviate from the "build-to-line" requirement with the CS district. According to the build-to-line requirement for the CS district, 50% of the frontage of the building is required to be built to the front setback of 10 feet from Embarcadero Road. The proposed project would be setback 40 feet from Embarcadero Road. Therefore, none of the building would be built to the front 10-foot setback. However, assuming the DEE is granted, the proposed project not conflict with the build-to-line requirement for 50% of the building frontage to be 10-foot from Embarcadero Road. The proposed auto dealership structure would also be set back 80-feet from East Bayshore Road to accommodate the 80-foot utility easement for thee high voltage power lines.

Baylands Master Plan

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

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

The Site Assessment and Design Guidelines (2006), Palo Alto Baylands Nature Preserve was prepared to help implement the Baylands Master Plan and the Baylands-related policies and programs in the Comprehensive Plan. The guidelines are intended to be used when designing or reviewing projects located in any part of the Baylands. While the more specific guidelines are primarily applicable to the dedicated parkland, the design principles and concepts should also be applied in the service and commercial areas when designing or reviewing projects for compatibility with the special aesthetic qualities and environmental conditions unique to the Baylands. The City's Architectural Review Board would consider this policy context and the site's proximity to the Baylands during their review of the project. Therefore, the proposed project is potentially consistent with the first private lands policy in the Baylands Master Plan.

The proposed project would involve a landscaped stormwater bio-retention area on along the southern boundary of the project site. The southern boundary would also include a total of nine trees, including perimeter screening trees and parking lot shade trees. The landscaping palette for the project site would include "Bayland-inspired" plantings such as native plants and trees. The proposed project would thus also be generally consistent with the second policy that calls for screening planting along the southern edge of the site. In addition, on the northwestern corner of the project site, the proposed project would involve public amenities (bench seating, bike repair and water station).

Based on the discussion above, the proposed project would be generally consistent with the Baylands Master Plan. In addition, the proposed project would not involve the direct removal, filling, hydrological interruption, or other means to the bed, bank, channel or adjacent upland area of the fresh water emergent wetland.

In addition to checklist question (b) above, according to the City's CEQA thresholds, a significant impact would also occur if the proposed project would:

1) *substantially adversely change the type or intensity of existing or planned land use in the area.* The project involves the demolition of an existing one-story restaurant and the construction of a new three-story auto dealership building and detached car wash structure. The project would increase the massing and intensity of development on the project site (see Figure 4). However, the existing visual character and quality of the site, characterized by a one-story commercial building, surface parking and landscaping, are considered low to moderate. In addition, the project would generally be within the range of development intensity of the surrounding area, which includes one- to three-story office park and commercial developments. Further, the proposed project is consistent with the allowed height and FAR for the project site (see discussion above under "City of Palo Alto Zoning Ordinance"). The type and intensity of the proposed project would be greater than existing for the site but generally within the range of adjacent and surrounding land use and development. As a result, the project would be bigger and more intense, but the change would not be substantially adverse.

2) *be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height.*

The project would be generally consistent with the size and scale of the adjacent two-story office building to the south and two-story auto dealership located to the east, although it would be

approximately one story taller than most development in the neighborhood. The proposed project would be consistent with height and FAR requirements set forth in the Palo Alto Municipal Code (PAMC) for CS(AD) properties. In addition, with approval of the DEE ad due to the utility easement along East Bayshore Road, the proposed project would be set back from Embarcadero and East Bayshore roads to decrease the perceived massing from adjacent sidewalks and roads. Therefore, the project would be generally compatible with the general character or the surrounding area, including density and building height.

3) conflict with established residential, recreational, educational, religious, or scientific uses of an area.

There are two such facilities in proximity to the site (within 0.25 miles). The closest recreational and residential uses are Baylands Athletic Center approximately 1,000 feet north, the Palo Alto Golf Course approximately 500 feet northeast, and the residences on Saint Francis Drive approximately 2,500 feet west of the project site. The proposed auto dealership building and detached carwash would not conflict with these uses. Therefore, impacts would be less than significant.

c) *NO IMPACT*. The project site is located in an entirely urbanized area of Palo Alto and is currently zoned for urban uses. There are not natural communities or habitats located on the project site. As discussed above in Section IV, *Biological Resources*, the project site is not within an approved Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Additionally, the proposed project would adhere to the City's Baylands Master Plan. Therefore, the project would not conflict with any habitat/natural community conservation plans and no impact would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XI. 	MINERAL RESOURCES Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				-
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				

a, b) *NO IMPACT*. The project site and surrounding properties are part of an urbanized area with no current oil or gas extraction. According to the Natural Environment Element of the Comprehensive Plan, there are no policies relating to mineral resources because Palo Alto does not contain any mineral deposits of regional significance (City of Palo Alto Comprehensive Plan, 2007). No mineral resource activities would be altered or displaced by the proposed project. No impact would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XII	NOISE				
V	Vould the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			•	
c)	A substantial permanent increase in ambient noise levels above levels existing without the project?				
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				
e)	For a project located within 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?			-	
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise?				

Noise Fundamentals

Noise is defined as unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

Because of the logarithmic scale of the decibel unit, sound levels cannot be added or subtracted arithmetically. If a sound's physical intensity is doubled, the sound level increases by 3 dBA, regardless of the initial sound level. For example, 60 dBA plus 60 dBA equals 63 dBA. Where

ambient noise levels are high in comparison to a new noise source, the change in noise level would be less than 3 dBA. For example, 70 dBA ambient noise levels are combined with a 60 dBA noise source the resulting noise level equals 70.4 dBA.

Noise that is experienced at any receptor can be attenuated by distance or the presence of noise barriers or intervening terrain. Sound from a single source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance. For acoustically absorptive, or soft, sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), ground attenuation of about 1.5 dBA per doubling of distance normally occurs. A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receiver, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver specifically result in at least 5 dBA of noise reduction.

Vibration Fundamentals

Vibration is a unique form of noise. It is unique because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from passing trucks. This phenomenon is caused by the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S.

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel wheeled trains, and traffic on rough roads.

Regulatory Setting

<u>City of Palo Alto Comprehensive Plan.</u> The City's Comprehensive Plan Natural Environment Element includes goals and policies related to noise. This element establishes land use compatibility categories for community noise exposure (see Table XII-1). For residential land uses, noise levels up to 60 dBA Ldn are identified as generally acceptable and levels up to 75 dBA Ldn as conditionally acceptable noise levels. For office uses, noise levels up to 70 dBA Ldn are identified as normally acceptable and noise levels between 70 and 80 dBA Ldn are identified as conditionally acceptable.

Land Lice Cotegory	Exterior Noise Exposure L _{dn} or CNEL or dB			
Land Use Category	Normally Acceptable	Conditionally Acceptable	Unacceptable	
Residential, Hotel and Motels	50-60	60-75	75+	
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	50-65	65-80	80+	
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	50-60	60-75	75+	
Office Buildings, Business Commercial, and Professional	50-70	70-80	80+	
Auditoriums, Concert Halls, & Amphitheaters	N/A	50-75	75+	
Industrial, Manufacturing, Utilities, and Agriculture	50-70	75+	N/A	

 Table XII-1

 Palo Alto Land Use Compatibility for Community Noise Environments

Source: City of Palo Alto Comprehensive Plan Update Noise Draft Existing Conditions Report, August 29, 2014

<u>City of Palo Alto Municipal Code.</u> The PAMC regulates noise primarily through the Noise Ordinance, which comprises Chapter 9.10 of the Code, under Title 9, Public Peace, Morals and Safety. The PAMC contains additional specific and general provisions relating to noise. Most notably, the PAMC contains performance standards for Multiple Family, Commercial, Manufacturing and Planned Community Districts. For commercial and industrial properties, a violation occurs at an increase of eight or more decibels.

<u>Federal Railroad Administration</u>. Vibration impacts would be significant if they exceed the following Federal Railroad Administration (FRA) thresholds:

- 65 VdB where low ambient vibration is essential for interior operations, such as hospitals and recording studios
- 72 VdB for residences and buildings where people normally sleep, including hotels
- 75 VdB for institutional land uses with primary daytime use, such as churches and schools
- 95 VdB for physical damage to extremely fragile historic buildings
- 100 VdB for physical damage to buildings

Construction-related vibration impacts would be less than significant for residential receptors if they are below the threshold of physical damage to buildings and occur during the City's normally permitted hours of construction, as described above, because these construction hours are during the daytime and would therefore not normally interfere with sleep.

a, c) *LESS THAN SIGNIFICANT IMPACT*. The main noise source on the project site is traffic noise from adjacent roadways, especially Embarcadero Road which is adjacent to the site. The project site is adjacent to commercial, office, and automotive uses. The Noise Element of the City's Comprehensive Plan identifies noise levels up to 70 dBA Ldn as generally acceptable and up to 80 dBA Ldn as conditionally acceptable noise levels for commercial uses.

Noise associated with operation of the proposed project may be periodically audible at adjacent uses. The proposed project would involve retail sales and repair service operation with ancillary carwash for automobile sales and service customers. Noise events that are typical of automotive uses involving auto repair and sales and carwash buildings include auto traffic, announcements, conversations, light industrial mechanical equipment as well as noise typical of parking areas such as car alarms and car doors slamming. Vehicles to be serviced on the site would drop off and pick up vehicles at the service area on the southern side of the proposed building. In this area would also be a small express service area with space for three vehicles. The main vehicle service/repair area would be located on the third floor. Because the service/repair area would be located within the building, most noise would be shielded and would not affect the ambient noise environment. The car wash would be located at the southern boundary of the project site. Noise from the mechanical equipment associated with the car wash could be audible at adjacent uses. However, the car wash is adjacent to a parking area. The office building south of the project site is located over 150 feet away. In addition, noise would only occur intermittently when the car wash is in operation. No sensitive receptors are located within 500 feet of the site. Noise associated with vehicle repair and washing would not create a substantial permanent increase in ambient noise levels and would not affect sensitive receptors.

On-site operations would also involve noise associated with rooftop heating, ventilation, and air condition systems (HVAC), heavy-duty truck deliveries, and trash hauling. Noise levels from commercial HVAC equipment can reach 100 dBA at a distance of three feet (USEPA, 1971). These units usually have noise shielding cabinets placed on the roof or are in mechanical equipment rooms. Typically, the shielding and location of these units reduces noise levels to no greater than 55 dBA at 50 feet from the source. The rooftop HVAC systems for the proposed project would be at least 50 feet from adjacent uses and would not create significant noise impacts. In addition, noise associated with truck deliveries and trash hauling would be similar to the surrounding commercial uses and previous on-site restaurant uses and would not result in substantial increase compared to the existing commercial use on-site.

Further, project-related changes in noise would result from an increase in traffic volumes on nearby street segments. For traffic-related noise, impacts would be significant if projectgenerated traffic results in exposure of sensitive receptors to unacceptable noise levels. Some land uses are considered more sensitive to ambient noise levels than other uses due to the amount of noise exposure and the types of activities involved. Residences, motels, hotels, schools, libraries, churches, nursing homes, auditoriums, parks and outdoor recreation areas are more sensitive to noise than are commercial and industrial land uses. The project site is surrounded by light industrial and commercial uses. Traffic to and from the project site would use surrounding roadways such as East Bayshore Road, Embarcadero Road, and the U.S. 101 freeway. There are no sensitive receptors on these roadways in the vicinity of the project site. As discussed in Section XVI, Transportation and Traffic, the existing storage capacity for the northbound left-turn lane from East Bayshore Road onto Embarcadero Road is currently exceeding capacity during the PM peak hour. The proposed project would add to this movement during the PM Peak Hour (Hexagon, 2016). However, there are no sensitive receptors heading west on Embarcadero Road. Therefore, impacts would be less than significant.

b) *LESS THAN SIGNIFICANT IMPACT*. The proposed project would involve standard construction activities that are anticipated to result in some vibration that may be felt on properties in the immediate vicinity of the project site, as commonly occurs with construction projects.

The closest building to the project site is the Audi Dealership approximately 25 feet to the east; however, the closest sensitive receptor to the project site is the school (Hope Technology) approximately 500 feet south of the project site. As shown in Table XII-2, vibration levels could reach approximately 87 VdB at the Audi Dealership and 61 VdB at the closest receptor; therefore, vibration levels would not exceed the FRA threshold of 72 VdB for institutions and buildings where people normally learn, including schools. However, in accordance with the PAMC, noise- and vibration-generating construction activity is limited to the hours of 8 AM to 6 PM Monday through Friday and 9 AM to 6 PM on Saturday. Construction is prohibited on Sundays and holidays (New year's day, Labor day, Martin Luther King day, Columbus day, Washington's birthday, Veteran's day, Memorial day, Thanksgiving day, Independence day, Christmas day).

Therefore, due to the project's distance from the sensitive receptor and regulated construction schedule, impacts to the nearby school would be less than significant. In addition, vibration levels would not exceed 95 VdB and therefore no damage to adjacent structures would occur.

Equipment	PPV at 25 ft (in/sec)	Approximately VdB at 25 ft	Approximate VdB at 50 ft	Approximate VdB at 500 ft
Large Bulldozer	0.089	87	81	61
Loaded Truck	0.076	86	80	60
Jack Hammer	0.035	79	73	53

Table XII-2Vibration Source Levels for Construction Equipment

Source: Federal Transit Administration, 2006.

d) *LESS THAN SIGNIFICANT IMPACT*. The project would generate temporary noise increases during construction. Temporary noise increases would result from construction activities such as demolition, asphalt removal, grading, and excavation activities. Noise impacts are a function of the type of activity being undertaken and the distance to the receptor location. The closest building to the project site is the adjacent Audi Dealership building approximately 25 feet east of the site; however, the closest sensitive receptor to the project site is a school (Hope Technology) approximately 500 feet south of the project site. Table XII-3 identifies various construction equipment noise emission levels for different types of construction equipment at 25 and 500 feet from the source.

Equipment	Typical Noise Level (dBA) 25 ft from source	Typical Noise Level (dBA) 50 ft from source	Typical Noise Level (dBA) 500 ft from the source			
Dozer	91	85	65			
Truck	94	88	68			
Jack Hammer	94	88	68			

 Table XII-3

 Construction Equipment Noise Emission Levels

Source: Federal Transit Administration, 2006.

Pursuant to Section 9.10.060 of the PAMC, noise associated construction activities are restricted to the hours of 8 AM to 6 PM Monday through Friday and 9 AM to 6 PM on Saturday. Construction is prohibited on Sundays and holidays (New year's day, Labor day, Martin Luther King day, Columbus day, Washington's birthday, Veteran's day, Memorial day, Thanksgiving day, Independence day, Christmas day). Construction, demolition or repair activities during those hours must meet the following standards:

- No individual piece of equipment shall produce a noise level exceeding 110 dBA at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made out-side the structure at a distance as close to 25 feet from the equipment as possible.
- The noise level at any point outside of the property plane of the project shall not exceed 110 dBA.
- The holder of a valid construction permit for a construction project in a non-residential zone shall post a sign at all entrances to the construction site upon commencement of construction, for the purpose of informing all contractors and subcontractors, their employees, agents, materialmen and all other persons at the construction site, of the basic requirements of this chapter.

The closest receptor is approximately 500 feet south of the project site. As seen above in Table 11, the typical noise level at 500 feet would reach a maximum of 68 dBA. This noise level would be generally similar to existing ambient noise levels in much of the area. Additionally, construction noise impacts would be temporary, and construction contractors would be required to comply with PAMC requirements restricting hours of excessive noise generation. Therefore, the project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Impacts would be less than significant.

e, f) *LESS THAN SIGNIFICANT IMPACT*. The Palo Alto Airport of Santa Clara County (PAO) is the closest airport to the project site. According to the Comprehensive Plan, air traffic makes only a modest contribution to the noise environment of Palo Alto. PAO is a 103-acre facility with a single run way, parallel taxiway, and a building area located approximately 0.2 miles east of the project site. The airport primarily serves small general aviation aircraft. The project is located within the PAO Airport Influence Area (AIA). As a result, the project site would be subject to noise, height, and safety considerations and must be evaluated to determine how the Airport Comprehensive Land Use Plan may impact the proposed development. This evaluation is to determine that the development meets the conditions specified for height restrictions, and noise and safety protection to the public. The project consists of the construction of a new auto dealership building and detached carwash. However, neither would be more than 50 feet (auto

dealership max height 50 feet) or four stories (auto dealership 3 stories) in height. Additionally, the proposed auto dealership project would not involve the conversion of land from existing or planned agricultural, industrial, or commercial use to residential uses. The project would continue the existing land use pattern of commercial uses. The proposed project would not expose people working in the project area to excessive noise levels. Therefore, the project would not need a review from the Airport Land Use Commission (ALUC).

At the nearest points within city limits, Palo Alto is located approximately 2.6 miles to the west of Moffett Federal Airfield, 6 miles to the southeast of San Carlos Airport, 10 miles to the northwest of the San Jose International Airport, 15 miles to the southeast of San Francisco International Airport, and 17 miles to the south of Oakland International Airport. Although Palo Alto does receive some noise from aircraft using these facilities, the Palo Alto city limit does not fall within the airport land use planning areas/airport influence areas, runway protection zones, or the identified noise contours of any airport other than Palo Alto Airport. As a result, impacts would be less than significant.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIII	. POPULATION AND HOUSING				
	Would the project:				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				•

a) *LESS THAN SIGNIFICANT IMPACT*. In addition to the threshold under checklist item (a) above, according to the City's CEQA thresholds, the project would result in a significant impact if it would cumulatively exceed regional or local population projections or would create an imbalance between employed residents and jobs. The proposed development would not involve new residential units and, therefore, would not directly generate population growth. Therefore, the proposed project would not exceed regional or local population projections.

The proposed project would involve commercial uses, which would result in the generation of additional employment opportunities. According to the project applicant, the proposed project would generate an estimated 63 jobs (25 techs, 5 support tech staff, 10 salesmen, 4 finance, 5 management positions, 4 service advisors, 4 valet positions, 4 carwash and detail positions, and 2 reception positions). Ming's Chinese Cuisine and Bar employed an estimated 49 employees

(Noguchi, 2014). Therefore, the proposed project would increase employment opportunities in the area by an estimated 14 jobs.

As discussed in the City's Comprehensive Plan 2015-2023 Housing Element (adopted November 2014), the City has a jobs/housing imbalance skewed to the jobs side of the ratio. The proposed project would contribute to this imbalance. Recent estimates put the current jobs/housing balance at 3.05 jobs per employed resident. This trend requires the City to import most of its workers to meet the needs of business and industry, indicating in a large unmet need for worker housing in the City. The Housing Element as well as amendments to the City's Zoning code have attempted to address the jobs/housing imbalance by allowing greater densities in transit areas, allowing mixed-use residential developments, and providing density bonuses for projects with affordable housing.

The project site has a Comprehensive Plan land use designation and zoned for Service Commercial. The proposed project is not consistent with the use designations for the sites. The project would require a zone change, per PAMC Section 18.80.030, to apply the Auto Dealership Combining (AD) District to allow the proposed use, additional FAR and other development standards for auto dealerships. Though the proposed project would incrementally affect the jobs/housing ratio, the project would not substantially impact the ratio. The project involves infill development on sites designated for commercial uses. Impacts would be adverse, but less than significant.

b, c) *NO IMPACT*. There are no housing units on the project site or people residing on the project site in any form of temporary housing. Therefore, the project would not displace any existing housing units or people. No impact would occur.

XIV	. PUBLIC SERVICES	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	i) Fire protection?			-	
	ii) Police protection?			•	

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. PUBLIC SERVICES				
iii) Schools?				•
iv) Parks?			•	
v) Other public facilities?				

a (i) *LESS THAN SIGNIFICANT IMPACT*. Fire protection is provided by the City of Palo Alto Fire Department (PAFD). The Fire Department provides fire suppression, paramedic ambulance service, search and rescue, fire prevention inspections/permits, public fire education programs, emergency preparedness planning and other services based on community needs. The proposed project would adhere to the conditions of approval set forth by the PAFD.

The fire station closest to the project site is Fire Station 3, located at 799 Embarcadero Road, approximately 1.4 miles west of the project site. The site is within the existing service area of the PAFD and onsite construction would comply with applicable Fire Code requirements. The proposed project would be a new commercial use in a commercial zone. The local water supply would be evaluated and additional fire hydrant(s) or relocation of existing hydrant(s) may be required, but the project would not create excessive demand for emergency services, so new fire protection facilities are not anticipated at this time (personal communication, Gordon Simpkinson, Plan Checker, Palo Alto Fire Department, November 13, 2015). With the continued implementation of existing practices of the City, including compliance with the California Fire Code, the proposed project would not significantly affect community fire protection services and would not result in the need for construction of fire protection facilities. Impacts would be less than significant.

a (ii) *LESS THAN SIGNIFICANT IMPACT*. Police protection is provided by the Palo Alto Police Department (PAPD). The closest police station is located at 275 Forest Avenue, which is approximately 2.6 miles west of the project site. The project site is within the PAPD's service area. It is assumed that the auto dealership would have a security system. The project would be located in an area with commercial uses. The proposed project would not create the need for new or expanded police protection facilities (personal communication, Craig Lee, Sergeant, Palo Alto Police Department, November 15, 2015). Impacts would be less than significant.

a (iii) *NO IMPACT*. The project site is served by the Palo Alto Unified School District (PAUSD). The proposed project would involve the construction of a new auto dealership building and carwash structure. The proposed project would not involve any new residential uses; therefore, the proposed project would not directly increase the number of school-aged children in the area. The proposed project would not result in the need for new or physically altered school facilities. No impacts to public schools would occur.
a (iv) LESS THAN SIGNIFICANT IMPACT. Refer to Section XV, Recreation.

a (v) *LESS THAN SIGNIFICANT IMPACT*. Library services are provided by the Palo Alto City Library (PACL). The closest library branch is Rinconada Library located at 1213 Newell Road, Palo Alto, CA 94303, which is 1.5 miles west of the project site. The proposed project would not directly generate substantial population growth and therefore would not result in the need for new library facilities.

Impacts to other public facilities (e.g., sewer storm drains and roadways) are discussed in Sections XVI, *Transportation/Traffic*, and Section XVII, *Utilities and Service Systems*, of this Initial Study. Impacts would be less than significant.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XV.	. RECREATION				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				-

a, b) *NO IMPACT*. The City of Palo Alto owns and operates approximately 36 parks and preserves, comprising about 162 acres of urban parks and 4,000 acres of open space (City of Palo Alto, 2015). The parks closest to the proposed project is Baylands Athletic Center, located less than half a mile north of the project site, and Greer Park, located 1.4 miles south of the project site. The City's estimated current population is 66,932 residents (DOF, 2015). Therefore, the ratio of public parks to residents in the City is 2.4 acres of parkland per for every 1,000 residents, which is slightly less than the standard ratio of 3 acres of parkland for every 1,000 residents used by the Quimby Act. Accounting for open space, the City has approximately 62 acres of parks and open space for every 1,000 residents.

The proposed project would not directly affect any existing or planned parks. Additionally, development of the proposed project does not involve new housing and would not directly add residents to the total City population. The parkland ratio would remain around 62 acres of parks and open space for every 1,000 residents after development of the proposed project. Therefore, the project would not substantially alter citywide demand for parks. No impacts to parks or recreational facilities would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
XV	I. TRANSPORTATION/TRAFFIC				
	Would the project:				
a)	Conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?		•		
b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		-		
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			•	
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?			•	
e)	Result in inadequate emergency access?				
f)	Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?			-	

a, b) **POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED.** Hexagon Transportation Consultants completed a traffic study for the proposed project in January of 2016 (see Appendix E). The discussion below is based primarily on the analysis and conclusions of this study.

Construction of the project would generate temporary construction-related traffic such as deliveries of equipment and materials to the project site and construction worker traffic. Construction traffic would be limited and temporary, and would not be substantial in relation to the existing traffic load and capacity of the street system. In addition, the project is on a four-

lane arterial roadway with direct access to US 101, so deliveries and hauling would not be routed through residential neighborhoods.

Methodology and Thresholds of Significance

According to the City's CEQA thresholds, in addition to the thresholds in the checklist above, significant impacts would occur if the proposed project would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- Result in inadequate parking capacity that impacts traffic circulation and air quality; or,
- Cause queuing impacts based on a comparative analysis between the design queue length and the available queue storage capacity;

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Palo Alto, the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP). 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.

Two nearby signalized intersections were analyzed: East Bayshore Road & Embarcadero Road and St. Francis Drive & Embarcadero Road. Two nearby freeway segments were analyzed: US 101 North of Embarcadero Road and US 101 South of Embarcadero Road. Additionally, four freeway ramps were analyzed: Southbound US 101 Off Ramp at Embarcadero Road, Southbound US 101 On Ramp at Embarcadero Road, Northbound US 101 Off Ramp at Embarcadero Road, and Northbound US 101 On Ramp at Embarcadero Road.

Levels of service were calculated for these intersections, freeway segments, and freeway ramps under the following scenarios:

- Existing (2015) Conditions
- Existing plus Project Conditions
- Background Conditions (estimated by adding to existing traffic volumes the trips generated by nearby approved projects that have not been completed or occupied, including the Palo Alto Golf Course Reconfiguration Project, Palo Alto Audi Expansion, and the Edgewood Plaza Shopping Center Project)
- Background plus Project Conditions
- Cumulative (2020) Conditions (estimated by applying a 1.4% annual growth rate through the year 2020 to the existing traffic conditions)
- Cumulative with Project Conditions.

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour is expected to occur between 7:00 AM and 9:00 AM and the PM peak hour is expected to occur between 4:00 PM and 6:00 PM on a

regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways.

Both of the signalized study intersections are located in the City of Palo Alto and are therefore subject to the City of Palo Alto level of service standards. The City of Palo Alto evaluates level of service at signalized intersections based on the 2000 Highway Capacity Manual (HCM) level of service methodology using TRAFFIX software. The City of Palo Alto level of service standard for signalized intersections is LOS D or better.

Both the City of Palo Alto and CMP guidelines consider a project to have a significant impact on an intersection if it causes the intersection LOS to fall from an acceptable level to unacceptable, or when, if the intersection is already operating at an unacceptable LOS, it causes both the critical-movement delay at the intersection to increase by four or more seconds and the demand-to-capacity ratio (V/C) to increase by .01 or more.

Project Trip Generation

Trip generation for the proposed automobile dealership was estimated based on calculating the average trip generation rates for nearby automobile dealerships in Palo Alto and Belmont, based on Showroom/Office Space square footage. Driveway counts were conducted at the Palo Alto Audi, Anderson Honda, and Autobahn Motors (Belmont) on July 22 and 23, 2015. Using these driveway counts, and the estimated showroom and office size, average rates for trips per 1,000 square feet were calculated from the three dealerships. Based on showroom size, the nearby automobile dealerships were found to produce 5.52 trips per 1,000 square feet during the AM peak hour, and 8.01 trips per 1,000 square feet during the PM peak hour.

Using these rates, as shown in Table XVI-1, the project is estimated to produce 102 total trips during the AM peak hour, with 57 trips inbound and 45 trips outbound. During the PM peak hour, the project is estimated to produce 149 total trips, with 58 trips inbound and 91 trips outbound. No credit was given for the existing restaurant on the site because it is vacant.

	Showroom	om Rate ¹		AM Peak Hour Trips			PM Peak Hour Trips		
	Size (ksf)	AM	РМ	In	Out	Total	In	Out	Total
Proposed Project	18.537	5.52	8.01	57	45	102	58	91	149
New Trips Generated			57	45	102	58	91	149	

Table XVI-1Project Trip Generation Estimates

¹ Peak Hour rates based on trips per 1,000 square feet of Showroom/Office Space from similar Auto Dealerships in Palo Alto and Belmont

Source: Hexagon Transportation Consultants, January 2016 (see Appendix E).

Intersection Analysis

Tables XVI-2, XVI-3, and XVI-4 show the proposed intersection levels of service under existing, background, and cumulative conditions with the proposed project.

		Existing		Existing Plus Project					
Intersection Name	Peak Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Increase in Critical Delay (sec)	Increase in Critical V/C		
E Bayshore Rd /	AM	47.7	D	52.4	D	2.8	0.009		
Embarcadero Rd ¹	PM	83.5	F	91.2	F	4.5	0.016		
St Francis Dr /	AM	20.8	С	20.8	С	0.0	0.002		
Embarcadero Rd	PM	11.8	В	11.8	В	0.0	0.002		

Table XVI-2 Existing Intersection Level of Service Summary

Notes:

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.

Bold indicates a substandard level of service.

Source: Hexagon Transportation Consultants, January 2016 (see Appendix E).

		Background		Background Plus Project					
Intersection Name	Peak Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Increase in Critical Delay (sec)	Increase in Critical V/C		
F Bayshore Rd /	AM	48.7	D	53.5	D	2.8	0.009		
Embarcadero Rd ¹	PM	95.6	F	104.2	F	5.1	0.015		
		With Mitigation		88.7	F				
St Francis Dr /	AM	21.9	С	21.8	С	0.0	0.002		
Embarcadero Rd	PM	16.0	В	15.9	В	0.0	0.002		

Table XVI-3Background Intersection Level of Service Summary

Notes:

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.

Bold indicates a substandard level of service.

Bold indicates a significant project impact.

Source: Hexagon Transportation Consultants, January 2016 (see Appendix E).

Table XVI-4
Cumulative (2020) Intersection Level of Service Summary

	Book	Cumulat	ive	Cumulative Plus Project					
Intersection Name	Hour	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Increase in Critical Delay ²	Increase in Critical V/C		
	AM	65.7	Е	73.0	Ε	10.3	0.028		
E Bayshore Rd /		With Mit	61.1	Ε					
Emparcadero Ru	PM	122.0	F	136.3	F	19.4	0.048		
With Mitigation			111.6	F					
St Francis Dr /	AM	22.9	С	23.0	С	0.0	0.002		
Embarcadero Rd	PM	16.4	В	16.4	В	0.0	0.002		

Notes:

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.
² Increase in Critical Delay and Increase in Critical V/C were calculated by comparing Cumulative with Cumulative No Project

² Increase in Critical Delay and Increase in Critical V/C were calculated by comparing Cumulative with Cumulative No Project Conditions.

Bold indicates a substandard level of service.

Bold *indicates a significant project impact.*

Source: Hexagon Transportation Consultants, January 2016 (see Appendix E).

As shown in the tables, the addition of project-generated traffic would create a significant impact at the intersection of East Bayshore Road and Embarcadero Road during the PM peak hour under Background plus Project and Cumulative scenarios, and during the AM peak hour under the Cumulative scenario. Mitigation is required to reduce impacts to a less than significant level. The identified mitigation would address congestion related to the large volume of left turns and a large volume of through traffic on eastbound Embarcadero Road in the morning. Creating two separate dedicated left turn lanes and two through lanes would reduce delay for eastbound traffic.

Mitigation Measure

The following mitigation measure would be required to reduce traffic impacts. With implementation of *Mitigation Measure T-1*, impacts would be less than significant.

- **T-1 East Bayshore Road and Embarcadero Road.** The project applicant shall construct the following improvements and enter into a reimbursement agreement with the City for payment less their fair share of the improvement costs:
 - Revise the eastbound leg on Embarcadero Road to include two leftturn pockets, a through lane, and a shared through/right-turn lane. This improvement shall also include changing the east-west phasing from split phase timing to protected left turn phasing.
 - 2. Restripe the northbound approach to have one left turn lane and one shared left-through-right lane. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection.

Freeway Analysis

Freeway Segment Analysis. The freeway segment closest to the project site is US 101 between Embarcadero Road and University Avenue. This segment was operating at LOS F during the PM peak hour in 1991, when the Santa Clara County Congestion Management Plan (CMP) was first adopted. The CMP defines an acceptable level of service for freeway segments in Santa Clara County as LOS E or better. According to CMP methodology, the proposed project would create a significant adverse impact on traffic conditions on a CMP freeway segment if for either peak hour the number of project trips on that segment constitutes at least one percent of capacity on that segment.

According to Hexagon Transportation Consultants, the project would contribute trips equivalent to less than one percent of the segment capacity (see Tables 9 and 10 in Appendix E). Thus, the project would have a less than significant impact on nearby freeway segments (Hexagon Transportation Consultants, 2016).

Freeway Ramp Capacity Analysis. The analysis of freeway ramps provided in the Hexagon traffic study showed that the US 101 ramps at Embarcadero Road that provide access to the project site would have sufficient capacity to serve the projected traffic volumes with the proposed project. The study ramps are expected to have volume-to-capacity (V/C) ratios below 1.0. Therefore, the project is considered to have a less than significant impact on the study

freeway ramps. Based on field observations, the freeway ramps are congested during peak hours. This congestion is largely due to the congestion on the freeway itself due to the current construction project at the US 101 crossing over San Francisquito Creek north of the project site. Absent the construction project, the ramps themselves have adequate capacity to serve the volumes of vehicles that used them prior to the construction.

The project is considered to have a less than significant impact on the study freeway ramps. However, it is recommended that these ramps be reevaluated following the completion of these construction projects. With the completion of the construction, the freeway is expected to carry additional traffic, and the ramp should be analyzed to determine if ramp metering rates or signal timing at the ramp-arterial intersections should be adjusted to reduce potential on- and off-ramp queuing.

<u>Parking</u>

According to the City of Palo Alto Zoning Ordinance (PAMC Chapter 18.52), the project is required to provide parking at the following rates:

- *Automobile Dealerships*: 1 per 400 sq. ft. of sales, service and office administration area, and 1 per 500 sq. ft. of exterior sales or display area, excluding automobile storage (not on display)
- Automotive Services & Service Station
 - (a) Service Station: 1 per 350 sq. ft. of gross enclosed floor area, plus queue capacity equivalent to the service capacity of gasoline pumps
 - (b) Services, Enclosed: 1 per 350 sq. ft. of enclosed space; and 1 per 500 sq. ft. of exterior sales, display or storage site area (open lot area)

As shown in Table 1, the total required parking is 165 spaces (91 spaces for sales service & office, 67 spaces for automotive services, enclosed, and seven (7) spaces for exterior sales/display). The proposed auto dealership would provide a total of 179 parking spaces.

Queuing Analysis

The traffic study prepared by Hexagon (January 2016) included a queuing analysis. The existing storage capacity for the northbound left-turn lane from East Bayshore Road onto Embarcadero Road is up to 11 vehicles (275 feet) without interfering with other movements. The number of left-turning vehicles already exceeds this capacity during the PM peak hour. The project would add <u>7743</u> vehicles to this movement during the PM peak hour. The 95th percentile queue with the proposed project is projected to extend to 425 feet. The roadway is not wide enough, between the stripped yellow line and the curb, to allow for all vehicles going right or through at the intersection to make it around this queue. Embarcadero Road is wide enough for the center line to be restriped to extend the left turn pocket should the City desire to do so. With implementation of *Mitigation Measure T-1*, impacts would be less than significant.

Site Access and Circulation

The proposed project would make use of the existing site driveways, one of which is located on Embarcadero Road near Geng Road, and the other is located on E. Bayshore Road at the southern edge of the property. The Embarcadero Road driveway would be restricted to right

turns only due to the median on Embarcadero Road. The driveway on East Bayshore Road would allow full access.

Most vehicles entering the site will be heading eastbound on Embarcadero Road, either coming from the freeway or Palo Alto. These vehicles could enter the site either by making a left turn off of East Bayshore Road or a right turn off of Embarcadero Road. Most vehicles exiting the site would travel westbound on Embarcadero Road. They could do so by first turning right on East Bayshore Road and then left on Embarcadero Road at the signal. Vehicles exiting the Embarcadero Road driveway would have a difficult time heading west on Embarcadero Road. There is a median preventing left turns, and the driveway is too close to Geng Road to allow access to the left turn pocket. Also, Embarcadero Road is not wide enough for U-turns, and Uturns are prohibited at the Geng Road intersection. Because of these difficulties, it is assumed that traffic heading west on Embarcadero Road would use the East Bayshore Road driveway.

Based on the site description and field observations, adequate sight distance is available at the East Bayshore Road driveway to insure that exiting vehicles can see pedestrians on the sidewalk, as well as vehicles on East Bayshore Road. Vehicles making a left-turn, 30 AM vehicles and 31 PM vehicles, into the project driveway at this location may occasionally have to wait for a gap in northbound traffic. Based on the driveway LOS calculations, shown in Table 15 of the traffic study (Appendix E), the average delay for vehicles turning right at the driveway is between 9.4 and 9.7 seconds during the AM peak periods, and between 13.9 and 15.4 seconds during the PM peak periods. The delay for vehicles turning left into the site ranges between 7.7 and 9.2 seconds for all time periods. There is currently no left turn pocket at the location of this driveway and with so few project trips a pocket would not be warranted.

Based on a review of the site description there will be no issues with site access along both Embarcadero Road and East Bayshore Road. No issues are expected to arise regarding on-site circulation. The final site plan would be required to demonstrate conformance with the City of Palo Alto design guidelines and requirements.

c) *LESS THAN SIGNIFICANT IMPACT*. The Palo Alto Airport is located approximately 0.2 miles east of the project site. The project consists of the construction of a new auto dealership building and detached carwash that would be no more than 50 feet or four stories in height. The proposed project would not affect airport operations, alter air traffic patterns or in any way conflict with established Federal Aviation Administration (FAA) flight protection zones. A less than significant impact would occur.

d, e) *LESS THAN SIGNIFICANT IMPACT*. According to the City's CEQA thresholds, in addition to the checklist question above, a significant impact would occur if the proposed project would create an operational safety hazard. The project site would have both construction traffic and operational traffic access the site from the existing driveway on Embarcadero Road and the existing driveway on East Bayshore Road. The proposed project does not include any design features that would increase hazards. There are no sharp curves or dangerous intersections.

The proposed project would be required to conform to traffic and safety regulations that specify adequate emergency access measures. In addition, the project site would be required to meet

the standards set forth by the Palo Alto Fire Department. Adherence to existing state and federal regulations and City of Palo Alto Comprehensive Plan policies and goals would reduce impacts. No operational safety hazards would occur. Therefore, impacts would be less than significant.

f) *LESS THAN SIGNIFICANT IMPACT*. In addition to the City's thresholds, a significant impact would occur if the proposed project would:

- Impede the development or function of planned pedestrian or bicycle facilities; or
- Impede the operation of a transit system as a result of congestion.

Pedestrian Impacts

According to the completed traffic study conducted by Hexagon Transportation Consultants, the project would not result in significant impacts or need for improvements to pedestrian facilities (Hexagon, 2016). Currently all of the signalized intersections near the project site have crosswalks and pedestrian signals and all of the streets have sidewalks. Therefore, the proposed project would provide adequate pedestrian access to areas east, south, north, and west of the project site.

The San Francisco Bay trail is a partially existing Class I trail that provides a regional connection along the San Francisco Bay shoreline. This is a multi-use trail designed for hiking and cycling. This trail is located near the project site, with access along E. Bayshore Road. Views from trails are discussed in Section I, *Aesthetics*. The project would not result in significant traffic or circulation impacts to the trail.

Bicycle Impacts

The proposed project would not change or block bicycle routes, and adequate bicycle facilities are available to serve the project site. The streetscape would provide elements from the Baylands design guidelines as well as include a resting place for bikers to get water and make minor adjustments on their bikes. The proposed project would have bike parking that meets the PAMC requirements, bike repair station signage, and a bike station. Additionally, according to the completed traffic study conducted by Hexagon Transportation Consultants, the project is assumed to create no impacts or need for improvements to bicycle facilities (Hexagon, 2016). Therefore, the project would not conflict with existing and planned bicycle facilities; the impact to bicycle facilities would be less than significant and no mitigation measures are needed.

The California Avenue Trail is a partially existing Class II trail that currently extends from St. Francis Drive to the Baylands preserve. This planned trail will provide bicycle and pedestrian access between the existing bike/pedestrian bridge over US 101 to the existing Class II bicycle lanes along Louis Road. The completion of this trail will enhance the pedestrian and bicycle access to and from the west side of the US 101 and the project area. The proposed project would not result in significant traffic or circulation impacts to this trail.

Transit Impacts

Valley Transportation Authority (VTA) operates bus service in Palo Alto. However, there are no VTA lines near the project site. The project site is served by the Palo Alto Embarcadero Shuttle

(line E) and Stanford University Marguerite shuttle line TECH stop, both of which are located at the northeast corner of the project site on Embarcadero Road. Because the Embarcadero Shuttle that provides transit service in the site vicinity is limited to weekday commute hours, the project is not expected to generate a significant number of transit trips. It is unlikely that the project would by itself generate enough demand for transit service to justify the extension of shuttle hours. As mentioned above, all traffic impacts would be less than significant. Therefore, the proposed project would not impede the operation of a transit system as a result of congestion.

In addition, the proposed project would add vehicle traffic to nearby roadways and intersections which could cause transit vehicle delay. Hexagon prepared an analysis of transit vehicle delay in May 2016 ("1700 Embarcadero CEQA Comments" memorandum included in Appendix E). The results of this analysis are summarized below.

There are no regular VTA bus lines that travel through the study intersections, but there are two shuttles: the City of Palo Alto Embarcadero Shuttle Service and the Marguerite Shuttle Service operated by Stanford. The increase in transit delay was determined by summing the increase in movement delay at each of the study intersections for each route in each direction. These movement delays were obtained from the level of service calculation sheets at each signalized study intersection, which were included in the traffic study (Appendix E). The sum of movement delay that the buses would experience at each of the study intersections was calculated under existing and existing plus project conditions for both the AM and PM peak hours. Table XVI-5 presents the delay that the buses would experience in each travel direction under existing plus project conditions.

		Transit Service Delay at Study Intersections (seconds)								
Bouto			AM Peak Hou	r	PM Peak hour					
Koute		<u>Existing</u>	<u>Existing +</u> <u>Project</u>	<u>Change</u> (+/-)	Existing	<u>Existing +</u> <u>Project</u>	<u>Change</u> (+/-)			
City of Palo Alto	<u>NB</u>	<u>71.5</u>	<u>79.9</u>	<u>+ 8.4</u>	<u>42.6</u>	<u>46.0</u>	<u>+3.4</u>			
Embarcadero Shuttle	<u>SB</u>	<u>138.4</u>	<u>141.4</u>	<u>+ 3.0</u>	<u>110.7</u>	<u>118.6</u>	<u>+7.9</u>			
Stanford Marguerite Tech	<u>NB</u>	<u>171.9</u>	<u>156.2</u>	<u>- 15.7</u>	<u>129.0</u>	<u>127.0</u>	<u>-2.0</u>			
Shuttle	<u>SB</u>	<u>138.4</u>	<u>141.4</u>	<u>+ 3.0</u>	<u>110.7</u>	<u>118.6</u>	<u>+7.9</u>			

<u>Table XVI-5</u> Transit Vehicle Delay

Source: Hexagon Transportation Consultants, May 2016 (see Appendix E).

The traffic study identified a significant traffic impact at the intersection of Embarcadero Road & East Bayshore Road. Mitigation Measure T-1 would offset the additional delay created by the project. This improvement also would offset the increase in transit travel time. Impacts associated with transit vehicle delay would be less than significant.

The proposed project involves infill development on an existing infill site. The proposed project would not impede with the development or function of planned pedestrian or bicycle facilities and would not affect or conflict with the adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially reduce the performance or safety of such facilities. Impacts would be less than significant.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
xv	II. UTILITIES AND SERVICE SYSTEMS				
	Would the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			-	
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			-	
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			-	
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			•	
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			-	
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			-	
g)	Comply with federal, state, and local statutes and regulations related to solid waste?				

a, b, e) *LESS THAN SIGNIFICANT IMPACT*. In addition to the thresholds under items (a), (b), and (e) above, the City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. The City of Palo Alto Utilities Department (CPAU) oversees a wastewater collection system consisting of over 208 miles of sewer lines. The City operates the Regional Water Quality Control Plant (RWQCP), which has primary treatment (bar screening and primary sedimentation), secondary treatment (fixed film reactors, conventional activated sludge, clarification and filtration), and tertiary treatment (filtration through a sand and coal filter and UV disinfection). Wastewater is routed to RWQCP, where it is treated prior to discharge into the San Francisco Bay. While the CPAU is responsible for the wastewater collection system, the Palo Alto Public Works Department is responsible for the collection/conveyance of sewage collected and delivered to the RWQCP.

The RWQCP is designed to have an average dry weather flow (ADWF) capacity of 39 MGD with full tertiary treatment, and a peak wet weather flow capacity of 80 MGD with full secondary treatment. Current average flows are approximately 22 MGD. Therefore, the current available capacity of the RWQCP is 17 MGD. The plant capacity is sufficient for current dry and wet weather loads and for future load projections. There are no plans for expansion or to "build-out" the plant. The RWQCP does not experience any major treatment system constraints and has no planned capacity expansions. Approximately 220,000 people live in the RWQCP service area. Of the wastewater flow to the RWQCP, about 60% is estimated to come from residences, 10% from industries, and 30% from commercial businesses and institutions. The RWQCP treats 21 million gallons per day of effluent from all the partner cities. All of the wastewater treated at the RWQCP can be recycled. The plant already has some capability to produce recycled water that meets the Title 22 unrestricted use standard (approximately 4.5 MGD of capacity of which 4.5 MGD is presently available).

The proposed project would involve development of automotive uses which would generate wastewater. The City of Palo Alto's Urban Water Management Plan (UWMP) does not list wastewater generation factors. As a result, wastewater generation rates from the City of Los Angeles were used to estimate the amount of wastewater that would be generated by the proposed project. The carwash would use a tank system to reclaim its water. With the reclaim tank, the proposed car wash would use approximately 45 gallons of reclaimed water and 16 gallons of city water per car wash. For the purposes of this analysis, it is conservatively assumed that 16 gallons of wastewater would be generated per car wash

As shown in Table XVII-1, the proposed project would generate a net increase of approximately 35,920 gallons of wastewater per day. This increase would be approximately 0.21% (35,920/17 MGD * 100) of the existing unused capacity of the RWQCP. Therefore, there would be sufficient wastewater capacity to serve the project site. The proposed project would not exceed wastewater treatment requirements or require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. The proposed project would not result in a substantial physical deterioration of public wastewater facilities. Therefore, impacts would be less than significant.

Type of Use	Quantity	Generation Factor (Per Day)	Amount (gallons per day)
Existing Uses			
Restaurant	17,942 sf	30 / seat*	(15,000)
Proposed Project			
Auto Parking	39,983 sf	20 / 1,000 sf	800
Auto Body / Mech Repair Shop	61,510 sf	800 / 1,000 sf	49,208
Car Wash: Automatic	57 cars**	16 gpc**	912
		Proposed Project Subtotal	50,920
	Total Net	Increase in Wastewater Generation	35,920

Table XVII-1 Estimated Wastewater Generation

Source: City of Los Angeles CEQA Thresholds Guidelines (2006).

Notes: gdp= gallons per day, sf= square feet, () denotes subtraction, gpc = gallons per car

* Restaurant has 500 seats. 30 gallons * 500 seats = 15,000 gallons per day (Source: http://www.paloaltoonline.com/news/2014/12/18/mings-restaurant-to-close-dec-28)

** There would be 24 service bays that can service about two cars per stall per day. There would be an estimated average of 48 washes per day for Monday through Friday and 80 washes on Saturday and Sunday, which averages to around 57 washes per day.

c) *LESS THAN SIGNIFICANT IMPACT*. The City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. Palo Alto's storm drainage system contains over 550,000 linear feet of pipelines, ranging in size from 8 to 96 inches. The storm drains collect stormwater and convey it primarily to San Francisquito, Matadero, Barron, and Adobe creeks. These creeks ultimately discharge the stormwater to San Francisco Bay. The Santa Clara Valley Water District (SCVWD) oversees County-wide programs for flood protection and stormwater management. For local lines that connect to the creeks, the City maintains a Storm Drain Master Plan that recommends improvements to be made over a 30-year horizon. Because the project site is already developed and covered with impermeable surfaces, the proposed project would not require the construction of substantial new storm water drainage facilities or expansion of existing facilities. The proposed project would not result in a substantial physical deterioration of public stormwater facilities. Therefore, impacts would be less than significant.

d) *LESS THAN SIGNIFICANT IMPACT*. In addition to the thresholds under item (d) above, the City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. Since 1962, the City of Palo Alto's potable water supply has come from the SFPUC. In 1999, the City began to prepare a new Water Integrated Resources Plan (WIRP). In mid-2003, the WIRP concluded, based on available information, that supplies from the SFPUC are adequate in normal years, but additional supplies are needed in drought years to avoid shortages. At this time, no decision has been made regarding whether or not to use groundwater as a supplemental supply in droughts, though the City is proceeding with the Emergency Water Supply and Storage project which would provide the City the flexibility to rely on groundwater during a drought if necessary. The City is also a participating agency on the Bay Area Water Supply and Conservation Agency's (BAWSCA) Long-Term Reliable Water Supply Strategy to meet the projected water needs of its member agencies and their customers through 2035 and to increase their water supply reliability under normal and drought conditions.

Table XVII-2 shows the projected City water supply and demand through the year 2030 according to the City's Urban Water Management Plan.

	2015	2020	2025	2030
Projected SFPUC demand	14,253	14,157	14,353	14,971
Individual Supply Guarantee	19,118	19,118	19,118	19,118
Difference	4,866	4,962	4,766	4,148

Table XVII-2
City of Palo Alto Supply/Demand Balance (AFY)

Source: City of Palo Alto Urban Water Management Plan, Table 41, June 2011

Development of the proposed project would increase demand for potable water. Assuming that water use is approximately 120% of wastewater generation, the proposed project would demand approximately 43,104 gallons of water per day, or approximately 48.3 acre-feet per year (AFY). As shown in Table 17, available water supply is projected through 2030. The proposed project would have sufficient water supplies available to serve the project from existing entitlements and resources. No new or expanded entitlements would be needed to serve the

proposed project. The proposed project would not result in a substantial physical deterioration of public water facilities. Therefore, impacts would be less than significant.

f) *LESS THAN SIGNIFICANT IMPACT*. In addition to the threshold under item (f) above, the City's CEQA thresholds state that a significant impact would occur if the project would result in a substantial physical deterioration of a public facility. Currently, the City is contracted with GreenWaste of Palo Alto, for collection of garbage, recycling, and composting services in the City and with Waste Management Inc. to use the Kirby Canyon Landfill for waste disposal. Annualized solid waste tonnage received by Kirby Canyon Landfill is approximately 475,000 tons. At that rate, the Kirby Canyon Landfill would reach capacity in approximately 45 years. The daily permitted capacity of Kirby Canyon Landfill is up to 2,600 tons per day (CalRecycle, 2015). According to the latest Disposal Facility Inspection Report in 2010, the peak tonnage is 2,094 tons per day. Therefore, the landfill has a remaining daily capacity of 506 tons per day.

As shown in Table XVII-3, the proposed project would generate 232 pounds, or 0.115 tons, of solid waste per day. This incremental increase in solid waste would be within the permitted capacities of Kirby Canyon Landfill. Therefore, the project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. The proposed project would not result in a substantial physical deterioration of public solid waste facilities. Impacts would be less than significant.

Land Use	Size	Generation Factor	Total (Ibs/day)	Total (tons/day)
Existing Uses				
Restaurant	17,942 sf	0.005 lbs / sf / day	(90)	(0.05)
Proposed Project	-			·
Auto dealer and service station	61,510 sf	0.9 lbs / 100 sf / day	554	0.28
	Total Net S	olid Waste Generation	464	0.23
Total Solid Waste Sent	to Landfill (As	suming 50% diversion rate)	232	0.115

Table XVII-3 Estimated Solid Waste Generation

Notes: sf = square feet, lbs = pounds, () denotes subtraction, numbers may not add up due to rounding *CalRecycle Waste Generation Rates, available at http://www.calrecycle.ca.gov/wastechar/WasteGenRates/

g) **NO IMPACT**. Palo Alto's Municipal Code Section 5.20.020 follows State regulations for solid waste and recycling. The project would comply with all applicable regulations related to solid waste. No impact would occur.

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
xv	III. MANDATORY FINDINGS OF SIGNIFICA	NCE			
a)	Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		•		
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		•		
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either				
	directly or indirectly?				

a) **POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED**. As noted in Section IV, *Biological Resources*, impacts to nesting birds could be potentially significant and therefore **Mitigation Measure BIO-1** is required to reduce potential impacts. Incorporation of this mitigation measure would reduce impacts to wildlife to a less than significant level. As discussed in Section V, *Cultural Resources*, the existing commercial building is not eligible for listing on the California Register of Historic Resources based on its failure to meet one or more of the four significance criterion. The proposed project would not eliminate important examples of major periods of California history or prehistory.

b) **POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATED**. As described in the discussion of environmental checklist Sections I through XVII, the project would have no impact, a less than significant impact, or a less than significant impact after mitigation with respect to all environmental issues. Cumulative impacts with some of the resource areas have been addressed in the individual resource sections above: Air Quality, Greenhouse Gases, Water Supply, and Solid Waste (see CEQA Guidelines Section 15064(h)(3).). As mentioned above in Section XVI, *Transportation/Traffic*, impacts to East Bayshore Road and Embarcadero Road could be potentially significant and therefore *Mitigation Measure T-1* has been required to address congestion related to the a large volume of left turns and a large volume of through traffic on eastbound Embarcadero Road in the morning. Aside from the Audi auto dealership

currently under construction adjacent to the project site to the east, there are no other known projects in development or under consideration that would affect the other resource areas. The Audi dealership is undergoing a remodel. There is no change in use. As such, cumulative impacts would also be less than significant (not cumulatively considerable).

c) *LESS THAN SIGNIFICANT IMPACT*. In general, impacts to human beings are associated with air quality, hazards and hazardous materials, traffic hazards, and noise impacts. As detailed in the preceding responses, the proposed project would not result, either directly or indirectly, in adverse impacts related to air quality or noise. Impacts related to unstable soils are potentially significant and *Mitigation Measure GEO-1* is required to reduce impacts to less than significant. The project as designed adequately addresses public health and safety objectives identified that could result in an adverse impact to human beings. Therefore, the project would result in a less than significant effect on human beings either directly or indirectly. However, the addition of project-generated traffic would create a significant impact at the intersection of East Bayshore Road and Embarcadero Road during the PM peak hour under Background Plus Project and Cumulative scenarios, and during the AM peak hour under the Cumulative scenario and therefore *Mitigation Measure T-1* has been required to reduce impacts to less than significant.

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Persons Contacted

- Craig Lee. Sergeant, City of Palo Alto Police Department. Personal communication, November 15, 2015.
- Gordon Simpkinson. Plan Checker, City of Palo Alto Fire Department. Personal communication, November 13, 2015.

Appendix A



Air Quality and Greenhouse Gas Modeling Results

1700 Embarcadero Road Auto Dealership Project

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	114.00	Space	1.03	45,600.00	0
Parking Lot	65.00	Space	0.59	26,000.00	0
Automobile Care Center	62.31	1000sqft	1.43	62,312.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2018
Utility Company	City of Palo Alto Public Utili	ties			
CO2 Intensity (Ib/MWhr)	354.26	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity (Ib/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Default

Construction Phase - App. Construction Schedule

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	153.00
tblConstructionPhase	NumDays	230.00	193.00
tblConstructionPhase	NumDays	20.00	27.00
tblConstructionPhase	NumDays	18.00	16.00
tblConstructionPhase	NumDays	5.00	278.00
tblConstructionPhase	PhaseEndDate	11/9/2017	6/30/2017
tblConstructionPhase	PhaseEndDate	3/17/2017	4/10/2017
tblConstructionPhase	PhaseEndDate	7/10/2017	6/21/2016
tblConstructionPhase	PhaseEndDate	6/2/2017	6/16/2017
tblConstructionPhase	PhaseStartDate	4/11/2017	11/30/2016
tblConstructionPhase	PhaseStartDate	6/22/2016	7/14/2016
tblConstructionPhase	PhaseStartDate	6/17/2017	5/31/2016
tblConstructionPhase	PhaseStartDate	5/11/2016	5/25/2016
tblGrading	MaterialImported	0.00	5,000.00
tblLandUse	LandUseSquareFeet	62,310.00	62,312.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

Page 3 of 32

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	со	SO2	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					ton	s/yr							МТ	/yr		
2016	0.9146	7.0489	5.4696	6.4000e- 003	2.5685	0.3972	2.9656	1.3958	0.3683	1.7641	0.0000	585.2622	585.2622	0.1451	0.0000	588.3089
2017	1.5153	4.3006	3.4295	4.1300e- 003	2.5516	0.2414	2.7930	1.3912	0.2242	1.6154	0.0000	371.0523	371.0523	0.0911	0.0000	372.9648
Total	2.4299	11.3496	8.8991	0.0105	5.1201	0.6385	5.7586	2.7870	0.5925	3.3794	0.0000	956.3144	956.3144	0.2362	0.0000	961.2736

Mitigated Construction

	ROG	NOx	СО	SO2	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					tor	ns/yr							M	T/yr		
2016	0.9146	7.0489	5.4695	6.4000e- 003	2.5685	0.3972	2.9656	1.3958	0.3683	1.7641	0.0000	585.2616	585.2616	0.1451	0.0000	588.3083
2017	1.5153	4.3006	3.4295	4.1300e- 003	2.5516	0.2414	2.7930	1.3912	0.2242	1.6154	0.0000	371.0519	371.0519	0.0911	0.0000	372.9644
Total	2.4299	11.3496	8.8991	0.0105	5.1201	0.6385	5.7586	2.7870	0.5925	3.3794	0.0000	956.3135	956.3135	0.2362	0.0000	961.2726
	ROG	NOx	СО	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Page 4 of 32

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	со	SO2	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					ton	s/yr				MT/yr						
Area	0.6492	2.0000e- 005	2.2500e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003
Energy	9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003		6.3600e- 003	6.3600e- 003	0.0000	234.6239	234.6239	0.0135	4.1000e- 003	236.1785
Mobile	1.8056	2.6937	13.9873	0.0216	1.4318	0.0324	1.4642	0.3842	0.0299	0.4141	0.0000	1,606.545 8	1,606.545 8	0.0710	0.0000	1,608.035 9
Waste						0.0000	0.0000		0.0000	0.0000	48.3159	0.0000	48.3159	2.8554	0.0000	108.2791
Water						0.0000	0.0000		0.0000	0.0000	1.8598	7.1179	8.9777	0.1916	4.6300e- 003	14.4369
Total	2.4640	2.7774	14.0599	0.0221	1.4318	0.0388	1.4705	0.3842	0.0362	0.4205	50.1757	1,848.291 9	1,898.467 6	3.1314	8.7300e- 003	1,966.934 9

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	со	SO2	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					ton	s/yr			MT/yr							
Area	0.6492	2.0000e- 005	2.2500e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003
Energy	9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003		6.3600e- 003	6.3600e- 003	0.0000	234.6239	234.6239	0.0135	4.1000e- 003	236.1785
Mobile	1.8056	2.6937	13.9873	0.0216	1.4318	0.0324	1.4642	0.3842	0.0299	0.4141	0.0000	1,606.545 8	1,606.545 8	0.0710	0.0000	1,608.035 9
Waste						0.0000	0.0000		0.0000	0.0000	48.3159	0.0000	48.3159	2.8554	0.0000	108.2791
Water	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					0.0000	0.0000		0.0000	0.0000	1.8598	7.1179	8.9777	0.1916	4.6200e- 003	14.4339
Total	2.4640	2.7774	14.0599	0.0221	1.4318	0.0388	1.4705	0.3842	0.0362	0.4205	50.1757	1,848.291 9	1,898.467 6	3.1314	8.7200e- 003	1,966.932 0

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/4/2016	5/10/2016	5	27	
2	Site Preparation	Site Preparation	5/25/2016	6/16/2017	5	278	
3	Paving	Paving	5/31/2016	6/21/2016	5	16	
4	Building Construction	Building Construction	7/14/2016	4/10/2017	5	193	
5	Architectural Coating	Architectural Coating	11/30/2016	6/30/2017	5	153	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 163,038; Non-Residential Outdoor: 54,346 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	494.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	50.00	22.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

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					ton	s/yr							МТ	/yr		
Off-Road	0.0579	0.6164	0.4729	5.4000e- 004		0.0309	0.0309		0.0288	0.0288	0.0000	50.0814	50.0814	0.0136	0.0000	50.3675
Total	0.0579	0.6164	0.4729	5.4000e- 004		0.0309	0.0309		0.0288	0.0288	0.0000	50.0814	50.0814	0.0136	0.0000	50.3675

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					ton	s/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	7.7000e- 004	1.1100e- 003	0.0108	2.0000e- 005	1.8400e- 003	2.0000e- 005	1.8500e- 003	4.9000e- 004	1.0000e- 005	5.0000e- 004	0.0000	1.6670	1.6670	9.0000e- 005	0.0000	1.6689
Total	7.7000e- 004	1.1100e- 003	0.0108	2.0000e- 005	1.8400e- 003	2.0000e- 005	1.8500e- 003	4.9000e- 004	1.0000e- 005	5.0000e- 004	0.0000	1.6670	1.6670	9.0000e- 005	0.0000	1.6689

3.2 Demolition - 2016

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Off-Road	0.0579	0.6164	0.4729	5.4000e- 004		0.0309	0.0309		0.0288	0.0288	0.0000	50.0814	50.0814	0.0136	0.0000	50.3674
Total	0.0579	0.6164	0.4729	5.4000e- 004		0.0309	0.0309		0.0288	0.0288	0.0000	50.0814	50.0814	0.0136	0.0000	50.3674

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/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	7.7000e- 004	1.1100e- 003	0.0108	2.0000e- 005	1.8400e- 003	2.0000e- 005	1.8500e- 003	4.9000e- 004	1.0000e- 005	5.0000e- 004	0.0000	1.6670	1.6670	9.0000e- 005	0.0000	1.6689
Total	7.7000e- 004	1.1100e- 003	0.0108	2.0000e- 005	1.8400e- 003	2.0000e- 005	1.8500e- 003	4.9000e- 004	1.0000e- 005	5.0000e- 004	0.0000	1.6670	1.6670	9.0000e- 005	0.0000	1.6689

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					ton	s/yr							МТ	/yr		
Fugitive Dust		1 1 1			2.5112	0.0000	2.5112	1.3804	0.0000	1.3804	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4011	4.3160	3.2473	3.0900e- 003		0.2322	0.2322		0.2136	0.2136	0.0000	291.3292	291.3292	0.0879	0.0000	293.1745
Total	0.4011	4.3160	3.2473	3.0900e- 003	2.5112	0.2322	2.7434	1.3804	0.2136	1.5939	0.0000	291.3292	291.3292	0.0879	0.0000	293.1745

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Hauling	3.3200e- 003	0.0420	0.0363	1.1000e- 004	3.7100e- 003	5.5000e- 004	4.2600e- 003	9.8000e- 004	5.0000e- 004	1.4800e- 003	0.0000	9.6304	9.6304	7.0000e- 005	0.0000	9.6319
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	5.3900e- 003	7.8100e- 003	0.0757	1.5000e- 004	0.0129	1.1000e- 004	0.0130	3.4300e- 003	1.0000e- 004	3.5300e- 003	0.0000	11.7058	11.7058	6.4000e- 004	0.0000	11.7193
Total	8.7100e- 003	0.0498	0.1120	2.6000e- 004	0.0166	6.6000e- 004	0.0173	4.4100e- 003	6.0000e- 004	5.0100e- 003	0.0000	21.3362	21.3362	7.1000e- 004	0.0000	21.3513

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	/yr		
Fugitive Dust					2.5112	0.0000	2.5112	1.3804	0.0000	1.3804	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4011	4.3160	3.2473	3.0900e- 003		0.2322	0.2322		0.2136	0.2136	0.0000	291.3288	291.3288	0.0879	0.0000	293.1742
Total	0.4011	4.3160	3.2473	3.0900e- 003	2.5112	0.2322	2.7434	1.3804	0.2136	1.5939	0.0000	291.3288	291.3288	0.0879	0.0000	293.1742

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Hauling	3.3200e- 003	0.0420	0.0363	1.1000e- 004	3.7100e- 003	5.5000e- 004	4.2600e- 003	9.8000e- 004	5.0000e- 004	1.4800e- 003	0.0000	9.6304	9.6304	7.0000e- 005	0.0000	9.6319
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	5.3900e- 003	7.8100e- 003	0.0757	1.5000e- 004	0.0129	1.1000e- 004	0.0130	3.4300e- 003	1.0000e- 004	3.5300e- 003	0.0000	11.7058	11.7058	6.4000e- 004	0.0000	11.7193
Total	8.7100e- 003	0.0498	0.1120	2.6000e- 004	0.0166	6.6000e- 004	0.0173	4.4100e- 003	6.0000e- 004	5.0100e- 003	0.0000	21.3362	21.3362	7.1000e- 004	0.0000	21.3513

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					ton	s/yr							МТ	/yr		
Fugitive Dust					2.5112	0.0000	2.5112	1.3804	0.0000	1.3804	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2903	3.1052	2.3638	2.3500e- 003		0.1653	0.1653		0.1520	0.1520	0.0000	217.8923	217.8923	0.0668	0.0000	219.2943
Total	0.2903	3.1052	2.3638	2.3500e- 003	2.5112	0.1653	2.6765	1.3804	0.1520	1.5324	0.0000	217.8923	217.8923	0.0668	0.0000	219.2943

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Hauling	2.3300e- 003	0.0286	0.0262	8.0000e- 005	3.5700e- 003	3.7000e- 004	3.9400e- 003	9.3000e- 004	3.4000e- 004	1.2700e- 003	0.0000	7.1898	7.1898	5.0000e- 005	0.0000	7.1909
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	3.6300e- 003	5.3100e- 003	0.0511	1.2000e- 004	9.8000e- 003	8.0000e- 005	9.8700e- 003	2.6100e- 003	7.0000e- 005	2.6800e- 003	0.0000	8.5519	8.5519	4.5000e- 004	0.0000	8.5613
Total	5.9600e- 003	0.0339	0.0773	2.0000e- 004	0.0134	4.5000e- 004	0.0138	3.5400e- 003	4.1000e- 004	3.9500e- 003	0.0000	15.7417	15.7417	5.0000e- 004	0.0000	15.7522

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Fugitive Dust					2.5112	0.0000	2.5112	1.3804	0.0000	1.3804	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2903	3.1052	2.3638	2.3500e- 003		0.1653	0.1653		0.1520	0.1520	0.0000	217.8921	217.8921	0.0668	0.0000	219.2940
Total	0.2903	3.1052	2.3638	2.3500e- 003	2.5112	0.1653	2.6765	1.3804	0.1520	1.5324	0.0000	217.8921	217.8921	0.0668	0.0000	219.2940

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/yr	MT/yr									
Hauling	2.3300e- 003	0.0286	0.0262	8.0000e- 005	3.5700e- 003	3.7000e- 004	3.9400e- 003	9.3000e- 004	3.4000e- 004	1.2700e- 003	0.0000	7.1898	7.1898	5.0000e- 005	0.0000	7.1909
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	3.6300e- 003	5.3100e- 003	0.0511	1.2000e- 004	9.8000e- 003	8.0000e- 005	9.8700e- 003	2.6100e- 003	7.0000e- 005	2.6800e- 003	0.0000	8.5519	8.5519	4.5000e- 004	0.0000	8.5613
Total	5.9600e- 003	0.0339	0.0773	2.0000e- 004	0.0134	4.5000e- 004	0.0138	3.5400e- 003	4.1000e- 004	3.9500e- 003	0.0000	15.7417	15.7417	5.0000e- 004	0.0000	15.7522

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	со	SO2	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	0.0144	0.1467	0.1005	1.5000e- 004		8.8500e- 003	8.8500e- 003		8.1600e- 003	8.1600e- 003	0.0000	13.8053	13.8053	4.0600e- 003	0.0000	13.8905
Paving	7.7000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0151	0.1467	0.1005	1.5000e- 004		8.8500e- 003	8.8500e- 003		8.1600e- 003	8.1600e- 003	0.0000	13.8053	13.8053	4.0600e- 003	0.0000	13.8905

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	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	6.1000e- 004	8.8000e- 004	8.5200e- 003	2.0000e- 005	1.4500e- 003	1.0000e- 005	1.4600e- 003	3.9000e- 004	1.0000e- 005	4.0000e- 004	0.0000	1.3171	1.3171	7.0000e- 005	0.0000	1.3186
Total	6.1000e- 004	8.8000e- 004	8.5200e- 003	2.0000e- 005	1.4500e- 003	1.0000e- 005	1.4600e- 003	3.9000e- 004	1.0000e- 005	4.0000e- 004	0.0000	1.3171	1.3171	7.0000e- 005	0.0000	1.3186

3.4 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	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	0.0144	0.1467	0.1005	1.5000e- 004		8.8500e- 003	8.8500e- 003		8.1600e- 003	8.1600e- 003	0.0000	13.8053	13.8053	4.0600e- 003	0.0000	13.8905			
Paving	7.7000e- 004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
Total	0.0151	0.1467	0.1005	1.5000e- 004		8.8500e- 003	8.8500e- 003		8.1600e- 003	8.1600e- 003	0.0000	13.8053	13.8053	4.0600e- 003	0.0000	13.8905			

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	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	6.1000e- 004	8.8000e- 004	8.5200e- 003	2.0000e- 005	1.4500e- 003	1.0000e- 005	1.4600e- 003	3.9000e- 004	1.0000e- 005	4.0000e- 004	0.0000	1.3171	1.3171	7.0000e- 005	0.0000	1.3186
Total	6.1000e- 004	8.8000e- 004	8.5200e- 003	2.0000e- 005	1.4500e- 003	1.0000e- 005	1.4600e- 003	3.9000e- 004	1.0000e- 005	4.0000e- 004	0.0000	1.3171	1.3171	7.0000e- 005	0.0000	1.3186

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	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	0.2078	1.7389	1.1289	1.6400e- 003		0.1200	0.1200		0.1128	0.1128	0.0000	147.7137	147.7137	0.0366	0.0000	148.4830	
Total	0.2078	1.7389	1.1289	1.6400e- 003		0.1200	0.1200		0.1128	0.1128	0.0000	147.7137	147.7137	0.0366	0.0000	148.4830	

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	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	0.0171	0.1345	0.1985	3.2000e- 004	8.6400e- 003	2.0100e- 003	0.0106	2.4800e- 003	1.8400e- 003	4.3200e- 003	0.0000	29.0220	29.0220	2.3000e- 004	0.0000	29.0269
Worker	0.0116	0.0168	0.1624	3.3000e- 004	0.0277	2.3000e- 004	0.0279	7.3600e- 003	2.1000e- 004	7.5700e- 003	0.0000	25.1074	25.1074	1.3800e- 003	0.0000	25.1364
Total	0.0287	0.1513	0.3609	6.5000e- 004	0.0363	2.2400e- 003	0.0385	9.8400e- 003	2.0500e- 003	0.0119	0.0000	54.1294	54.1294	1.6100e- 003	0.0000	54.1633
3.5 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	со	SO2	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					ton	s/yr							МТ	/yr		
Off-Road	0.2078	1.7389	1.1289	1.6400e- 003		0.1200	0.1200		0.1128	0.1128	0.0000	147.7135	147.7135	0.0366	0.0000	148.4829
Total	0.2078	1.7389	1.1289	1.6400e- 003		0.1200	0.1200		0.1128	0.1128	0.0000	147.7135	147.7135	0.0366	0.0000	148.4829

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					ton	s/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	0.0171	0.1345	0.1985	3.2000e- 004	8.6400e- 003	2.0100e- 003	0.0106	2.4800e- 003	1.8400e- 003	4.3200e- 003	0.0000	29.0220	29.0220	2.3000e- 004	0.0000	29.0269
Worker	0.0116	0.0168	0.1624	3.3000e- 004	0.0277	2.3000e- 004	0.0279	7.3600e- 003	2.1000e- 004	7.5700e- 003	0.0000	25.1074	25.1074	1.3800e- 003	0.0000	25.1364
Total	0.0287	0.1513	0.3609	6.5000e- 004	0.0363	2.2400e- 003	0.0385	9.8400e- 003	2.0500e- 003	0.0119	0.0000	54.1294	54.1294	1.6100e- 003	0.0000	54.1633

3.5 Building Construction - 2017

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					ton	s/yr							МТ	/yr		
Off-Road	0.1101	0.9374	0.6436	9.5000e- 004		0.0632	0.0632	1 1 1	0.0594	0.0594	0.0000	85.0151	85.0151	0.0209	0.0000	85.4545
Total	0.1101	0.9374	0.6436	9.5000e- 004		0.0632	0.0632		0.0594	0.0594	0.0000	85.0151	85.0151	0.0209	0.0000	85.4545

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/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	9.0100e- 003	0.0702	0.1086	1.9000e- 004	5.0300e- 003	1.0100e- 003	6.0400e- 003	1.4400e- 003	9.3000e- 004	2.3700e- 003	0.0000	16.6048	16.6048	1.3000e- 004	0.0000	16.6075
Worker	5.9700e- 003	8.7300e- 003	0.0840	1.9000e- 004	0.0161	1.3000e- 004	0.0162	4.2800e- 003	1.2000e- 004	4.4000e- 003	0.0000	14.0552	14.0552	7.4000e- 004	0.0000	14.0707
Total	0.0150	0.0789	0.1926	3.8000e- 004	0.0211	1.1400e- 003	0.0223	5.7200e- 003	1.0500e- 003	6.7700e- 003	0.0000	30.6600	30.6600	8.7000e- 004	0.0000	30.6782

Page 19 of 32

3.5 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Off-Road	0.1101	0.9374	0.6436	9.5000e- 004		0.0632	0.0632	1 1 1	0.0594	0.0594	0.0000	85.0150	85.0150	0.0209	0.0000	85.4544
Total	0.1101	0.9374	0.6436	9.5000e- 004		0.0632	0.0632		0.0594	0.0594	0.0000	85.0150	85.0150	0.0209	0.0000	85.4544

Mitigated Construction Off-Site

	ROG	NOx	со	SO2	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					ton	s/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	9.0100e- 003	0.0702	0.1086	1.9000e- 004	5.0300e- 003	1.0100e- 003	6.0400e- 003	1.4400e- 003	9.3000e- 004	2.3700e- 003	0.0000	16.6048	16.6048	1.3000e- 004	0.0000	16.6075
Worker	5.9700e- 003	8.7300e- 003	0.0840	1.9000e- 004	0.0161	1.3000e- 004	0.0162	4.2800e- 003	1.2000e- 004	4.4000e- 003	0.0000	14.0552	14.0552	7.4000e- 004	0.0000	14.0707
Total	0.0150	0.0789	0.1926	3.8000e- 004	0.0211	1.1400e- 003	0.0223	5.7200e- 003	1.0500e- 003	6.7700e- 003	0.0000	30.6600	30.6600	8.7000e- 004	0.0000	30.6782

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Archit. Coating	0.1893					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2400e- 003	0.0273	0.0217	3.0000e- 005		2.2600e- 003	2.2600e- 003		2.2600e- 003	2.2600e- 003	0.0000	2.9362	2.9362	3.5000e- 004	0.0000	2.9435
Total	0.1936	0.0273	0.0217	3.0000e- 005		2.2600e- 003	2.2600e- 003		2.2600e- 003	2.2600e- 003	0.0000	2.9362	2.9362	3.5000e- 004	0.0000	2.9435

Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	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					ton	s/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	4.4000e- 004	6.3000e- 004	6.1200e- 003	1.0000e- 005	1.0400e- 003	1.0000e- 005	1.0500e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.9467	0.9467	5.0000e- 005	0.0000	0.9478
Total	4.4000e- 004	6.3000e- 004	6.1200e- 003	1.0000e- 005	1.0400e- 003	1.0000e- 005	1.0500e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.9467	0.9467	5.0000e- 005	0.0000	0.9478

3.6 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	со	SO2	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					ton	s/yr							МТ	'/yr		
Archit. Coating	0.1893					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2400e- 003	0.0273	0.0217	3.0000e- 005		2.2600e- 003	2.2600e- 003		2.2600e- 003	2.2600e- 003	0.0000	2.9362	2.9362	3.5000e- 004	0.0000	2.9435
Total	0.1936	0.0273	0.0217	3.0000e- 005		2.2600e- 003	2.2600e- 003		2.2600e- 003	2.2600e- 003	0.0000	2.9362	2.9362	3.5000e- 004	0.0000	2.9435

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/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	4.4000e- 004	6.3000e- 004	6.1200e- 003	1.0000e- 005	1.0400e- 003	1.0000e- 005	1.0500e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.9467	0.9467	5.0000e- 005	0.0000	0.9478
Total	4.4000e- 004	6.3000e- 004	6.1200e- 003	1.0000e- 005	1.0400e- 003	1.0000e- 005	1.0500e- 003	2.8000e- 004	1.0000e- 005	2.9000e- 004	0.0000	0.9467	0.9467	5.0000e- 005	0.0000	0.9478

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	/yr		
Archit. Coating	1.0701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0216	0.1420	0.1214	1.9000e- 004		0.0113	0.0113		0.0113	0.0113	0.0000	16.5962	16.5962	1.7500e- 003	0.0000	16.6330
Total	1.0917	0.1420	0.1214	1.9000e- 004		0.0113	0.0113		0.0113	0.0113	0.0000	16.5962	16.5962	1.7500e- 003	0.0000	16.6330

Unmitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	/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	2.1900e- 003	3.2000e- 003	0.0308	7.0000e- 005	5.9000e- 003	5.0000e- 005	5.9400e- 003	1.5700e- 003	4.0000e- 005	1.6100e- 003	0.0000	5.1470	5.1470	2.7000e- 004	0.0000	5.1526
Total	2.1900e- 003	3.2000e- 003	0.0308	7.0000e- 005	5.9000e- 003	5.0000e- 005	5.9400e- 003	1.5700e- 003	4.0000e- 005	1.6100e- 003	0.0000	5.1470	5.1470	2.7000e- 004	0.0000	5.1526

Page 23 of 32

3.6 Architectural Coating - 2017

Mitigated Construction On-Site

	ROG	NOx	со	SO2	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					ton	s/yr							МТ	'/yr		
Archit. Coating	1.0701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0216	0.1420	0.1214	1.9000e- 004		0.0113	0.0113		0.0113	0.0113	0.0000	16.5961	16.5961	1.7500e- 003	0.0000	16.6329
Total	1.0917	0.1420	0.1214	1.9000e- 004		0.0113	0.0113		0.0113	0.0113	0.0000	16.5961	16.5961	1.7500e- 003	0.0000	16.6329

Mitigated Construction Off-Site

	ROG	NOx	СО	SO2	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					ton	s/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	2.1900e- 003	3.2000e- 003	0.0308	7.0000e- 005	5.9000e- 003	5.0000e- 005	5.9400e- 003	1.5700e- 003	4.0000e- 005	1.6100e- 003	0.0000	5.1470	5.1470	2.7000e- 004	0.0000	5.1526
Total	2.1900e- 003	3.2000e- 003	0.0308	7.0000e- 005	5.9000e- 003	5.0000e- 005	5.9400e- 003	1.5700e- 003	4.0000e- 005	1.6100e- 003	0.0000	5.1470	5.1470	2.7000e- 004	0.0000	5.1526

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					ton	s/yr							МТ	/yr		
Mitigated	1.8056	2.6937	13.9873	0.0216	1.4318	0.0324	1.4642	0.3842	0.0299	0.4141	0.0000	1,606.545 8	1,606.545 8	0.0710	0.0000	1,608.035 9
Unmitigated	1.8056	2.6937	13.9873	0.0216	1.4318	0.0324	1.4642	0.3842	0.0299	0.4141	0.0000	1,606.545 8	1,606.545 8	0.0710	0.0000	1,608.035 9

4.2 Trip Summary Information

	Aver	age Daily Trip Ra	ite	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	3,863.22	3,863.22	3863.22	3,848,486	3,848,486
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	3,863.22	3,863.22	3,863.22	3,848,486	3,848,486

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
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

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546229	0.063048	0.174586	0.122573	0.033968	0.004845	0.015596	0.024745	0.002089	0.003270	0.006707	0.000678	0.001667

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category					ton	s/yr							МТ	/yr		
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	143.4800	143.4800	0.0118	2.4300e- 003	144.4800
Electricity Unmitigated	Fr		1			0.0000	0.0000		0.0000	0.0000	0.0000	143.4800	143.4800	0.0118	2.4300e- 003	144.4800
NaturalGas Mitigated	9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003		6.3600e- 003	6.3600e- 003	0.0000	91.1439	91.1439	1.7500e- 003	1.6700e- 003	91.6986
NaturalGas Unmitigated	9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003	 , , ,	6.3600e- 003	6.3600e- 003	0.0000	91.1439	91.1439	1.7500e- 003	1.6700e- 003	91.6986

Page 26 of 32

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	NaturalGa s 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					ton	s/yr							MT	/yr		
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	1 1 1	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
Automobile Care Center	1.70797e +006	9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003		6.3600e- 003	6.3600e- 003	0.0000	91.1439	91.1439	1.7500e- 003	1.6700e- 003	91.6986
Total		9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003		6.3600e- 003	6.3600e- 003	0.0000	91.1439	91.1439	1.7500e- 003	1.6700e- 003	91.6986

Mitigated

	NaturalGa s 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					ton	s/yr							МТ	/yr		
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
Automobile Care Center	1.70797e +006	9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003		6.3600e- 003	6.3600e- 003	0.0000	91.1439	91.1439	1.7500e- 003	1.6700e- 003	91.6986
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.2100e- 003	0.0837	0.0703	5.0000e- 004		6.3600e- 003	6.3600e- 003		6.3600e- 003	6.3600e- 003	0.0000	91.1439	91.1439	1.7500e- 003	1.6700e- 003	91.6986

5.3 Energy by Land Use - Electricity

<u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		ΜT	7/yr	
Automobile Care Center	562677	90.4164	7.4000e- 003	1.5300e- 003	91.0466
Enclosed Parking with Elevator	307344	49.3870	4.0400e- 003	8.4000e- 004	49.7312
Parking Lot	22880	3.6766	3.0000e- 004	6.0000e- 005	3.7022
Total		143.4800	0.0117	2.4300e- 003	144.4800

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		Π	/yr	
Automobile Care Center	562677	90.4164	7.4000e- 003	1.5300e- 003	91.0466
Enclosed Parking with Elevator	307344	49.3870	4.0400e- 003	8.4000e- 004	49.7312
Parking Lot	22880	3.6766	3.0000e- 004	6.0000e- 005	3.7022
Total		143.4800	0.0117	2.4300e- 003	144.4800

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	ī/yr		
Mitigated	0.6492	2.0000e- 005	2.2500e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003
Unmitigated	0.6492	2.0000e- 005	2.2500e- 003	0.0000	 - - -	1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003

6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	со	SO2	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	0.1260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5230					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e- 004	2.0000e- 005	2.2500e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003
Total	0.6492	2.0000e- 005	2.2500e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	СО	SO2	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	0.1260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5230					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1000e- 004	2.0000e- 005	2.2500e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003
Total	0.6492	2.0000e- 005	2.2500e- 003	0.0000		1.0000e- 005	1.0000e- 005		1.0000e- 005	1.0000e- 005	0.0000	4.3100e- 003	4.3100e- 003	1.0000e- 005	0.0000	4.5600e- 003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category		MT	√yr	
Mitigated	8.9777	0.1916	4.6200e- 003	14.4339
Unmitigated	8.9777	0.1916	4.6300e- 003	14.4369

7.2 Water by Land Use

<u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e		
Land Use	Mgal	MT/yr					
Automobile Care Center	5.86219 / 3.59296	8.9777	0.1916	4.6300e- 003	14.4369		
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		8.9777	0.1916	4.6300e- 003	14.4369		

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e		
Land Use	Mgal	MT/yr					
Automobile Care Center	5.86219 / 3.59296	8.9777	0.1916	4.6200e- 003	14.4339		
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		8.9777	0.1916	4.6200e- 003	14.4339		

8.0 Waste Detail

Page 31 of 32

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e			
	MT/yr						
Mitigated	48.3159	2.8554	0.0000	108.2791			
Unmitigated	48.3159	2.8554	0.0000	108.2791			

8.2 Waste by Land Use

<u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e		
Land Use	tons	MT/yr					
Automobile Care Center	238.02	48.3159	2.8554	0.0000	108.2791		
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		48.3159	2.8554	0.0000	108.2791		

Page 32 of 32

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e		
Land Use	tons	MT/yr					
Automobile Care Center	238.02	48.3159	2.8554	0.0000	108.2791		
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		48.3159	2.8554	0.0000	108.2791		

9.0 Operational Offroad

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

Ming's Restaurant

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	0.00		0.00		0
High Turnover (Sit Down Restaurant)	18.00	1000sqft	2.54	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2014
Utility Company	City of Palo Alto Public Utili	ties			
CO2 Intensity (Ib/MWhr)	354.26	CH4 Intensity (Ib/MWhr)	0.029	N2O Intensity 0. (Ib/MWhr)	006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Actual Lot Acreage

Construction Phase - No construction period

Table Name	Column Name	Default Value	New Value		
tblConstructionPhase	NumDays	10.00	8.00		
tblLandUse	LotAcreage	0.41	2.54		

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	со	SO2	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					ton	s/yr							MT	/yr		
2014	0.2104	0.0112	8.2200e- 003	1.0000e- 005	7.0000e- 005	9.8000e- 004	1.0500e- 003	2.0000e- 005	9.8000e- 004	1.0000e- 003	0.0000	1.0918	1.0918	1.5000e- 004	0.0000	1.0950
Total	0.2104	0.0112	8.2200e- 003	1.0000e- 005	7.0000e- 005	9.8000e- 004	1.0500e- 003	2.0000e- 005	9.8000e- 004	1.0000e- 003	0.0000	1.0918	1.0918	1.5000e- 004	0.0000	1.0950

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					ton	s/yr							МТ	ī/yr		
2014	0.2104	0.0112	8.2200e- 003	1.0000e- 005	7.0000e- 005	9.8000e- 004	1.0500e- 003	2.0000e- 005	9.8000e- 004	1.0000e- 003	0.0000	1.0918	1.0918	1.5000e- 004	0.0000	1.0949
Total	0.2104	0.0112	8.2200e- 003	1.0000e- 005	7.0000e- 005	9.8000e- 004	1.0500e- 003	2.0000e- 005	9.8000e- 004	1.0000e- 003	0.0000	1.0918	1.0918	1.5000e- 004	0.0000	1.0949

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	СО	SO2	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					ton	s/yr							MT	/yr		
Area	0.0912	0.0000	1.7000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004
Energy	0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142		0.0142	0.0142	0.0000	301.8950	301.8950	0.0120	5.4000e- 003	303.8199
Mobile	1.5861	2.5994	12.9255	0.0153	1.0274	0.0348	1.0622	0.2757	0.0319	0.3076	0.0000	1,274.991 1	1,274.991 1	0.0705	0.0000	1,276.470 5
Waste						0.0000	0.0000		0.0000	0.0000	43.4807	0.0000	43.4807	2.5696	0.0000	97.4430
Water						0.0000	0.0000		0.0000	0.0000	1.7334	4.9467	6.6801	0.1784	4.2900e- 003	11.7563
Total	1.6978	2.7857	13.0821	0.0164	1.0274	0.0489	1.0763	0.2757	0.0460	0.3217	45.2140	1,581.833 2	1,627.047 2	2.8305	9.6900e- 003	1,689.490 1

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	со	SO2	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					ton	s/yr							MT	/yr		
Area	0.0912	0.0000	1.7000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004
Energy	0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142		0.0142	0.0142	0.0000	301.8950	301.8950	0.0120	5.4000e- 003	303.8199
Mobile	1.5861	2.5994	12.9255	0.0153	1.0274	0.0348	1.0622	0.2757	0.0319	0.3076	0.0000	1,274.991 1	1,274.991 1	0.0705	0.0000	1,276.470 5
Waste						0.0000	0.0000		0.0000	0.0000	43.4807	0.0000	43.4807	2.5696	0.0000	97.4430
Water						0.0000	0.0000		0.0000	0.0000	1.7334	4.9467	6.6801	0.1784	4.2800e- 003	11.7536
Total	1.6978	2.7857	13.0821	0.0164	1.0274	0.0489	1.0763	0.2757	0.0460	0.3217	45.2140	1,581.833 2	1,627.047 2	2.8305	9.6800e- 003	1,689.487 3

	ROG	NOx	со	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2014	1/10/2014	5	8	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 27,000; Non-Residential Outdoor: 9,000 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip	Vendor Trip	Hauling Trip	Worker Trip	Vendor Trip	Hauling Trip	Worker Vehicle	Vendor	Hauling
	Count	Number	Number	Number	Length	Length	Length	Class	Vehicle Class	Vehicle Class
Architectural Coating	1	2.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2014

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					ton	s/yr							МТ	/yr		
Archit. Coating	0.2086		, , ,			0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7800e- 003	0.0111	7.6900e- 003	1.0000e- 005		9.8000e- 004	9.8000e- 004		9.8000e- 004	9.8000e- 004	0.0000	1.0213	1.0213	1.5000e- 004	0.0000	1.0244
Total	0.2104	0.0111	7.6900e- 003	1.0000e- 005		9.8000e- 004	9.8000e- 004		9.8000e- 004	9.8000e- 004	0.0000	1.0213	1.0213	1.5000e- 004	0.0000	1.0244

3.2 Architectural Coating - 2014

Unmitigated Construction Off-Site

	ROG	NOx	со	SO2	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					ton	s/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	4.0000e- 005	5.0000e- 005	5.4000e- 004	0.0000	7.0000e- 005	0.0000	7.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706
Total	4.0000e- 005	5.0000e- 005	5.4000e- 004	0.0000	7.0000e- 005	0.0000	7.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706

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					ton	s/yr							МТ	/yr		
Archit. Coating	0.2086		, , ,			0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7800e- 003	0.0111	7.6900e- 003	1.0000e- 005		9.8000e- 004	9.8000e- 004		9.8000e- 004	9.8000e- 004	0.0000	1.0213	1.0213	1.5000e- 004	0.0000	1.0244
Total	0.2104	0.0111	7.6900e- 003	1.0000e- 005		9.8000e- 004	9.8000e- 004		9.8000e- 004	9.8000e- 004	0.0000	1.0213	1.0213	1.5000e- 004	0.0000	1.0244

3.2 Architectural Coating - 2014

Mitigated Construction Off-Site

	ROG	NOx	со	SO2	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					ton	s/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	4.0000e- 005	5.0000e- 005	5.4000e- 004	0.0000	7.0000e- 005	0.0000	7.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706
Total	4.0000e- 005	5.0000e- 005	5.4000e- 004	0.0000	7.0000e- 005	0.0000	7.0000e- 005	2.0000e- 005	0.0000	2.0000e- 005	0.0000	0.0705	0.0705	0.0000	0.0000	0.0706

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					ton	s/yr							МТ	/yr		
Mitigated	1.5861	2.5994	12.9255	0.0153	1.0274	0.0348	1.0622	0.2757	0.0319	0.3076	0.0000	1,274.991 1	1,274.991 1	0.0705	0.0000	1,276.470 5
Unmitigated	1.5861	2.5994	12.9255	0.0153	1.0274	0.0348	1.0622	0.2757	0.0319	0.3076	0.0000	1,274.991 1	1,274.991 1	0.0705	0.0000	1,276.470 5

4.2 Trip Summary Information

	Ave	rage Daily Trip Ra	ate	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	2,288.70	2,850.66	2373.12	2,762,636	2,762,636
Total	2,288.70	2,850.66	2,373.12	2,762,636	2,762,636

4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546249	0.062948	0.174600	0.125189	0.034587	0.004960	0.015036	0.022157	0.002053	0.003311	0.006538	0.000702	0.001670

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	/yr		
Electricity Mitigated			1 1 1			0.0000	0.0000	1	0.0000	0.0000	0.0000	99.1809	99.1809	8.1200e- 003	1.6800e- 003	99.8721
Electricity Unmitigated	n					0.0000	0.0000		0.0000	0.0000	0.0000	99.1809	99.1809	8.1200e- 003	1.6800e- 003	99.8721
NaturalGas Mitigated	0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142		0.0142	0.0142	0.0000	202.7142	202.7142	3.8900e- 003	3.7200e- 003	203.9479
NaturalGas Unmitigated	0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142	 	0.0142	0.0142	0.0000	202.7142	202.7142	3.8900e- 003	3.7200e- 003	203.9479

5.2 Energy by Land Use - NaturalGas

<u>Unmitigated</u>

	NaturalGa s 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					ton	s/yr							MT	/yr		
High Turnover (Sit Down Restaurant)	3.79872e +006	0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142		0.0142	0.0142	0.0000	202.7142	202.7142	3.8900e- 003	3.7200e- 003	203.9479
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		0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142		0.0142	0.0142	0.0000	202.7142	202.7142	3.8900e- 003	3.7200e- 003	203.9479

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGa s 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					ton	s/yr							MT	/yr		
High Turnover (Sit Down Restaurant)	3.79872e +006	0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142		0.0142	0.0142	0.0000	202.7142	202.7142	3.8900e- 003	3.7200e- 003	203.9479
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		0.0205	0.1862	0.1564	1.1200e- 003		0.0142	0.0142		0.0142	0.0142	0.0000	202.7142	202.7142	3.8900e- 003	3.7200e- 003	203.9479

5.3 Energy by Land Use - Electricity

<u>Unmitigated</u>

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr		Π	7/yr	
High Turnover (Sit Down Restaurant)	617220	99.1809	8.1200e- 003	1.6800e- 003	99.8721
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		99.1809	8.1200e- 003	1.6800e- 003	99.8721

5.3 Energy by Land Use - Electricity <u>Mitigated</u>

Total CO2 CH4 N20 CO2e Electricity Use Land Use kWh/yr MT/yr High Turnover (Sit 617220 Down Restaurant) 1.6800e-003 8.1200e-003 99.8721 99.1809 ÷. 0.0000 0.0000 Parking Lot 0 0.0000 0.0000 훈 Total 99.1809 8.1200e-1.6800e-99.8721 003 003

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	/yr		
Mitigated	0.0912	0.0000	1.7000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004
Unmitigated	0.0912	0.0000	1.7000e- 004	0.0000		0.0000	0.0000	 , , ,	0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004

6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	ī/yr		
Architectural Coating	0.0209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e- 005	0.0000	1.7000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004
Total	0.0912	0.0000	1.7000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004

Mitigated

	ROG	NOx	СО	SO2	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					ton	s/yr							МТ	/yr		
Architectural Coating	0.0209					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e- 005	0.0000	1.7000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004
Total	0.0912	0.0000	1.7000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e- 004	3.2000e- 004	0.0000	0.0000	3.4000e- 004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category		MT	ſ/yr	
Mitigated	6.6801	0.1784	4.2800e- 003	11.7536
Unmitigated	6.6801	0.1784	4.2900e- 003	11.7563

7.2 Water by Land Use

<u>Unmitigated</u>

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	7/yr	
High Turnover (Sit Down Restaurant)	5.46361 / 0.348741	6.6801	0.1784	4.2900e- 003	11.7563
Total		6.6801	0.1784	4.2900e- 003	11.7563

Page 14 of 16

7.2 Water by Land Use

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal		МТ	ī/yr	
High Turnover (Sit Down Restaurant)	5.46361 / 0.348741	6.6801	0.1784	4.2800e- 003	11.7536
Total		6.6801	0.1784	4.2800e- 003	11.7536

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
		MT	ī/yr	
Unmitigated	43.4807	2.5696	0.0000	97.4430
Mitigated	43.4807	2.5696	0.0000	97.4430

8.2 Waste by Land Use

<u>Unmitigated</u>

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	7/yr	
High Turnover (Sit Down Restaurant)	214.2	43.4807	2.5696	0.0000	97.4430
Total		43.4807	2.5696	0.0000	97.4430

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons		МТ	7/yr	
High Turnover (Sit Down Restaurant)	214.2	43.4807	2.5696	0.0000	97.4430
Total		43.4807	2.5696	0.0000	97.4430

9.0 Operational Offroad

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

10.0 Vegetation

Greenhouse Gas Emission Worksheet N20 Mobile Emissions

1700 Embarcadero Road Auto Dealership Project

From CalEEMod Vehicle Fleet Mix Output:

Annual VMT:

3,848,486

				N2O	
			CH4	Emission	N2O
	Percent	CH4 Emission	Emission	Factor	Emission
Vehicle Type	Туре	Factor (g/mile)*	(g/mile)**	(g/mile)*	(g/mile)**
Light Auto	54.6%	0.04	0.0218492	0.04	0.021849
Light Truck < 3750 lbs	6.3%	0.05	0.0031524	0.06	0.003783
Light Truck 3751-5750 lbs	17.5%	0.05	0.0087293	0.06	0.010475
Med Truck 5751-8500 lbs	12.3%	0.12	0.0147088	0.2	0.024515
Lite-Heavy Truck 8501-10,000 lbs	3.4%	0.12	0.0040762	0.2	0.006794
Lite-Heavy Truck 10,001-14,000 lbs	0.5%	0.09	0.0004361	0.125	0.000606
Med-Heavy Truck 14,001-33,000 lbs	1.6%	0.06	0.0009358	0.05	0.00078
Heavy-Heavy Truck 33,001-60,000 lbs	2.5%	0.06	0.0014847	0.05	0.001237
Other Bus	0.2%	0.06	0.0001253	0.05	0.000104
Urban Bus	0.3%	0.06	0.0001962	0.05	0.000164
Motorcycle	0.7%	0.09	0.0006036	0.01	6.71E-05
School Bus	0.1%	0.06	4.068E-05	0.05	3.39E-05
Motor Home	0.2%	0.09	0.00015	0.125	0.000208
Total	100.0%		0.0564882		0.070615

Total Emissions (metric tons) =

Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21 GWP
N2O	310 GWP
1 ton (short, US) =	0.90718474 metric ton

Annual Mobile Emissions:

	Total Emissions	Total CO2e units
N20 Emissions:	0.2718 metric tons N2O	84 metric tons CO2e
	Project Total:	84 metric tons CO2e

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).

in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009. Assume Model year 2000-present, gasoline fueled. ** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

*** From URBEMIS 2007 results for mobile sources

Greenhouse Gas Emission Worksheet N20 Mobile Emissions

Ming's Restaurant - existing use

From CalEEMod Vehicle Fleet Mix Output:

Annual VMT:

2,762,636

				N2O	
			CH4	Emission	N2O
	Percent	CH4 Emission	Emission	Factor	Emission
Vehicle Type	Туре	Factor (g/mile)*	(g/mile)**	(g/mile)*	(g/mile)**
Light Auto	54.6%	0.04	0.0218492	0.04	0.021849
Light Truck < 3750 lbs	6.3%	0.05	0.0031524	0.06	0.003783
Light Truck 3751-5750 lbs	17.5%	0.05	0.0087293	0.06	0.010475
Med Truck 5751-8500 lbs	12.3%	0.12	0.0147088	0.2	0.024515
Lite-Heavy Truck 8501-10,000 lbs	3.4%	0.12	0.0040762	0.2	0.006794
Lite-Heavy Truck 10,001-14,000 lbs	0.5%	0.09	0.0004361	0.125	0.000606
Med-Heavy Truck 14,001-33,000 lbs	1.6%	0.06	0.0009358	0.05	0.00078
Heavy-Heavy Truck 33,001-60,000 lbs	2.5%	0.06	0.0014847	0.05	0.001237
Other Bus	0.2%	0.06	0.0001253	0.05	0.000104
Urban Bus	0.3%	0.06	0.0001962	0.05	0.000164
Motorcycle	0.7%	0.09	0.0006036	0.01	6.71E-05
School Bus	0.1%	0.06	4.068E-05	0.05	3.39E-05
Motor Home	0.2%	0.09	0.00015	0.125	0.000208
Total	100.0%		0.0564882		0.070615

Total Emissions (metric tons) =

Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21 GWP
N2O	310 GWP
1 ton (short, US) =	0.90718474 metric ton

Annual Mobile Emissions:

	Total Emissions	Total CO2e units
N20 Emissions:	0.1951 metric tons N20	60 metric tons CO2e
	Project Tota	I: 60 metric tons CO2e

References

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).

in California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009. Assume Model year 2000-present, gasoline fueled. ** Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1, January 2009.

*** From URBEMIS 2007 results for mobile sources

Appendix B

Historic Resource Evaluation

1700 Embarcadero Historic Resource Evaluation

City of Palo Alto, CA December 4, 2015



Prepared by m-group 1303 Jefferson Street, Suite 100-B Napa, CA 94559
1. PURPOSE

The project applicant is requesting to demolish the former Ming's Restaurant building at 1700 Embarcadero Road, constructed in 1968, and redevelop the property.

Recognizing the potential historical significance of the subject building, the City of Palo Alto has requested that a Historic Resource Evaluation be prepared to accompany the demolition permit submittal in order to determine if the property meets the CEQA definition of a Historical Resource as defined in CEQA § 15064.5. Generally, a resource shall be considered to be "historically significant" if the resource meets the criteria for listing on the California Register of Historic Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852).

2. METHODOLOGY

M-Group used a systematic approach to perform the Historic Resource Evaluation. Our approach included review of archival information for the subject property and review of records available at the Palo Alto Historical Society and the City of Palo Alto Development Center. To aid in the evaluation M-Group referenced available historic contexts and literature related to the building or its setting. A field survey was undertaken by M-Group Preservation Specialist, Lilly Bianco on November 12, 2015 to perform photographic documentation and evaluate the level of integrity.

The evaluation focuses on the identification of essential character defining features important for conveying the properties significance, the role the property played in the larger historic context, and an assessment of the extent to which those essential features have or have not been retained.

3. SUMMARY OF FINDINGS

The following Evaluation performed for the subject property indicates that the subject building is a neo-eclectic commercial building and confirms that the subject building is not eligible for listing on the California Register of Historic Resources based on its failure to meet one or more of the four significance criterion.

4. HISTORIC CONTEXT

Growth in Palo Alto

The 1960's saw the beginnings of Palo Alto as a financial, technological and medical hub. The City of Palo Alto largely developed as an off shoot of Stanford University and until the 1960s the City was generally considered a community of homeowners and shopkeepers. ¹ Accordingly, up until that time, Palo Alto was largely defined by residential, agricultural, and small commercial land uses. From 1950 to 1960 Palo Alto's population doubled, increasing from 25,475 in 1950 to 52,287 in 1960. This

¹ Arthur Coffman, *An Illustrated History of Palo Alto*, Lewis Osborne: Palo Alto, 1969. 90

growth was in line with the rest of the Country which saw the nation's longest period of continuous growth following the Second World War.² During this period a series of annexations pushed the City's boundaries south past Oregon Avenue all the way to San Antonio Road which nearly doubled the City in size and allowed for the profound population growth³.

This period of growth coincided with the construction of the Stanford Shopping Center, relocation of the Stanford Medical School from San Francisco to its new location on the Stanford Campus, and the opening of the Stanford Research Park. This era was also the golden era of architect Joseph Eichler (1900-1974), who popularized the Mid Century modern style for residential architecture.

Chinese Americans in Palo Alto

Prior to the middle of the twentieth century Chinese immigrants in California were faced with a multitude of struggles and were often confined to the life of a laborer building railroads, working as laundrymen, grocers, servants and factory workers.

With the end of World War II came the end of the Chinese exclusion acts and the Chinese in the Santa Clara Valley felt a sense of relief and optimism. The forthcoming era was not without its barriers though. While the Exclusion Acts had been rescinded there remained barriers to obtaining housing and business licenses. Chinese- Americans in Palo Alto often had help from white friends who helped them purchase homes. ⁴ Many Chinese also purchased land in the name of their American born children to get around the land ownership prohibitions and established farms, namely flower farms.

As population and technological advancement surged in the middle and latter half of the twentieth century many Chinese transitioned their business efforts from floriculture to commercial ventures that included supermarkets, restaurants, and retail establishments to serve the ever growing population⁵

Ming's Restaurant

The original Ming's Restaurant was opened by famed San Francisco Restaurateur, Mr. Johnny Kan of San Francisco and graphic illustrator, Dan Lee on July 26, 1956 at 4100 El Camino Real in Palo Alto, taking over what was known as the "former Longbarn restaurant".

Johnny Kan was a Chinese American Restauranteur that made his mark in San Francisco Chinatown by introducing a more authentic version of Cantonese cuisine to Americans which contrasted rather significantly with the Americanized interpretation of Chinese food Americans had been consuming

² Mary Brown, San Francisco Planning Department, *San Francisco Modern Architecture and Landscape Design*, 1955-1970, Final Draft, San Francisco, CA, January 12, 2011. 115

³ Ward Winslow, *Palo Alto: A Centennial History, Palo Alto Historical Association*, 1993. 54

⁴ Lillian Gong Guy and Gerrye Wong, Images of America: Chinese in San Jose and the Santa Clara Valley (San Francisco: Arcadia, 2007), 33.

⁵ Ibid

up until then. He also is credited with creating an early example of the restaurant designed around an open kitchen so as to allow diners to observe the preparation of food and with introducing an innovative lazy Susan/ revolving tabletop to Chinese Restaurants. After the success of Kan's first restaurant in San Francisco, he and his three partners (George Hall, John C Young, and George Chow) recruited graphic illustrator Dan Lee as a fifth partner and opened Ming's in Palo Alto as another premium Cantonese restaurant. Dan Lee was a commercial graphic artist who ended up serving as the interior designer for Ming's. When the partner scheduled to serve as the manager was called for Military Duty, Dan Lee was asked to serve as the manager and subsequently became partner. ⁶

Ming's Restaurant served over a hundred different dishes and thrived at that location until 1968 when a road widening project along El Camino Real necessitated demolition of much of the existing building and required the restaurant to move. In 1968 the Restaurant relocated to 1700 Embarcadero at the Southeast corner of Embarcadero Road and East Bayshore Road. The new Ming's was designed by architects Philip Choy and David Arnold of San Francisco⁷ and constructed by contractors Howard J. White Inc. The new building was purported to have cost \$300,000 to construct exclusive of furnishings, equipment, and landscaping.⁸ Much of the decorative features including wooden plaques and oriental screens were brought over from the original location on El Camino Real.⁹

The new Ming's Restaurant was to be housed in a single story redwood commercial building designed in the neo-eclectic style with Asian influence reflected in the detailing and featuring approximately 17,942 square feet of floor area with two large dining rooms separated by a bar/lounge area capable of accommodating 350 patrons at a given time. The restaurant would be surrounded by a large surface parking lot.

On May 22, 1968 the new Ming's Restaurant opened. On April 15, 1969, Institutions Magazine, an international publication related to the food and beverage industry, awarded Ming's "an award of special distinction for total design". Ming's became a Palo Alto Institution that served as a gathering place for the Stanford Varsity teams, executives, and Palo Alto families. ¹⁰

The restaurant changed hands in 1986 after an approximately 7 month closure. In June 1986 Ming's Restaurant was sold by Dan Lee and partners to Felicity and Francis Tse of Oakland who owned and operated "Jade's Villa" restaurant in Oakland. Francis Tse was a prominent anesthesiologist in Berkeley. The Restaurant was co-owned by Dr. Tse's sister Bataille Wong. The Tses renamed the restaurant "Ming's Villa". The new owners embarked on a 1.5 million dollar renovation that included the addition of two additional kitchens and expansion of the dining rooms to increase the capacity

⁶ Daily Palo Alto Times, August 24,1967

⁷ Daily Palo Alto Times, August 24, 1967

⁸ Daily Palo Alto Times, May 10, 1968.

⁹ Ibid

¹⁰ Lillian Gong-Guy and Gerrye Wong, 50

from approximately 350 to over 600. The renovation added a new entrance facing Embarcadero Road, fountains, landscaping, and new interior facilities¹¹. A Palo Alto Weekly article recalled that when comparing the renovated restaurant to the previous iteration, "about the only things you can expect to find the same are the basic menu and the size of the building."¹²

As part of the rehabilitation and in accordance with Chinese customs, the Tses added features intended to ensure good fortune to those who ate and worked in the restaurant including offsetting the front door by 24 degrees from true north — according to a Chinese soothsayer such an angle allows good spirits to flow through and bad ones to vent. In addition, two large stone lions were added in front of the entrance as "guards" ¹³. Unlike the traditional Chinese American restaurant, the renovated Ming's was designed to exhibit an open and airy look that veered away from the traditional dark, gold, and red décor. The interior was finished in pastel shades of green and pink and enhanced by indirect neon cove lighting.¹⁴ The added kitchen was a full 4,200 square feet larger than most commercial kitchens and staffed by 40 people. The Kitchen featured bowling alley sized aisles lined with gas flamed woks. The kitchen was divided into three areas: dim sum, barbecue and dinner¹⁵. The Tses hired Hing Kei Lam as executive chef who had been the former executive chef at Maxim's in Hong Kong.

The restaurant operated until December 2014 and has been closed since.

Architects

Philip Choy was born in 1926 and raised in San Francisco Chinatown by his second generation American Mother and Chinese Immigrant father. He had three sisters and one brother. In 1945 Choy joined the air force where he served for one and a half years. Following his tenure with the air force he attended U.C Berkeley under the G.I Bill and graduated with a degree in Architecture.

Once out of school, Choy worked for an architectural firm for 12 years designing schools- one of which is located in Watsonville. After gaining experience working for a large firm, Choy went into private practice. It was during his time in private practice that he designed the award winning Ming's Restaurant.

Since the 1970's Choy has served as an adjunct professor in the Asian American Studies Department in San Francisco State University. He is passionately involved in Chinese American History in the Bay Area and has taught and lectured on the subject throughout the Bay Area.¹⁶

No information could be found related to architect, David Arnold.

¹¹ Daily Palo Alto Times, June 10,1986

¹² Palo Alto Weekly March 18, 1987

¹³ Daily Palo Alto Times, November 18,1986

¹⁴ Ibid

¹⁵ Palo Alto Weekly March 18, 1987

¹⁶ Choy: A Period of Ethnic Awakening, published in the Asian American Times, September & October 2002 Issue Vol.2, No. 20 California Edition <u>http://www.angelfire.com/clone/aatimes/cat5.html</u> accessed 12.1.15

5. ARCHITECTURAL DESCRIPTION

The former Ming's Restaurant is located on a 2.5 acre lot at 1700 Embarcadero at the corner of Embarcadero Road and Bayshore Road. The property is surrounded by Merrill Corporation offices to the north and across Embarcadero Road, professional offices to the south and west, and auto dealerships to the east.

The style of the former Ming's restaurant is most reminiscent of the neo-eclectic style which became common after 1965. Neo Eclectic architecture is a style known for borrowing from past eras and foreign influences without necessarily being duplicative of any particular style or building type. The building exhibits both neo-traditional details visible in the wood paneled walls and ribbons of windows, but also eclectic Asian influences readily visible in the pagoda style roof, articulation in form, and Chinese talismans and details as well as in the landscape.

The restaurant exhibits a complex, irregular plan (somewhat surprisingly based on how Chinese architecture often features bilateral symmetry) that is topped with a deck/mansard shaped roof featuring red pantile and reminiscent of the pagoda style roof. The roof line exhibits various levels with a taller roof at the center of the building and shorter rooflines exhibited by the irregular projections off the primary building. The irregularity in the rooflines provides articulation and perpetuates the emphasis on the horizontal orientation and expansiveness of the building.

<u>FAÇADE (North Elevation)</u> The entrance (relocated in 1986) is situated on the north elevation, facing Embarcadero Road. The entrance projects from the wall and is offset by approximately 24 degrees from due north with the intention of letting good spirits in and bad out. The entrance features paired glass doors with gold anodized aluminum handles and a jade colored marble surround that give a nod to the Moderne style. The entrance is flanked by plain pastel green walls, intentionally meant to depart from the traditional dark reds, and golds typical of Chinese American Restaurants.

A series of wooden pillars and a trellis system line a pathway leading to what was the original entrance at the northwest corner of the building. The pathway leads to the side of the building and provides access to the entrance via concrete stairs and landing that surround the front of the building. Accessibility ramps have also been added.

<u>SIDES (East and West Elevations)</u> The east and west elevations feature rather traditional detailing that provides for an interesting contrast with the Chinese influences. The side elevations reinforce the strong horizontal orientation, and feature paneling on bulkheads and frieze, ribbons of large 9-paned fixed windows, side lights on either side of paired French entry doors, and regularly spaced wooden piers.

A large deck and ADA access have been added to the west elevation and ADA access has also been added to access the building at the east elevation. The northeast corner of the building includes a small alcove featuring a traditional Chinese garden. <u>REAR (South Elevation)</u> The rear elevation is generally free of adornment and features a wood clad wall. An outdoor dining area is situated at the far corner on the southeast portion of the building and exhibits similar architectural detailing as the side elevations.

Alterations:

April 22, 1969	Enlarged and reconfigured parking lot for improved traffic configuration
C. Dec 6, 1986	Added new front entrance facing Embarcadero Road, fountains, landscaping, and new interior facilities including the addition of two kitchens and expansion of dining area
June 21, 1994	Addition of approximately 980 square feet of outdoor dining (deck) in an existing enclosed garden area and construction of handicap ramp.
August 29, 2003	New roof

Essential Character Defining Features:

- Emphasis on articulation
- Horizontal Emphasis
- Talismans and imagery of good fortune
- Pagoda style roof
- Ribbon windows
- Wall Paneling

6. SIGNIFICANCE

Eligibility for listing on the California Register and/or National Register is determined based on how well a given property meets one or more of the following criteria. It is not required that all four criteria are met for a resource to be considered significant. The applicable criteria are listed below.

Criterion 1	Associated 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
Criterion 2	Associated with the lives of persons important to local, California or national history
Criterion 3	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
Criterion 4	Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation

Evaluation of Significance

Criterion 1: Associated with Significant Events

The former Ming's Restaurant does not appear eligible based on its association with significant events related to local, California, or National History. The Restaurant did serve as a popular Chinese Restaurant in the Bay Area and became somewhat of an institution over its existence; however the restaurant did not play such a pivotal role as to be considered eligible for the California Register of Historic Resources merely based on its long lived popularity. The property does not appear eligible under Criterion 1.

Criterion 2: Associated with Significant Persons

A property may be considered significant under Criterion 2 based on its association with a person whose specific contributions to history can be identified and documented. Persons "significant in our past" refers to individuals whose activities are demonstrably important within a local, State, or national historic context. The criterion is generally restricted to those properties that illustrate (rather than commemorate) a person's important achievements.

The Restaurant is most closely associated with original owners Johnny Kan and Dan Lee, who opened the restaurant in 1956 and the principal architect Philip Choy who constructed the relocated Ming's in 1968. The restaurant was also associated with Mr. and Mrs. Tse who purchased the property in 1986. While owner Johnny Kan did contribute greatly to the Cantonese dining experience in America, his first restaurant, "Kan's" in San Francisco is much more representative and illustrative of those contributions. Partner, Dan Lee also contributed to the Chinese-American dining experience in Palo Alto; however, his contributions to the industry are not so substantial as to consider the property significance based on its association with him.

Architect, Philip Choy was a notable member of the Bay Area community and advocated recognition of Chinese American heritage in the Bay Area. He served as an architect for many years until becoming a teacher and advocate of Chinese American heritage. While Philips did contribute to the architectural fabric of Palo Alto and make many other types of contributions through his teaching and lecturing, the former Ming's restaurant is not necessarily most illustrative of his contributions. Further, it is unusual to deem a building significant based on its association with a living person because it is thought that not enough time would have passed for a scholarly perspective to have been formed. As such, the restaurant does not appear to be significant based on its association with architect, Philip Choy. Accordingly, it is determined that the subject property is not eligible for listing under Criterion 2.

Criterion 3: Architectural or Artistic Value

Criterion 3 applies to properties significant for their physical design or construction, including such elements as architecture, landscape architecture, engineering etc. Most properties found eligible under Criterion C are those that embody "distinctive characteristics of a type" which refers to all

architectural styles and construction practices. To be eligible under this portion of the Criterion, a property must clearly illustrate the physical features or traits that commonly recur in individual types, periods, or methods of construction. To be eligible, a property must clearly contain enough of those characteristics to be considered a true representative of a particular type, period, or method of construction.

The former Ming's Restaurant is a neo-eclectic commercial building which exhibits both neotraditional elements and Chinese influences, it is not; however, especially illustrative of a particular discernible style and does not constitute a true representative of any one type, period, or method of construction that it would be considered eligible under this criterion. As such, the subject property does not appear eligible under Criterion 3.

Criterion 4: Potential to yield Information

The building site does is not expected to hold significant archeological resources and the building itself does not exhibit construction methods that would be particularly important to yielding information related to prehistory or history of California. Accordingly, the building at 1700 Embarcadero does not appear eligible pursuant to Criterion 4.

7. INTEGRITY

Historic Resources deemed to be significant must also be able to convey their historic significance. The ability to do this is judged by how well the resource meets the seven aspects of integrity: Location, design, setting, materials, workmanship, feeling and association. However, the individual nature of the property and its particular significance may result in certain aspects holding more weight than others. It is not required that a property retains *all* of its historic physical features or characteristics, rather a property must retain at the very least, those essential features which allow it to convey its significance. The essential features are those that define (1) why a property is significant and (2) when it was significant.

- 1. Location: Refers to the building's original geographical location.
- 2. Design: Design refers to the organization of space, proportion, scale, technology, ornamentation and materials used. Design is reflective of function, technology and aesthetic trends of a respective time period. In order for integrity of design to be retained the resource should retain the original structural systems, massing, spatial arrangement, texture and color of materials, detailing and arrangement and type of vegetation or, at the least, a majority of those elements.
- 3. Setting: Setting refers to the character of the place in which the property played its historical role. Setting often reflects the basic physical conditions under which a property was built and the functions it was intended to serve.

- 4. Materials: Materials are the physical elements that were combined in a particular pattern or configuration to form a historic property. The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies. In order to retain integrity a property should retain the key exterior materials dating to the period of significance.
- 5. Workmanship: Workmanship is important because it can furnish evidence of the technology of a craft, illustrate the aesthetic principles of a historic or prehistoric period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles.
- 6. Feeling: Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.
- 7. Association: Association is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer.

The subject property was determined not to be significant and as such, consideration of integrity — those components which work together to convey a properties significance—is not warranted.

9. CONCLUSION

The former Ming's Restaurant at 1700 Embarcadero is not considered eligible for listing on the California Register of Historic Resources. The neo-eclectic commercial building fails to meet one or more of the criterion for listing on the California Register of Historic Resources and therefore, is not a significant historical resource. No further evaluation or documentation of the property is warranted.

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Palo Alto Times

Palo Alto Weekly

RL. Polk & CO. Palo Alto City Directory

Personal Correspondence

Steve Saiger, Historian at Palo Alto Historical Society, DATE

QUALIFICATIONS

Lilly Bianco of M-Group performed the Historic Resource Evaluation. Ms. Bianco holds a Masters in Historic Preservation and is a qualified Architectural Historian pursuant to the Secretary of the Interior's Standards and as defined in the Code of Federal Regulations, 36 CFR Part 61. Ms. Bianco is listed as an Architectural Historian on the California Historic Resources Information Systems list of qualified consultants.

M-Group Principal, Heather Hines, oversaw the evaluation. Heather Hines is a qualified Architectural Historian pursuant to the Secretary of the Interior's Standards and as defined in the Code of Federal Regulations, 36 CFR Part 61. Ms. Hines holds a Masters in Urban Planning and Graduate Certificate in Historic Preservation. She has 14 years of experience in the fields of historic preservation and urban planning and is listed as an Architectural Historian on the California Historic Resources Information Systems list of qualified consultants.

ATTACHMENTS

- A. Photographs
- B. DPR 523

ATTACHMENT A



Figure 1 Front (North) Entrance Facing Embarcadero Road. Photo taken Nov 12, 2015.



Figure 2 Path to Former Entry at northeast corner. Photo taken Nov 12, 2015



Figure 3 Close Up of Architecture at Northeast corner. Photo Taken Nov 12, 2015



Figure 4 Landscaping at northwest corner. Photo taken Nov 12, 2015



Figure 5 West elevation. Photo taken Nov 12, 2015



Figure 6 South (Rear) elevation. Photo Taken Nov 12, 2015



Figure 7 Outdoor Patio at Southwest Corner. Photo taken Nov 12, 2015



Figure 8 East Elevation. Photo taken Nov 12, 2015

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e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate) APN.008-03-08

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The restaurant was constructed in 1968 and designed in the neo-eclectic style which became common after 1965. The building exhibits both neo-traditional details visible in the wood paneled walls and ribbons of windows, but also eclectic Asian influences readily visible in the pagoda style roof, articulation in form, and Chinese talismans and details as well as in the landscape. The front entrance (added in 1986) gives a nod to the Moderne style. The building has undergone extensive alterations including a large scale renovation and expansion in 1986 in which the front entrance was relocated to face Embarcadero Road and the capacity enlarged from approximately 350 patrons to over 600.



***P11.** Report Citation: (Cite survey report and other sources, or enter "none.") 1700 Embarcadero Historic Resource Evaluation, Prepared by M-Group, December 4, 2015

*Attachments: ×NONE □Location Map □Continuation Sheet IF Building, Structure, and Object Record □Archaeological Record □District Record □Linear Feature Record □Milling Station Record □Rock Art Record □Artifact Record □Photograph Record □ Other (List):

Appendix C

Geotechnical Investigation

GEOTECHNICAL INVESTIGATION FOR **MERCEDES-BENZ DEALERSHIP 1700 EMBARCADERO ROAD** PALO ALTO, CALIFORNIA 94303

August 2015

Prepared for

Jones Real Estate Property II, LLC

c/o Fletcher Jones Management Group 7300 W. Sahara Avenue Las Vegas, Nevada 89117

Project No. 3489-1

ROMIG ENGINEERS, INC. GEOTECHNICAL & ENVIRONMENTAL SERVICES

August 31, 2015 3489-1

Jones Real Estate Property II, LLC c/o Fletcher Jones Management Group 7300 W. Sahara Avenue Las Vegas, Nevada 89117

RE: GEOTECHNICAL INVESTIGATION MERCEDES-BENZ DEALERSHIP 1700 EMBARCADERO ROAD PALO ALTO, CALIFORNIA

Attention: Mr. Shawn Dettrey

Gentlemen:

In accordance with your request, we have performed a geotechnical investigation for the proposed Mercedes-Benz Dealership to be constructed at 1700 Embarcadero Road in Palo Alto, California. The accompanying report summarizes the results of our field exploration, laboratory testing, and engineering analysis, and presents our geotechnical recommendations for the project.

We refer you to the text of our report for specific recommendations.

Thank you for the opportunity to work with you on this project. If you have any questions or comments about our findings or recommendations for the project, please call.

Very truly yours,

ROMIG ENGINEERS, INCOROFESS/ 002157 No. 77883 Tom W. Porter, P.E. Glenn A. Romig CIVI TE OF CALIFO Copies: Addressee (1) Genzler (3) Attn: Mr. Deeg Snyder KJWW Engineering (1) Attn: Mr. Arun Garg Attn: Mr. Karl Pennings Calichi Design Group (1) Attn: Mr. Austin Hahn Skender Construction (1) Attn: Mr. Tom Kooiker

GAR:TWP:dr

GEOTECHNICAL INVESTIGATION MERCEDES-BENZ DEALERSHIP 1700 EMBARCADERO ROAD PALO ALTO, CALIFORNIA 94303

PREPARED FOR: JONES REAL ESTATE PROPERTY II, LLC c/o FLETCHER JONES MANAGEMENT GROUP 7300 W. SAHARA AVENUE LAS VEGAS, NEVADA 89117

PREPARED BY: ROMIG ENGINEERS, INC. 1390 EL CAMINO REAL, SECOND FLOOR SAN CARLOS, CALIFORNIA 94070

AUGUST 2015

TABLE OF CONTENTS

Letter of transmittal	
Title Page	
TABLE OF CONTENTS	
INTRODUCTION	1
Project Description	1
Scope of Work	2
Limitations	2
SITE EXPLORATION AND RECONNAISSANCE	3
Previous Geotechnical Investigation	3
Surface Conditions	4
Subsurface Conditions	4
Soil Properties Testing	5
Table 1. Soil Properties Testing	5
Ground Water	5
Corrosion Potential Testing	6
GEOLOGIC SETTING	7
Faulting and Seismicity	7
Table 2. Earthquake Magnitudes and Historical Earthquakes	8
Earthquake Design Parameters	9
Liquefaction Evaluation	.9
Compressible Bay Mud	10
Table 3. Estimated Fill 30-Year Consolidation Settlement	11
Geologic Hazards	11
CONCLUSIONS	12
PILE FOUNDATIONS	13
Pre-Cast Pre-Stressed Driven Concrete Piles	13
Pile Groups	14
Pile Foundation Settlement	14
Pile Lateral Load Resistance	14
WEAP Analysis	15
Indicator Piles	15
PDA Monitoring	15
Pre-Drilling and Pile Driving	16
Auger Cast Piles	17
Pile Groups	17
Pile Foundation Settlement	18
Lateral Loads on Piles and Pile Caps	18
Table 4. Average P-Multipliers for Various Pile Groups	19
Auger Cast Pile Load Testing	19
Installation of Production Piles	19
SPREAD FOOTINGS FOR SURFACE IMPROVEMENTS	20
Lateral Loads	20
Settlement for Footings	21

TABLE OF CONTENTS

(Continued)

SLABS-ON-GRADE	21
General Slab Considerations	21
Exterior Flatwork	22
Interior Slabs	22
RETAINING WALLS	23
VEHICLE PAVEMENTS	24
Asphalt Concrete Pavements	24
Table 5. Minimum Asphalt Concrete Pavement Sections	25
Portland Cement Concrete Pavements	25
EARTHWORK	
Clearing and Subgrade Preparation	
Material For Fill.	
Recycling of Existing Building and Pavement Materials	27
Temporary Slopes, Excavations and Dewatering	27
Compaction	
Table 6. Compaction Recommendations	
Finished Slopes	29
Surface Drainage	29
FUTURE SERVICES	29
Plan Review	29
Construction Observation and Testing	
č	
REFERENCES	
FIGURE 1 - VICINITY MAP	
FIGURE 2 - SITE PLAN	
FIGURE 2 - VICINITY GEOLOGIC MAP	
FIGURE $4 - CONTOUR MAP OF BAY MUD THICKNESS$	
HOURE 4 - CONTOOR MAL OF DAT MOD THICKNESS	
APPENDIX A - SUMMARY FIELD INVESTIGATION DATA	
Cone Penetration Test Method Description	
Cone Penetration Test Logs CPT 1 through CPT 3 (2000)	
Figure A 1 Key to Exploratory Boring Logs	
Exploratory Boring Logs EB 5 through EB 8 (2013)	
Boring Logs EB 1 through EB 4 (Billy Lin and Associates, 2005	
borning Logs LD-1 unough LD-4 (Diny Lin and Associates, 2005	
APPENDIX B - SUMMARY OF LABORATORY TEST RESULTS	
Figure B-1 - Plasticity Chart	
Figure B-2 - Liquid and Plastic Limits Test Report	
Figure B-3 - Liquid and Plastic Limits Test Report	
Figure B-4 - Particle Size Distribution Report	
Figure B 5 Partiala Size Distribution Report	

Figure B-5 - Particle Size Distribution Report

Corrosion Test Summary

TABLE OF CONTENTS

(Continued)

APPENDIX C - PILE CAPACITY ANALYSIS RESULTS

Figure C-1 - Allowable 14-inch Square PCPS Pile Capacity

Figure C-2 - Allowable 12-inch Square PCPS Pile Capacity

Figure C-3 - Allowable 16-inch Auger Cast Pile Capacity

Figure C-4 - Allowable 18-inch Auger Cast Pile Capacity

Figure C-5 - Lateral Pile Deflection, Free Head Condition, 16-inch Pile

Figure C-6 - Pile Bending Moment, Free Head Condition, 16-inch Pile

Figure C-7 - Pile Shear, Free Head Condition, 16-inch Pile

Figure C-8 - Lateral Pile Deflection, Fixed Head Condition, 16-inch Pile

Figure C-9 - Pile Bending Moment, Fixed Head Condition, 16-inch Pile

Figure C-10 - Pile Shear, Fixed Head Condition, 16-inch Pile

GEOTECHNICAL INVESTIGATION FOR MERCEDED-BENZ DEALERSHIP 1700 EMBARCADERO ROAD PALO ALTO, CALIFORNIA

INTRODUCTION

We are pleased to present this geotechnical investigation report for the proposed Mercedes-Benz dealership to be constructed at 1700 Embarcadero Road in Palo Alto, California. The location of the site is shown on the Vicinity Map, Figure 1. The purpose of this investigation was to review our previous work at the site and to provide geotechnical design and construction recommendations for the proposed project.

Project Description

The project consists of constructing an approximately 110,000 square-foot, 4-level Mercedes-Benz dealership facility at the subject property in Palo Alto. The building will include a ground level showroom and offices and an open service drive through. Additional showroom space, offices, and vehicle parking/storage will be provided at the second floor with the service shop and parking on the third floor. The entire roof will consist of additional parking (fourth floor). The building foundation will be supported on a deep pile foundation tied together with grade beams with a structural floor spanning between the grade beams. Typical interior column dead plus live loads are expected to be on the order of about 800 kips. A detached car wash structure is planned along the southeast side of the property with paved drive aisles and parking along the perimeter of the building. Vehicle access to the upper floors will be provided with car elevators.

The building will have a finished first floor elevation of about 10.68 feet and site grades vary from about 5.7 feet at the south corner of the property to about 7.2 feet at the north corner (based on the previous survey by Kier & Wright, dated July, 2009; datum NAVD 1988). Several feet of fill will be needed below the floor slab and along the perimeter of the building to adjust site grades. The existing building on the property will be demolished.

Scope of Work

Our scope of work for this investigation was presented in detail in our agreement with Jones Real Estate Property II, LLC dated June 29, 2015. In order to complete our investigation, we performed the following work.

- Reviewed readily available geologic and geotechnical literature pertinent to the general area of the site. We also reviewed a preliminary geotechnical report for the property.
- Review of our previous subsurface exploration and laboratory testing for the site and information available in our files concerning the site.
- Engineering analysis and evaluation of the subsurface data and laboratory testing to develop geotechnical design criteria for the project.
- Preparation of this report presenting our findings and geotechnical recommendations for the proposed project.

<u>Limitations</u>

This report has been prepared for the exclusive use of Jones Real Estate Property II, LLC for specific application to developing geotechnical design criteria for the proposed Mercedes-Benz dealership to be constructed at 1700 Embarcadero Road Avenue in Palo Alto, California. We make no warranty, expressed or implied, except that our services are performed in accordance with the geotechnical engineering principles generally accepted at this time and location. This report was prepared to provide engineering opinions and recommendations only. In the event there are any changes in the nature, design, or location of the project, or if any future improvements are planned, the conclusions and recommendations presented in this report should not be considered valid unless 1) the project changes are reviewed by us, and 2) the conclusions and recommendations presented in this report are modified or verified in writing.

The analysis, conclusions, and recommendations presented in this report are based on site conditions as they existed at the time of our investigation; the currently planned improvements; review of previous reports relevant to the site conditions; and laboratory test results. In addition, it should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes occur, we should be advised so that we can review our report in light of those changes.

SITE EXPLORATION AND RECONNAISSANCE

Site reconnaissance and subsurface exploration were initially performed on June 25, 2009, using track-mounted, electronic cone penetration test (CPT) equipment. Three CPT probes were advanced to a depth of approximately 80 feet below ground surface. Supplemental subsurface exploration work was performed on November 12, 2013 using a Mobile B-53 truck-mounted drill equipped with 8-inch diameter hollow-stem augers in order to obtain additional samples to test soil properties for use as potential off haul material. Four exploratory borings (Borings EB-5 through EB-8) were advanced to depths ranging between 13 and 18 feet. Additional site reconnaissance was performed on August 18, 2015 to observe the current condition of the site. The approximate locations of the CPT probes and borings are shown on the Site Plan, Figure 2. The CPT data and boring logs are included on Appendix A and the results of our laboratory tests are included in Appendix B.

Previous Geotechnical Investigation

We reviewed a preliminary geotechnical report for a previously proposed hotel complex prepared by Billy Lin and Associates, dated December 15, 2005. This previous investigation included four exploratory borings, each advanced to a depth of 46.5 feet. Subsurface conditions at the location of the borings generally consisted of approximately 4 to 8 feet of artificial fill (intermixed clay, silt, sand, and gravels of variable density) underlain by 4 to 6 feet of Bay Mud comprised of soft to firm fat clay of high plasticity. The artificial fill and Bay Mud were generally underlain by interbedded layers of loose to very dense clean sands and silty sands intermixed with stiff to very stiff lean clays of moderate plasticity and fat clays of high plasticity. The approximate locations of the borings from the investigation are also shown on the Site Plan, Figure 2 and the boring logs are attached in Appendix A.

The primary geotechnical considerations for the project outlined in the report included the presence of a thin layer of soft compressible Bay Mud, the high ground water table, and presence of several relatively thick potentially liquefiable sand and silt layers encountered in the borings. The loose to medium dense sand layers were encountered at various depths in Boring EB-1 between a depth of 14 to 38 feet, Boring EB-3 from 12 to 36 feet, and Boring EB-4 from 27 to 36 feet. Ground water was encountered in the borings between depths of approximately 5 to 7 feet below the ground surface. The report concluded that the full extent of these potentially liquefiable layers was not fully established and recommended that further exploration be performed.

Surface Conditions

The site is located in a commercial area at the east corner of the intersection of Embarcadero Road and East Bayshore Road. The site is occupied by a single-story, wood-frame building which had a wood siding exterior. An asphalt parking lot and access driveways extended around the building. Concrete walkways extended along the perimeter of the building with concrete stairs along the front of the building. The finished floor elevation of the building was several feet higher than the pavement grades. A steel framed, utility tower was located at the west corner of the site. The relatively flat site was landscaped with small to medium shrubs, and medium to large trees.

The asphalt concrete was in fair to poor condition with extensive stress cracks and alligator cracks. Several large asphalt concrete patches were evident throughout the parking lot. The walkways were in adequate condition with only minor offset between slabs.

Subsurface Conditions

The upper 3 to 5 feet of surface soil at each CPT location were excavated with a hand auger in order to avoid potential unmarked utilities. Beneath the asphalt pavement, the fill soils exposed during the hand auguring consisted of gravel mixed with sand in the upper 2 feet underlain by sandy clay, sandy silt and clayey sand with gravel. These soils to a depth of approximately 5 to 7 feet were interpreted to be artificial fill.

Below the fill, we encountered approximately 4.5 to 6.5 feet of soft to firm clay and sensitive fine-grained soils. These soft soils were interpreted to be younger Bay Mud. Relatively high water contents were measured on the Bay Mud during the previous geotechnical investigation. The Bay Mud is expected to be highly compressible under new foundation or fill loads.

Beneath the fill and Bay Mud, we encountered stratified layers of firm to stiff silty clay with interbeds of firm to stiff clayey silt and medium dense sand and silty sand that extended to depths of approximately 28 to 34 feet. We then encountered stiff to very stiff silty clay and clayey silt, interbedded with medium dense to very dense sand and silty sand extending to approximately 80 feet, the maximum depth of our exploration.

At the location of the exploratory borings (2013), we generally encountered approximately 5 to 7 feet of artificial fill which consisted of dense/hard, clayey sand/sandy lean clay and stiff to hard sandy lean clay of low to moderate plasticity underlain by approximately 7 to 9.5 feet of younger Bay Mud which consisted of soft fat clay of very high plasticity. Beneath the fill and Bay Mud, we encountered stiff to very stiff sandy lean clay/sandy fat clay of moderate to high plasticity with medium dense clayey sand encountered in Boring EB-5.

Soil Properties Testing

The laboratory testing was conducted on 10 selected soil samples which included sieve analysis including percent passing the No. 200 sieve and Atterberg Limit tests to establish the Liquid Limit and Plasticity Index of the clay material. A summary of the test results are presented in Table 1, below. The results of the sieve analysis of selected samples are presented in the particle size distribution report, Figures B-4 and B-5.

Boring	Depth (feet)	Soil Type	Liquid Limit	Plasticity Index	% Passing #200 Sieve
EB-5	1 5-2	Artificial Fill	33	16	51%
EB-5	6-6.5	Bay Mud	88	40	91%
EB-5	13.5-14	Clayey Sand	22	8	28%
EB-6	2.5-3	Artificial Fill	38	21	56%
EB-6	8.5-9	Bay Mud	89	47	95%
EB-7	1.5-2	Artificial Fill	27	12	61%
EB-7	6-6.5	Artificial Fill	43	25	71%
EB-7	11-11.5	Sandy Fat Clay	53	32	66%
EB-8	1.5-2	Artificial Fill	47	29	57%
EB-8	6.5-7	Bay Mud	81	40	92%

Table 1. Soil Properties Testing Mercedes-Benz Dealership Palo Alto, California

Ground Water

At the time of our exploration, ground water was estimated to be present at a depth of about 7 feet below grade at all the CPT locations based on the dynamic pore pressure response observed during testing in 2009. Because of the low permeability of the Bay Mud, pore pressure dissipation tests performed at two CPT locations were inconclusive, therefore these ground water levels do not represent stabilized ground water levels. Ground water was measured at a depth of between 9.5 to 14 feet in our supplemental exploratory borings in 2013. As noted earlier, ground water was encountered in the previous borings (Billy Lin and Associates, 2005) between depths of approximately 5 to 7 feet below the ground surface. Please be cautioned that fluctuations in the level of ground water can occur due to variations in rainfall, tidal fluctuations, local surface and subsurface drainage patterns, landscaping, and other factors.

Two ground water monitoring wells were installed to facilitate measuring preconstruction ground water levels on the property in November, 2013. The exploratory monitoring wells were permitted through the Santa Clara Valley Water District (SCVWD). The two wells were installed in order to sample ground water and for initial depth to water measurements for the previously proposed hotel complex basement. "Stabilized" ground water levels in these wells after well development showed depth to ground water in MW-1 and MW-2 at a depth of about 7 feet. The location of the monitoring wells are show on Figure 2.

Information contained in Seismic Hazard Zone Report 111 for the Palo Alto 7.5-Minute Quadrangle (California Geological Survey, 2006) indicates the depth to the historic high ground water level in the area of the site is approximately 5 feet or less. Based on our experience at other sites in the area, we expect that ground water will be present in the fill above the Bay Mud and that the stabilized ground water level could seasonally be as high as approximately 3 feet below grade.

Corrosion Potential Testing

Corrosion potential tests were performed by Cooper Testing Laboratory on two samples of surface fill obtained from the CPT locations. The soil samples were tested for resistivity, pH, sulfate content, chloride content, and redox potential. The results of these tests are presented in Appendix B.

Resistivity of the lab-saturated soil samples measured in accordance with ASTM Test G57 ranged from 1,502 to 4,158 ohm-cm. These test results suggest the surface soils may be severely corrosive.

The pH of the soil samples ranged from 7.9 to 8.0. A pH between 5 and 8.5 is generally considered relatively passive from a corrosion standpoint. Chloride content was <2 mg/kg (ppm) for each sample. The oxidation-reduction potential (Redox) ranged from - 34 to 123 mv.

The water-soluble sulfate content of the samples that were tested in accordance with California Test Method 417-modified were measured to be <5 parts per million (<0.0005% by dry weight). Table 19A-A-4 of the California Building Code classifies a water-soluble sulfate content of 0.0 to 0.10% by dry weight as producing negligible sulfate exposure. The Bay Mud soils encountered at depth however would be expected to have moderate to high sulfate content.

Due to the Bay Mud and salt water environment, for specific long-term corrosion control design recommendations, it may be beneficial to retain a corrosion engineer to evaluate the corrosion potential and protection for buried metal and concrete elements.

GEOLOGIC SETTING

We have briefly reviewed our local experience and geologic literature pertinent to the area of the site. The information that we reviewed for this study indicates the site is underlain by Historic Artificial fill, af (Brabb, Graymer and Jones, 2000). These deposits are generally found to consist of loose to very well consolidated gravel, sand, silt, clay, rock fragments, organic matter, and man-made debris in various combinations. Thickness is variable and may exceed 30 meters in some places. Some of the fill is compacted and quite firm, but fill made before 1965 is nearly everywhere not compacted and consists of dumped materials. The geology of the site vicinity is shown on the Vicinity Geologic Map, Figure 3.

Based on information presented in a report titled "Geologic and Engineering Aspects of San Francisco Bay Fill" (CDMG, 1969), the surface fill is mapped as being underlain by approximately 10 feet of soft, compressible, younger Bay Mud (CDMG, 1969). The young Bay Mud covers most of the bottom of the San Francisco Bay and some of the Bay margins and generally consists of soft, silty clay, silt, minor fine sand, and shell fragments. The estimated thickness of the young Bay Mud indicated in the reference noted above is shown on the Contour Map of Bay Mud Thickness, Figure 4.

The Seismic Hazards Zones Map of the Palo Alto Quadrangle prepared by the California Geologic Survey (Seismic Hazard Zone Report 111, 2006) indicates the site is located in an area where historical occurrence of liquefaction, or local geological, geotechnical, and ground water conditions indicate a potential for permanent ground displacement from liquefaction such that mitigation would be required. A site specific liquefaction discussion is presented later in this report.

The property and the immediate site vicinity are located in an area that slopes very gently to the east (approximately 10 feet vertically per 1,600 feet laterally, although locally the topography may be steeper). The site is located at an elevation of approximately 6 feet above sea level (see Figure 1).

Faulting and Seismicity

There are no mapped through-going faults within or adjacent to the site and the site is not located within a State of California Earthquake Fault Zone (formerly known as a Special Studies Zone), an area where the potential for fault rupture is considered probable. The closest active fault is the San Andreas fault, located approximately 7.5 miles southwest of

the property. Thus, the likelihood of surface rupture occurring from active faulting at the site is remote.

The San Francisco Bay Area is an active seismic region. Earthquakes in the region result from strain energy constantly accumulating because of the northwestward movement of the Pacific Plate relative to the North American Plate. On average about 1.6-inches of movement occur per year. Historically, the Bay Area has experienced large, destructive earthquakes in 1838, 1868, 1906, and 1989. The faults considered most likely to produce large earthquakes in the area include the San Andreas, San Gregorio, Hayward, and Calaveras faults. The San Gregorio fault is located approximately 18 miles southwest of the site. The Hayward and Calaveras faults are located approximately 12 and 18 miles northeast of the site, respectively. These faults and significant earthquakes that have been documented in the Bay Area are listed in Table 2 below.

Table 2. Earthquake Magnitudes and Historical Earthquakes Mercedes-Benz Dealership Palo Alto, California

<u>Fault</u>	Maximum <u>Magnitude (Mw)</u>	HistoricalExEarthquakesM	stimated agnitude
San Andrea	s 7.9	 1989 Loma Prieta 1906 San Francisco 1865 N. of 1989 Loma Prieta Earthquake 1838 San Francisco-Peninsula Segment 1836 East of Monterey 	6.9 7.9 6.5 6.8 6.5
Hayward	7.1	1868 Hayward 1858 Hayward	6.8 6.8
Calaveras	6.8	1984 Morgan Hill 1911 Morgan Hill 1897 Gilroy	6.2 6.2 6.3
San Gregor	io 7.3	1926 Monterey Bay	6.1

In the future, the subject property will undoubtedly experience severe ground shaking during moderate and large magnitude earthquakes produced along the San Andreas fault or other active Bay Area fault zones. The Working Group On California Earthquake Probabilities, a panel of experts that are periodically convened to estimate the likelihood of future earthquakes based on the latest science and ground motion prediction modeling, concluded there is a 72 percent chance for at least one earthquake of Magnitude 6.7 or larger in the Bay Area before 2045. The Hayward fault has the highest likelihood of an earthquake greater than or equal to magnitude 6.7 in the Bay Area, estimated at 14 percent, while the likelihood on the San Andreas and Calaveras faults is estimated at approximately 6 and 7 percent, respectively (Working Group, 2015).

Earthquake Design Parameters

The State of California currently requires that buildings and structures be designed in accordance with the seismic design provisions presented in the 2013 California Building Code and in ASCE 7-10, "Minimum Design Loads for Buildings and Other Structures." Based on site geologic conditions, and on information from our subsurface exploration at the site, the site may be classified as Site Class F due to the potential for liquefaction, in accordance with Table 1613.5.2 in the 2013 California Building Code and Section 20.3.1 of ASCE 7-10. In Site Class F, a site specific response analysis can be required to obtain the seismic design parameters however, for structures with a fundamental period of equal or less than 0.5 second, a site response analysis is not required for areas of liquefiable soils.

Based on the information we were provided by KJWW Engineering, the proposed structure will have a fundamental period of less than 0.5 second. The project may be designed based on the higher values of the seismic design parameters of Site Class D and E, in our opinion. Spectral Response Acceleration parameters S_S and S_1 , and site coefficients Fa and Fv, may be taken directly from the figures and tables in the 2013 California Building Code and in the lookup tables at the U.S.G.S. website based on the longitude and latitude of the site. For the site latitude (37.4495) and longitude (-122.1188), SDs = 1.00g for Site Class D, and SD1 = 0.961g for Site Class E.

Liquefaction Evaluation

Severe ground shaking during an earthquake can cause loose to medium dense granular soils to densify. If the granular soils are below ground water, their densification can cause increases in pore water pressure, which can lead to soil softening, liquefaction, and ground deformation. Soils most prone to liquefaction are saturated, loose to medium dense, silty sands and sandy silts with limited drainage, and in some cases, sands and gravels that are interbedded with or that contain seams or layers of impermeable soil.

To evaluate the potential for earthquake-induced liquefaction of the soils at the site, we performed a liquefaction analysis of the data from our CPT probe following the methods described in the 2008 publication by Idriss and Boulanger titled "Soil Liquefaction During Earthquakes".

The peak ground acceleration (PGA) used for our liquefaction analysis was based on information presented on the Probabilistic Seismic Hazards Mapping Ground Motion Page (CGS, 2014) which indicates that the maximum considered earthquake acceleration (PGA_M) is 0.54g. The depth to ground water used in our liquefaction analysis was 3 feet below grade.

The silt and sand layers encountered at the site below a depth of 3 feet (the ground water level used in our analysis) and the maximum of our exploration were considered in our liquefaction analysis. Soils with a soil behavior classified as "clay" and "silty clay to clay" (based on soil the behavior correlations referenced in Appendix A) were considered too clay-rich to liquefy.

The results of our analyses indicate that some of the interbedded layers of medium dense, sand, sandy silt, and silty sand encountered in the CPT's at the site between depths of approximately 15 feet and 45 feet could liquefy when subjected to the PGA that has a 10 percent probability of being exceeded in 50 years. Total ground surface settlement that could occur as a result of liquefaction from the design-level earthquake is estimated to be approximately 2.5 to 3.7 inches at the ground surface. In our opinion, differential settlement of about 1½- to 2-inch over a horizontal distance of about 50 feet is possible at the ground surface from this amount of total settlement. However, since the proposed buildings will be supported on pile foundations extending well below the liquefiable layers, in our opinion, the likelihood of significant damage to the proposed buildings from liquefaction in low.

The clayey soils that we encountered in the exploratory borings were primarily of moderate to high plasticity, generally having a low potential for liquefaction. Because the CPT tests included continuous measurement to a depth of about 80 feet, the CPT evaluation is considered more reliable, in our opinion.

Since there are no open faces or steep creek banks in the immediate site area, it is our opinion that there is a low potential for lateral spreading to occur at the site as a result of an earthquake.

Compressible Bay Mud

As discussed above, up to about 5 to 9.5 feet of relatively soft younger Bay Mud was encountered across the project site, and the Bay Mud is expected to be compressible under new building and fill loads. Based on the documents reviewed, the existing fills across the site appear to have been placed about 40 years ago. Because fill was placed so long ago and its thickness at the site, additional ongoing settlement within the Bay Mud from the existing fill loads is not expected to be significant.

Based on the preliminary grading plan, up to about 3 feet of fill may be required to raise the site grades and up to about 3.5 feet of fill may be required to raise the pad grade below the building floor slab. We estimated the amount of consolidation settlement that will occur based on the varying amounts of fill that will be placed. The results of our settlement evaluation for the range of Bay Mud thickness are presented in Table 3 below.

Paio Alto, California				
<u>Fill Thickness (ft)</u>	<u>Fill Load (psf)</u>	Approximate Consolidation <u>Settlement (inches)</u>		
0.5	62.5	0.3 - 0.4		
1.0	125	0.7 - 1.2		
1.5	187.5	1.2 - 2.1		
2.0	250	1.7 - 2.8		
2.5	312.5	2.1 - 3.6		
3.0	375	2.5 - 4.3		
3.5	437.5	2.8 - 4.8		

Table 3. Estimated Fill 30-Year Consolidation Settlement Mercedes-Benz Dealership Palo Alto, California

About 70 percent of the total settlement estimated in Table 3 from new fill placement will occur in a time period of about four months to one year, with 90 percent of the total settlement occurring over about one and a half to two years. We recommend that the fill for the building pads and surrounding areas be placed as early as practical.

Since the buildings will be supported on pile foundations, differential settlement will occur between the buildings and the surrounding areas receiving fill. This differential settlement should be considered in the design of entrance slabs or ramps that will not be supported on deep foundations and may need to be adjusted in the future. In addition, the above estimated settlement should be considered during the design of the underground utilities to be constructed within or around the building pads or across portions of the site requiring varying amounts of new fill. The settlement will also place a downdrag load on pile foundations that will need to be considered during design.

Geologic Hazards

We briefly reviewed the potential for geologic hazards other than liquefaction and lateral spreading (which were discussed previously) to impact the site, considering the geologic setting and the soils encountered during our investigation. The results of our review are presented below:

• <u>Fault Rupture</u> - The site is not located in a State of California Earthquake Fault Zone or area where fault rupture is considered likely. Therefore, active faults are not believed to exist beneath the site and the potential for fault rupture at the site is considered low.

- <u>Ground Shaking</u> The site is located in an active seismic area. Moderate to large earthquakes are probable along several active faults in the greater Bay Area over a 30 to 50 year design life. Strong ground shaking should therefore be expected several times during the life of the building, as is typical for sites throughout the Bay Area. The building should be designed in accordance with current earthquake resistance standards.
- <u>Differential Compaction</u> Differential compaction can occur during moderate and large earthquakes when soft or loose, natural or fill soils are densified and settle, often unevenly across a site. The soils encountered in our CPT's and borings were generally firm to very stiff clay and medium dense to dense sand. However some loosely compacted fill was encountered in the upper 5 to 7 feet in the previous borings advanced at the site. Since the proposed buildings are expected to be supported on pile foundations extending well below the fill, in our opinion, the likelihood of structural damage to the proposed buildings from differential compaction is low, however some differential compaction could affect flatwork and pavements supported on existing grades or new fill areas.

CONCLUSIONS

From a geotechnical viewpoint, the site is suitable for the proposed Mercedes-Benz dealership building and associated site improvements provided the recommendations presented in this report are followed during design and construction. Specific recommendations are provided in the following sections of this report.

The primary geotechnical concerns are the presence of a shallow ground water table, the presence of soft compressible Bay Mud below the fill, and the probability of liquefaction and liquefaction-induced total and differential settlement at the site as a result of a major earthquake in the loose to medium dense sands encountered between depths of about 15 and 35 feet particularly in the north portion of the site.

Due to the presence of compressible Bay Mud and the anticipated high column loads of the proposed dealership building (on the order of about 800 kips service load), we recommend that the dealership building and car wash structure be supported on a driven or auger cast pile foundation system. The piles will gain support in friction and will need to extend below the liquefaction prone soils encountered to depths of about 45 feet. In addition, because of the amount of consolidation settlement from new fills to be placed at the site, the floor slabs at the ground level should be designed as structural slabs supported on the pile foundation. Differential settlement should also be considered in the design of entrance slabs or ramps that will not be supported on deep foundations and for underground utilities that connect to the pile supported structures or extend across portions of the site requiring varying amounts of new fill.

Because subsurface conditions may vary from those encountered at the locations of our CPT's and borings and to observe that our recommendations are properly implemented, we recommend that we be retained to 1) review the project plans for conformance with our report recommendations and 2) observe and test the earthwork and foundation installation phases of construction.

PILE FOUNDATIONS

Based on our evaluation of subsurface conditions and preliminary column load estimates provided to us by the project structural engineer, the proposed building should be supported on a deep foundation system, such as pre-cast, pre-stressed driven concrete piles or auger-cast piles. Recommendations for driven concrete piles and auger cast piles are presented in the following sections of this report.

Pre-Cast Pre-Stressed Driven Concrete Piles

The proposed dealership building and car wash structure may be supported on pre-cast, pre-stressed driven concrete piles. Since a sufficiently thick and continuous end-bearing strata was not encountered during subsurface exploration, the piles will gain support primarily from friction along the pile shaft. In our opinion, 12- or 14-inch-square pre-stressed concrete piles 60 to 80 feet long will probably be the most economic pile type and size for the proposed structures.

To help establish allowable pile capacities, we utilized the data from the three CPTs that were advanced and the method of estimating pile capacity developed by Eslami and Fellenius (1997). This method uses direct readings of the cone tip resistance to estimate pile friction capacity by applying correlation coefficients based on soil type. We also estimated pile capacity using adhesion factors and shear strength profiles established during our field investigation.

Figures C-1 and C-2 present recommended allowable pile capacity with depth for 14inch-square and 12-inch-square piles, respectively. These allowable pile capacities include a factor of safety of 2.0 and may be increased by one-third when considering additional short-term wind or seismic loading. An 80-foot-long, 14-inch-square, concrete pile will have an allowable capacity of about 180 kips when considering dead plus live loads. The allowable capacities include a downdrag load caused by consolidation settlement of the Bay Mud from placement of new fill. The structural engineer should confirm that the total structural load on the piles plus the downdrag load exceed the structural capacity of the pile that is selected.

Some adjustment of the recommended allowable pile capacity may be appropriate following completion of the indicator pile program and dynamic pile monitoring.
The uplift capacity of the piles may be estimated using an allowable average skin friction value of 425 pounds per square foot. The tensile capacity of the piles and pile cap should be evaluated to verify the actual structural uplift capacity.

Medium dense to very dense sand strata were encountered at several locations in the previous borings and the recent CPTs. These dense strata may result in refusal driving conditions. If refusal driving occurs within these dense sand layers, our office will need to review the driving record to assess the upward and downward capacity for the pile. Some pre-drilling may be required depending upon the depth of refusal. In areas where hard driving through sand layers is anticipated, it may be desirable to increase the effective pre-stress in the piles to reduce the potential for damaging the piles during installation.

Pile Groups

When grouped or in closely spaced configuration, the center-to-center spacing of the piles should not be less than three pile widths. The capacity of driven friction piles in groups will be less than the sum of the individual pile capacities of the group and should be reduced by a group efficiency factor. A group efficiency factor of 0.92 should be applied for pile groups with six piles spaced at three pile widths; a group efficiency factor of 0.78 should be applied for pile groups with nine piles spaced at three pile widths; and a group efficiency factor of 0.71 should be applied for pile groups with twelve piles spaced at three pile widths. We can provide pile efficiency factors for other pile spacing, if requested. A group reduction factor is not necessary for pile groups of four piles or less.

Pile Foundation Settlement

On a preliminary basis, based on the recommended maximum allowable pile load capacity described above, we estimate that total pile settlement will be less than 1-inch to mobilize the allowable static capacity of the driven piles. Differential settlement between adjacent pile groups will depend on pile length, loading, and spacing, although we expect that differential settlement will be less than about $\frac{1}{2}$ - to $\frac{3}{4}$ -inch between adjacent columns. As the foundation plan is being finalized, the foundation settlement estimates can be updated.

Pile Lateral Load Resistance

Lateral resistance to wind or earthquake loadings will be developed by passive resistance against pile caps and grade beams and by bending in the piles. For pile caps and grade beams supported with fill soils placed above the Bay Mud, a passive resistance of 300 pounds per cubic foot may be used. The upper foot of passive soil resistance should be neglected where soil adjacent to the pile cap is not covered and protected by a concrete slab or pavement.

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Lateral loads may also be resisted by passive earth pressure acting on the projected area of the pile. If it is decided to support the building on 12- or 14-inch square piles a detailed estimate of the lateral load capacity of individual piles can be developed using the soil structure interaction program L-Pile to model lateral pile capacity and load/deflection response. Please contact us if this analysis is required by the structural engineer for either the 12- or 14-inch square pile alternatives. A group lateral load reduction factor will also need to be considered in the analysis.

WEAP Analysis

The pile contractor should have a Wave Equation Analysis of Piles (WEAP analysis) performed to confirm compatibility and drivability of the pile driving system with the selected piles and the anticipated soil conditions at the site. We should review the results of the WEAP analysis prior to mobilization of pile driving equipment to the site.

Indicator Piles

Some of the uncertainties associated with production pile driving can be reduced by performing an indicator pile program. An indicator pile program will provide a means of confirming the limits of layers where high driving resistance may be encountered and more accurately estimate final pile length and capacity.

The number of indicator piles to be driven should be determined by the geotechnical engineer once the foundation plan has been finalized. On a preliminary basis we expect that 8 to 12 indicator piles should be installed across the proposed building area before the final pile casting lengths have been selected. Some of the indicator piles should be located close to selected CPT locations. The indicator piles should be driven with the same equipment that will be used to drive the production piles. The indicator pile lengths should be based on the design lengths required to meet the desired pile capacity plus 5 feet. It is expected that some indicator piles may not be driven their entire length and will require cutting to provide the desired butt elevation. Indicator piles can be used for building support and should be accurately located.

PDA Monitoring

A Pile Driving Analyzer (PDA) should be used during the indicator pile program to determine approximate pile capacities through dynamic testing. PDA monitoring may allow a reduction in production pile length resulting in cost savings. PDA monitoring should be performed during indicator pile driving and on piles selected for restrike. Pile restriking should be performed no sooner than seven days after initial driving. Since restrike testing more than one day after installation may alter the contractor's sequencing, it should be clearly identified on the plans and specifications to avoid unexpected change-orders for out-of-sequence moves. PDA monitoring would be beneficial for checking

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tensile stresses in the piles during driving and for evaluating pile integrity on any piles suspected of being damaged during indicator or production driving.

Pre-Drilling and Pile Driving

The exact locations of the piles should be carefully marked on the site. To help spot the piles and to avoid the possibility of driving piles into obstructions, the contractor may pre-drill to a depth of about 10 feet, with an auger no larger than 14-inches in diameter for a 14-inch square pile or 12-inches in diameter for a 12-inch square pile. Typical measures should be taken during driving to avoid overstressing the piles. Our office should review the details of the pile driving hammer proposed by the contractor.

Pre-drilling at depth is not expected to be needed except in some locations where dense to very dense sand and/or gravelly sand interbeds are present and piles cannot be driven to the required design depths without damaging the pile. The areas where this may occur can likely be better established with further site exploration and during the indicator pile program. Where predrilling below a depth 10 feet is required to penetrate these sand layers, an auger no larger than 12-inches should be used for a 14-inch square pile and an auger no larger than 10-inches should be used for a 12-inch square pile.

All indicator and production piles should be driven under the continuous observation of our staff. The piles should be driven without interruption until minimum pile depth criteria is met or refusal driving conditions occur. It is possible that at some locations refusal driving conditions will be encountered in dense to very dense sand and/or gravelly sand strata. If pile driving refusal conditions occur, our staff will need to review the pile driving records to assess the vertical and lateral capacity of the pile, and to determine in conjunction with the structural engineer whether additional piles will need to be installed.

ACI 318 referenced in the 2013 California Building Code provides minimum requirements for concrete exposed to sulfate-containing solutions. In our experience, sulfate levels in Bay Mud and in a salt water environment are typically in the range of 1,000 to 1,500 parts per million (ppm). Based on Bay Mud and salt water environment, sulfate exposure may be considered Moderate. Consequently, concrete piles should be constructed with Type II cement and a maximum water/cement ratio no greater than 0.50. However, the structural criteria may result in more stringent requirements.

A corrosion consultant may be retained to provide specific design recommendations for corrosion protection of piles.

Auger Cast Piles

As an alternative to pre-cast, pre-stressed driven concrete piles, the dealership building and car wash structure may be supported on auger cast piles. The advantages of auger cast piles may include economy, reduced vibration influence on adjacent buildings, and reduced noise during pile installation.

Based on our conversations with the design team, we understand the method, details, and equipment for construction of auger cast piles will be determined by a design/build auger cast pile subcontractor. In our opinion, the auger cast pile design/build contractor should have at least 5 years of auger cast pile experience and a proven track record of successful design and installation of auger cast piles in the Bay Area. We anticipate the preferred type of auger cast piles will be auger pressure-grouted, partial displacement piles (Partial APGD).

On a preliminary basis, the design lengths for individual 16- and 18-inch diameter auger cast piles may be estimated using the allowable capacity curves presented on Figures C-3 and C-4 of this report, respectively. The allowable pile capacity was calculated based a factor of safety of about 2.0. The axial capacity may be increased by one-third when evaluating for total loads, including wind or seismic forces. The allowable capacities include a downdrag load caused by consolidation settlement of the Bay Mud from placement of new fill. The structural engineer should confirm that the total structural load on the piles plus the downdrag load exceed the structural capacity of the pile that is selected. The actual capacity of auger cast piles will depend on the methods and details of pile installation and will need to be confirmed in the field by static and/or dynamic load tests on auger cast test piles prior to constructing the production piles.

Depending on the method and details of pile installation, it is possible that field load testing of auger cast test piles will establish that the allowable capacity of auger cast piles is on the order of 25 percent higher than the pile capacity shown on Figure C-3 and C-4.

The allowable uplift capacity of auger cast piles may be assumed to be 75 percent of the allowable downward capacity but no more than the allowable structural capacity of the pile in tension, as determined by the auger cast pile designer.

Pile Groups

The center-to-center spacing of auger cast piles in pile groups should be at least three pile diameters. With at least this minimum spacing, we expect the auger cast pile designer will determine that a pile group reduction factor is not required.

Pile Foundation Settlement

On a preliminary basis, we expect that total pile group settlement will be less than 1-inch to mobilize the allowable static capacity. Differential settlement between adjacent pile groups will depend on pile length, loading, and spacing, although we expect that differential settlement will be less than about $\frac{1}{2}$ - to $\frac{3}{4}$ -inch between adjacent columns. Total settlement of pile groups and differential settlement between pile groups can be estimated after the pile lengths, diameter, and configurations of the pile caps are selected by the auger cast pile designer.

Lateral Loads on Piles and Pile Caps

Lateral resistance to wind or earthquake loadings will be developed by passive resistance against pile caps and grade beams and by bending in the piles. For pile caps and grade beams supported with fill soils placed above the Bay Mud, a passive resistance of 300 pounds per cubic foot may be used. The upper foot of passive soil resistance should be neglected where soil adjacent to the pile cap is not covered and protected by a concrete slab or pavement.

The auger cast pile designer should model and analyze the lateral load behavior of the selected auger cast piles and auger cast pile groups. We would be pleased to review and discuss with the auger cast pile designer the range of lateral modulus values that could be used to model the on-site soils during static and cyclical loading. To provide a preliminary estimate for the design team of the lateral load capacity and bending moment for the pile expected to be used, we modeled a 16-inch diameter auger cast pile using L-Pile 3.0, a program that estimates lateral pile capacity and load/deflection response.

Our lateral pile analyses were intended to model 80-foot-long, 16-inch diameter auger cast piles with an assumed pile concrete compressive strength of at least 6,000 pounds per square inch and a modulus of elasticity of 4.4×10^6 pounds per square inch. An axial compression load of 180 kips was assumed to act on the head of the piles during lateral loading. Our analysis used typical average soil conditions and no factor of safety was included. The structural engineer may need to use an appropriate factor of safety for their design, as appropriate. The calculated deflection, bending moment, and shear versus pile depth for various lateral loads under free head and fixed head conditions for the 16-inch auger cast pile are presented on Figures C-5 through C-10 of this report.

Individual piles in pile groups will have lower lateral load capacity than calculated for an individual pile. To account for the reduction in soil resistance due to group effects, we recommend multiplying the lateral loads corresponding to a given pile deflection by the *p*-multipliers listed in Table 4 below.

For example, a 4 x 5 pile group with a center-to-center pile spacing (S/D) of 3 times the shaft diameter would use p-multipliers of 0.54 and 0.52 for loads applied in the direction of (perpendicular to) the 4 and 5 pile rows, respectively.

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PILE SPACING (S/D)

Table 4. Average P-Multipliers for Various Pile Groups

		1 11/1		
		2.5	3	4
ws*	2	0.61	0.68	0.79
of Ro	3	0.50	0.59	0.72
nber	4	0.45	0.54	0.69
Nun	5	0.42	0.52	0.67

* Number of pile rows in the direction of loading

Auger Cast Pile Load Testing

Preliminary estimates of auger cast pile capacity will need to be confirmed in the field by static and/or dynamic load tests on auger cast test piles prior to constructing production piles. The number of test piles to be driven should be determined by the geotechnical engineer once the foundation plan has been finalized. On a preliminary basis we expect that 8 to 12 test piles should be installed within the proposed building area to confirm the required final pile lengths. Some of the test piles should be located close to selected CPT locations. The test piles should be installed with the same equipment that will be used to construct the production piles. The test piles should be constructed with continuous observation and monitoring by our staff. Pile load testing should also be monitored by our staff, and the results of the load testing used to confirm the final length and configuration of the production piles and pile caps.

Installation of Production Piles

We note that the actual load capacity and performance of auger cast piles are highly dependent on the method of installation, the contractor's experience, and the equipment that is used. Therefore, monitoring the installation of the auger cast piles will be essential to confirm the integrity and capacity of the piles. We recommend that only specialized contractors with proper equipment be considered for this project, and that all piles be installed under the continuous observation of the geotechnical engineer to confirm that the pile foundations are constructed in accordance with the recommendations presented in this report. For quality assurance purposes, we recommend that each auger cast pile rig be equipped with a Pile Installation Recorder (PIR), or comparable instrumentation, in order to accurately monitor the installation of each pile.

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SPREAD FOOTINGS FOR SURFACE IMPROVEMENTS

In our opinion, miscellaneous landscape improvements, such as low landscaping walls, may be supported on conventional spread footings bearing on stiff onsite soils. Once the type of structures to be supported on shallow foundations are known, these preliminary recommendations may need to be updated for the specific loading and type of improvement proposed. In general, footings should have a minimum width of 15 inches and extend at least 24 inches below the bottom of slabs-on-grade and at least 24 inches below exterior finish grade. Footings may be designed for allowable bearing pressures of 2,000 pounds per square foot for dead plus live loads, with a one-third increase allowed for total loads including wind or seismic forces. The weight of the footings can be neglected for design purposes.

All footings located adjacent to utility lines or other footings should bear below a 1:1 plane extended upward from the bottom edge of the utility trench. All continuous footings should be reinforced with top and bottom steel to provide structural continuity and to permit spanning of local irregularities.

The bottom of all footing excavations should be cleaned of loose material. Our representative should observe the excavations to confirm that they are founded in suitable materials and have been properly cleaned prior to placing concrete forms and reinforcing steel. If soft or loose materials are encountered at the foundation bearing depth, our field representative may require over-excavation and/or compaction before the reinforcing steel is placed or may require a deeper footing embedment depth.

Lateral Loads

Lateral loads will be resisted by friction between the bottom of the footings and the supporting subgrade. A coefficient of friction of 0.30 may be assumed for design of improvements supported in fill. Lateral resistance may also be provided by passive soil pressure acting against foundations cast neat in footing excavations or backfilled with properly compacted structural fill. We recommend that passive soil resistance simulated by an equivalent fluid pressure of 300 pounds per cubic foot be used for design, where appropriate. The upper foot of passive soil resistance should be neglected where soil adjacent to the footing is not covered and protected by a concrete slab or pavement.

Settlement for Footings

We are not aware of any heavy landscape improvements that are planned for the project. When the actual loads and foundation configuration of the landscape improvements are available, we should be contacted and settlement analyses may need to be performed based on the actual loads and footing sizes.

As discussed above, on the order of about 2.5 to 4.3 inches of total settlement could occur in the areas where the exterior site grades will be raised by about 3 feet, and the amount of settlement will vary across the site based on the thickness of the fill that will be placed and the thickness of the underlying compressible Bay Mud. The estimated consolidation settlement discussed in the above section titled "Compressible Bay Mud" should be considered during the design of any surface improvements to be constructed on shallow foundations. In addition, miscellaneous structures that are sensitive to differential settlement preferably should not be located in areas where the thickness of new fill will vary significantly across the improvement area or deep foundations should be considered.

SLABS-ON-GRADE

General Slab Considerations

The surface and near surface fill soils at this site generally have a low potential for expansion. To reduce the potential for movement of the slab subgrade, at least the upper 6-inches of surface soil should be scarified and compacted at a moisture content at least 2 percent above the laboratory optimum. The native or fill soil subgrade should be kept moist up until the time the non-expansive fill and/or aggregate base is placed. Slab subgrades and non expansive fill should be prepared and compacted as recommended in the section of this report titled "Earthwork." Exterior flatwork should be underlain by a layer of non expansive fill as discussed below. The non expansive fill should consist of aggregate base rock or a clayey soil with a plasticity index of 15 or less.

Considering the potential for expansive soil movements of the surface soils, we expect that a reinforced slab will perform better than an unreinforced slab. Consideration should also be given to using a control joint spacing on the order of 2 feet in each direction for each inch of slab thickness.

Exterior Flatwork

Concrete walkways and exterior flatwork should be at least 4 inches thick and should be constructed on at least 4 inches of Class 2 aggregate base. We recommend that exterior slabs-on-grade be constructed with a thickened edge to improve edge stiffness and to reduce the potential for water seepage under the edge of the slabs.

Interior Slabs

We understand that concrete floors at the ground level of the structures will be designed and constructed as structural slabs spanning across the foundations. In our opinion, structural slabs should be constructed on a properly prepared and compacted soil subgrade. In areas where dampness of concrete floor slabs would be undesirable, such as within building interiors, concrete slabs should be underlain by at least 4 inches of clean, free-draining gravel, such as ¹/₂-inch to ³/₄-inch clean crushed rock with no more than 5 percent passing the ASTM No. 200 sieve. Pea gravel should not be used. The crushed rock should be compacted with vibratory equipment.

To reduce vapor transmission up through at-grade concrete floor slabs, the crushed rock section should be covered with a high-quality, UV-resistant membrane vapor retarder meeting the minimum ASTM E 1745, Class C requirements or better. If moisture-sensitive floor coverings are proposed and/or additional protection is desired by the owner, a higher quality vapor barrier conforming to the requirements of ASTM E 1745 Class A, with a water vapor transmission rate less than or equal to 0.01 perms (such as 15-mil thick "Stego Wrap Class A") may be used rather than a Class C vapor retarder. The vapor retarder or barrier should be placed directly below the concrete slab. Sand above the vapor retarder/barrier is not recommended. The vapor retarder/barrier should be installed in accordance with ASTM E 1643. All seams and penetrations of the vapor barrier should be sealed in accordance with manufacturer's recommendations.

The permeability of concrete is affected significantly by the water:cement ratio of the mix, with lower water:cement ratios producing more damp-resistant slabs and higher strength. Where moisture protection is important and/or where the concrete will be placed directly on the vapor barrier, the water:cement ratio should be 0.45 or less. To increase the workability of the concrete, mid-range plasticizers may be added to the mix. Water should not be added to the mix unless the slump is less than specified and the water:cement ratio will not exceed 0.45. Other steps that may be taken to reduce moisture transmission through concrete slabs-on-grade include moist curing for 5 to 7 days and allowing the slab to dry for a period of two months or longer prior to placing floor coverings. Prior to installation of floor coverings, it may be appropriate to test the slab moisture content for adherence to the manufacturer's requirements to determine whether a longer drying time is necessary.

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RETAINING WALLS

We recommend retaining walls with level backfill that are not free to deflect or rotate, such as building, site walls or elevator pits, be designed to resist an equivalent fluid pressure of 45 pounds per cubic foot, plus an additional uniform lateral pressure of 8H pounds per square foot, where H is the height of the wall in feet. Where retaining walls are assumed to be undrained, such as for the elevator pit walls, these walls should be designed to resist an equivalent fluid pressure of 80 pounds per cubic foot plus an additional uniform lateral pressure of 8H pounds per square foot (where H is the height of the wall in feet).

Retaining walls with level backfill that are free to rotate, such as site retaining walls (if any), may be designed to resist an equivalent fluid pressure of 45 pounds per cubic foot. Retaining walls with backfill that slopes at about 2:1 (horizontal:vertical) should be designed to resist an equivalent fluid pressure of 65 pounds per cubic foot for walls free to rotate, with 8H added as recommended above for walls not free to rotate. Wherever retaining walls or elevator pit walls will be subjected to surcharge loads, the walls should be designed for an additional uniform lateral pressure equal to one-half of the surcharge load for restrained walls and one-third of the surcharge load for unrestrained walls.

Based on the site peak ground acceleration (PGA), on Seed and Whitman (1970); Al Atik and Sitar (2010); and Lew et al. (2010); seismic loads on retaining walls that can yield may be simulated by a line load of $2H^2$ (in pounds per foot, where H is the wall height in feet). Seismic loads on walls that cannot yield may be subjected to a seismic load as high as about $8H^2$. This seismic surcharge line load should be assumed to act at 1/3H above the base of the wall (in addition to an active wall design pressure of 45 pounds per cubic foot).

To prevent buildup of water pressure from surface water infiltration, a subsurface drainage system could be installed behind retaining walls, otherwise the walls should be designed for undrained pressures as discussed above. The drainage system should consist of a 4-inch diameter perforated pipe (perforations placed down) embedded in a section of 1/2- to 3/4-inch, clean, crushed rock at least 12 inches wide. Backfill above the perforated drain line should also consist of 1/2- to 3/4-inch, clean, crushed rock to within about $1\frac{1}{2}$ to 2 feet below exterior finished grade. A filter fabric should be wrapped around the crushed rock to protect it from infiltration of native soil. The upper $1\frac{1}{2}$ to 2 feet of backfill should consist of compacted native soil. The perforated pipe should discharge into a free-draining outlet or sump that pumps to a suitable location. Dampproofing of the walls should be included in areas where wall dampness and efflorescence would be undesirable.

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Miradrain, Enkadrain or other drainage fabrics approved by our office may be used for wall drainage as an alternative to the gravel drainage system described above. If used, the drainage fabric should extend from a depth of about 1 foot below the top of the wall backfill down to the drain pipe at the base of the wall. A minimum 12-inch wide section of ¹/₂-inch to ³/₄-inch clean crushed rock and filter fabric should be placed around the drainpipe, as recommended previously.

Backfill placed behind the basement walls should be compacted to at least 90 percent relative compaction using light compaction equipment. If heavy equipment is used for compaction of wall backfill, the walls should be temporarily braced.

Building retaining walls should be supported on a pile foundation designed in accordance with the recommendations presented previously. Low landscaping walls may be supported on conventional continuous shallow foundations as presented previously.

VEHICLE PAVEMENTS

Asphalt Concrete Pavements

We understand the existing vehicle pavements will be removed, finished grades adjusted slightly for improved surface water drainage, and new asphalt concrete pavements constructed. The new pavement sections will be supported on the existing variable clayey sandy fill soils, which may be assumed to have an R-value of 18 for design purposes. Following Procedure 630 of Caltrans Highway Design Manual, we developed the minimum recommended pavement section thicknesses presented on Table 5 on the following page.

The Traffic Indices used in our pavement thickness calculations are considered reasonable values for this development and are based on engineering judgment rather than on detailed traffic projections. Asphalt concrete and aggregate base should conform to and be placed in accordance with the requirements of the Caltrans Standard Specifications, latest edition, except that compaction should be based on ASTM Test D1557.

Mercedes-Benz Dealership Palo Alto, California										
Traffic Loading Condition	Design Traffic Index	Asphalt Concrete (inches)	Aggregate Base* (inches)	Total Thickness (inches)						
Automobile Parking	4.0	3.0	5.0	8.0						
Automobile Access	4.5	3.0	7.0	10.0						
Light Truck Traffic	5.0 5.5	3.0 3.0	8.0 10.0	11.0 13.0						
Moderate Truck Traffic	6.0	4.0	9.0	13.0						
Heavy Truck Traffic	7.0	4.0	12.0	16.0						

Table 5. Minimum Asphalt Concrete Pavement Sections

*Caltrans Class 2 Aggregate Base (minimum R-value = 78).

We recommend that measures be taken to limit the amount of surface water that seeps into the aggregate base and subgrade below vehicle pavements, particularly where the pavements are adjacent to landscape areas. Seepage of water into the pavement base material tends to soften the subgrade, increasing the amount of pavement maintenance that is required and shortening the pavement service life. Deepened curbs extending 4-inches below the bottom of the aggregate base layer are generally effective in limiting excessive water seepage. Other types of water cutoff devices or edge drains may also be considered to maintain pavement service life.

Portland Cement Concrete Pavements

If Portland Cement Concrete (PCC) pavements are to be used on portions of the site, the minimum required thickness of the PCC pavements should be based on the anticipated traffic loading, the modulus of rupture of the concrete that will be used for pavement construction, and the composition and supporting characteristics of the soil subgrade below the pavement section.

To provide a general guideline for the minimum required thickness of PCC pavements, we used information in the Portland Cement Association publication titled "Thickness Design for Concrete Highway and Street Pavements." We assumed "low" subgrade support from the on-site fills, typical residential street traffic (trucks with maximum single axle loads of 22 kips and maximum tandem axle loads of 36 kips), aggregateinterlock joints (i.e. no dowels), no concrete shoulder or curb, a modulus of rupture of concrete of 550 psi (which correlates to a concrete compressive strength of approximately 3,700 psi), at least 8 inches of Class 2 aggregate base below the PCC pavement, and 20-

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year pavement service life. Sufficient control joints should be incorporated in the design and construction to limit and control cracking.

Based on the design assumptions described above, a PCC pavement with a thickness of at least 6 inches would be adequate for average daily truck traffic (ADTT) of one; a thickness of at least 6.5 inches would be adequate for ADTT of 13; and a thickness of at least 7 inches would be adequate for ADTT of 110.

EARTHWORK

Clearing and Subgrade Preparation

All deleterious materials, such as existing foundations and pavements, utilities to be abandoned, vegetation, root systems, loose surface fills, topsoil, etc. should be cleared from areas of the site to be built on or paved. The actual stripping depth should be determined by a member of our staff in the field at the time of construction. Excavations that extend below finished grade should be backfilled with structural fill that is water-conditioned, placed, and compacted as recommended in the section of this report titled "Compaction."

After the site has been properly cleared, stripped, and excavated to the required grades, exposed soil surfaces in areas to receive structural fill or slabs-on-grade should be scarified to a depth of 6 inches, moisture conditioned, and compacted as recommended for structural fill in the section of this report titled "Compaction."

On-site native soils, slab and pavement subgrades, footing, grade beam and pile cap excavations, and utility trench excavation, should be kept in a moist condition throughout the construction period.

Material For Fill

All on-site soil containing less than 3 percent organic material by weight (ASTM D2974) may be suitable for use as structural fill. Structural fill should not contain rocks or pieces larger than 6 inches in greatest dimension and no more than 15 percent larger than 2.5 inches. Imported, non-expansive fill should have a Plasticity Index no greater than 15, should be predominately granular, and should have sufficient binder so as not to slough or cave into foundation excavations or utility trenches. A member of our staff should approve proposed import materials prior to their delivery to the site.

Recycling of Existing Building and Pavement Materials

Portions of the concrete floors, and foundations of the existing buildings, and other miscellaneous concrete that are present are expected to be pulverized on-site and reused as part of the proposed construction. If these materials are properly crushed and handled, the pulverized materials will be suitable for use as structural fill, non-expansive fill, and subbase, and possibly as Class 2 aggregate base below vehicle pavements.

If the on-site asphalt concrete is properly pulverized and handled, the pulverized asphalt concrete should be suitable for use as aggregate base or subbase below exterior flatwork, walkways, and vehicle pavements depending on the gradation of the pulverized asphalt concrete material. We also expect the majority of the existing aggregate base below pavements, buildings, and slabs will be able to be used as structural fill, non-expansive fill, subbase, or aggregate base, depending on how the materials are handled. We do not recommend that recycled asphalt concrete be used as non-expansive fill below the footprint of the building.

Temporary Slopes, Excavations and Dewatering

Ground water should be expected in the bottom of utility trench and manhole excavations that extend down to or below the ground water elevations described previously. If this occurs, provisions will need to be made for dewatering and maintaining sidewall stability during placement and compaction of pipe bedding and backfill.

The contractor should be responsible for the design and construction of all temporary slopes, excavations, and shoring. Shoring and bracing should be designed and installed in accordance with applicable local, state, and federal safety regulations, including current OSHA excavation and trench safety standards.

If deep excavations are required that extend into or close to the soft saturated Bay Mud, they may be prone to sloughing and/or caving if excavated near-vertical, and could become unstable. If excavations will extend into the Bay Mud, sheet piles or an equivalent method may be required to support the walls of the excavations. This information should be considered by the contractor when establishing temporary shoring/bracing/cut slope criteria for any deep utility trench excavations and other temporary cuts. Excavations that extend below ground water will require flatter inclinations or temporary shoring. If deep excavations are required, we can provide further input as needed.

Because of the potential variation of the surface and near-surface soils, field modification of temporary cut slopes and excavations may be required. Unstable materials near trenches, excavations, and slopes should be trimmed off even if this requires cutting the slopes back to a flatter inclination.

Protection of structures near excavations and trenches will also be the responsibility of the contractor. In our experience, a preconstruction survey is generally performed to document existing conditions prior to construction, with intermittent monitoring of the structures during construction.

Compaction

Scarified soil surfaces and all structural fill should be compacted in uniform lifts no thicker than 8-inches in uncompacted thickness, conditioned to the appropriate moisture content, and compacted as recommended for structural fill in Table 6 on the following page. The relative compaction and moisture content recommended in Table 6 is relative to ASTM Test D1557, latest edition.

<u>General</u>	<u>Relative Compaction</u> *	Moisture Content*
• Scarified subgrade in areas to receive structural fill.	90 percent	Above optimum
• Structural fill composed of native soil.	90 percent	Above optimum
• Structural fill composed of non-expansive fill.	90 percent	Above optimum
• Structural fill below a depth of 4 feet.	93 percent	Above optimum
Pavement Subgrade		
• On-site soil.	95 percent	Near optimum
• Aggregate base.	95 percent	Near optimum
Utility Trench Backfill		
• On-site soil.	90 percent	Near optimum
Imported sand.	93 percent	Near optimum

Table 6. Compaction RecommendationsMercedes-Benz DealershipPalo Alto, California

* Relative to ASTM Test D1557, latest edition.

Finished Slopes

We recommend that finished slopes be cut or filled to an inclination no steeper than 3:1 (horizontal:vertical). Exposed slopes may be subject to minor sloughing and erosion that would require periodic maintenance. We recommend that all slopes and soil surfaces disturbed during construction be planted to with erosion resistant vegetation.

Surface Drainage

Finished grades should be designed to prevent ponding and to drain surface water away from foundations and edges slabs and pavements, and toward suitable collection and discharge facilities. Slopes of at least 2 percent are recommended for flatwork and pavement areas with 5 percent preferred in landscape areas within 8 feet of the structures, where possible. At a minimum, splash blocks should be provided at the ends of downspouts to carry surface water away from perimeter foundations. Preferably, downspout drainage should be collected in a closed pipe system that is routed to a storm drain system or other suitable discharge outlet.

Drainage facilities should be observed to verify that they are adequate and that no adjustments need to be made, especially during first two years following construction. We recommend that an as-built plan be prepared to show the locations of all surface and subsurface drain lines and clean-outs. Drainage facilities should be periodically checked to verify that they are continuing to function properly. The drainage facilities will probably need to be periodically cleaned of silt and debris that may build up in the lines.

FUTURE SERVICES

<u>Plan Review</u>

Romig Engineers should review the completed grading and foundation plans for conformance with the recommendations contained in this report. We should be provided with these plans as soon as possible upon completion in order to limit the potential for delays in the permitting process that might otherwise be attributed to our review process. In addition, it should be noted that many of the local building and planning departments now require "clean" geotechnical plan review letters prior to acceptance of plans for their final review. Since our plan reviews typically result in recommendations for modification of the plans, our generation of a "clean" review letter often requires two iterations. At a minimum, we recommend the following note be added to the plans:

"Earthwork, slab subgrade preparation, foundation construction, pile installation and load testing, pavement construction, backfilling of walls and utility trenches, and site drainage should be performed in accordance with the geotechnical report prepared by Romig Engineers, Inc., dated August 31, 2015. Romig Engineers should be notified at least 48 hours in advance of any earthwork and should observe and test during earthwork and foundation construction as recommended in the geotechnical report."

Construction Observation and Testing

The earthwork and foundation phases of construction should be observed and tested by us to 1) establish that subsurface conditions are compatible with those used in the analysis and design; 2) observe compliance with the design concepts, specifications and recommendations; and 3) allow design changes in the event that subsurface conditions differ from those anticipated. The recommendations in this report are based on a limited amount of subsurface exploration. The nature and extent of variation across the site may not become evident until construction. If variations are exposed during construction, it will be necessary to reevaluate our recommendations.



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VICINITY MAP MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA FIGURE 1 AUGUST 2015 PROJECT NO. 3489-1



SITE PLAN MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE 2 AUGUST 2015 PROJECT NO. 3489-1

Ņ	25	50	100 feet



Base is Geologic Map of Palo Alto 30 x 60 Minute Quadrangle (Brabb, Graymer, and Jones, 2000).

VICINITY GEOLOGIC MAP MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE 3 AUGUST 2015 PROJECT NO. 3489-1



VICINITY GEOLOGIC MAP

MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE 4 AUGUST 2015 PROJECT NO. 3489-1

APPENDIX A

SUMMARY OF FIELD INVESTIGATION DATA

Subsurface exploration at the site was performed by means of exploratory borings and Cone Penetration Test (CPT) probes to explore subsurface conditions. Three cone penetration test (CPT) probes were advanced using a track-mounted, Geoprobe Model 6625CPT rig to advance an electronic cone penetration test (CPT) probe with a down pressure capacity of 20 tons.

The soils encountered during drilling of the borings were logged by our representative and samples were obtained at depths appropriate to the investigation. The samples were taken to our laboratory where they were evaluated and classified in accordance with the Unified Soil Classification System. The logs of our borings, and a summary of the soil classification system used on the logs (Figure A-1), are included in this appendix.

Several tests were performed in the field during drilling. The standard penetration test resistance was determined by dropping a 140-pound hammer through a 30-inch free fall and recording the blows required to drive the 2-inch (outside diameter) sampler 18 inches. The standard penetration test (SPT) resistance is the number of blows required to drive the sampler the last 12 inches and is recorded on the boring logs at the appropriate depths. Soil samples were also collected using 3.0-inch O.D. drive samplers. The blow counts shown on the logs for these larger samplers do not represent SPT values and have not been corrected in any way.

The locations of the CPTs and borings were determined by pacing using the site plan provided to us. The CPT and boring locations should be considered accurate only to the degree implied by the method used.

The CPT and boring logs and related information depict our interpretation of subsurface conditions only at the specific location and time indicated. Subsurface conditions and ground water levels at other locations may differ from conditions at the locations where sampling was conducted. The passage of time may also result in changes in the subsurface conditions.





California Push Technologies Inc. 104 Constitution Drive Suite 2 Menlo Park CA 94025 (C57 License #884827)

> office: 650 854 0300 fax: 650 854 0301

> > www.cptinc.com

Cone penetration testing and soil sampling methods description.

Rig Description

Our services are based on the state-of-the-art, Geoprobe Model 6625CPT rig, a limited-access, self-anchoring, 20-ton push capacity, track-mounted push platform for dedicated Geotechnical CPT applications with the unique and valuable added ability to quickly perform intermittent or continuous soil sampling.

Weight = $\sim 9,500$ pounds Surface load = ~ 4.5 psi Push capacity = ~ 20 tons; self-anchoring achieved using 10- or 15-inch diameter helical soil anchors driven 4- to 10-feet into the soil Sampling hammer percussion rate = 32 Hz & 20,000 lbs force/blow Length = ~ 12 feet; Width = ~ 7 feet Height (folded) = 7 feet; Height (unfolded) = 14 feet

CPT Description

Our Geoprobe 6625CPT incorporates the Swedish-made Geotech AB Cone Penetration Testing tools which meet the ASTM D-5778 Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils. Cones have 10 cm² tips and 150 cm² friction sleeves, and include a porous filter and pressure sensor located in the u_2 position directly behind the cone. The cone and porous filter are saturated under vacuum with glycerin to promote rapid equilibration with in-situ pore pressures. Cones are advanced at the ASTM standard rate of 2 cm/second. Baseline readings are performed both before and after each push to check for load cell drift. The cone measures bearing (max load = 100 MPa ~ 1044 TSF), friction sleeve (max load = 1.0 MPa ~ 10.4 TSF), and dynamic pore pressure (max load = 2.5 MPa ~ 363 psi) at 2 cm or 4 cm intervals (client's choice) and this data is plotted in real-time and recorded on a laptop computer adjacent to the push platform. Holes are grouted upon completion of each push, or at the end of each day, as site conditions and regulations warrant.

The basic equation to determine the depth to the free water surface from the pore pressure dissipation test is;

Depth to phreatic surface = [Dissipation depth] – [equilibrium pore pressure / unit weight of H2O x unit conversation factor]

... where;

- 1) Surface elevation is always assumed to be 0 feet
- <u>Dissipation depth</u> = the depth (feet) below surface elevation where the cone advancement was paused while waiting for equilibrium pore pressure to be achieved
- Equilibrium pore pressure = the pore pressure after an elapsed time where no increase or decrease in pore pressure is occurring, in pounds per square inch (psi)
- 4) Unit weight of water = 62.3 pounds per cubic foot (lb/ft^3)
- 5) Unit conversion factor (for dimensional analysis): 1 psi = 144 lb/ft^3

CPT Inc. methods description.doc

June 25, 2008

From the dissipation plots, simply read the dissipation depth and dissipated pressure for the values to plug into the equation above. On the plots, pore pressure (psi) is on the abscissa and log time (seconds) is on the ordinate.

Sampling Description

Geoprobe® brand Dual Tube Sampling Systems are efficient methods of collecting continuous soil cores with the added benefit of a cased hole. Dual tube sampling uses two sets of probe rods to collect continuous soil cores. One set of rods is driven into the ground as an outer casing (2.2 or 3.25 inches in diameter). These rods receive the driving force from the hammer and provide a sealed hole from which soil samples may be recovered without the threat of cross contamination. The second, smaller set of rods are placed inside the outer casing. The smaller rods hold a sample liner in place as the outer casing is driven one sampling interval. The small rods are then retracted to retrieve the filled liner. Soil samples are collected in 1.85-inch diameter or 1.125-inch diameter clear PVC sample sheaths.

Interpretations

Soil behavior type (SBT), SPT N60 energy ratio, undrained shear strength, OCR, and unit weights are calculated and/or are interpretations generated by the CPT-Pro software based on empirical relationships derived in the following references;

P.K. Robertson, R.G. Campanella, D. Gillespie, and J. Greig, 1986, Use of Piezometer Cone Data, Proceedings of the ASCE Specialty Conference In Situ '86: Use of In Situ Tests in Geotechnical Engineering; pp. 1263-1280.

P.K. Roberston, 1990, Soil Classification Using the Cone Penetration Test, Canadian Geotechnical Journal, 27(1), pp. 151-158.

T. Lunne, P.K. Robertson, and J.J.M. Powell, 1997, Cone Penetration in Geotechnical Practice, Taylor and Francis Publishing.

CPT Inc. makes no recommendation on which soil behavior type analysis is "most-correct". The engineer should be aware of the limitations of using CPT data to derive soil behavior type and other engineering parameters and is encouraged to review the above references to better understand the applicability and limitations of CPT data. It is sometimes not possible to determine soil type based solely on tip resistance, sleeve friction, and dynamic pore pressure response, and confirmatory samples may be required.

Please do not hesitate to contact CPT Inc. if you have questions.

Sincerely, John Rogie

President California Push Technologies, Inc.



Source: Robertson, P.K., Campanella, R.G., Gillespie, D., and Greig, J., 1986, Use of Piezometer Cone Data. Proceedings of the ASCE Specialty Conference In Situ 86: Use of In Situ Tests in Geotechnical Engineering.



Soil Behavior Type (SBT) Model







USCS SOIL CLASSIFICATION

PF	RIMARY DIV	ISIONS	SECONDARY DIVISIONS						
		CLEAN GRAVEL	GW ₫	Well graded gravel, gravel-sand mixtures, little or no fines.					
COARSE	GRAVEL	(< 5% Fines)	$GP \stackrel{\triangleleft \triangleleft}{\triangleright}$	Poorly graded gravel or gravel-sand mixtures, little or no fines.					
GRAINED		GRAVEL with	GM 😽	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.					
SOILS		FINES	GC 🕅	Clayey gravels, gravel-sand-clay mixtures, plastic fines.					
(< 50 % Fines)		CLEAN SAND	SW °°	Well graded sands, gravelly sands, little or no fines.					
	SAND	ND (< 5% Fines) SP Poorly graded sands or gravelly sands, little or no fines.							
		SAND	SM 炎	Silty sands, sand-silt mixtures, non-plastic fines.					
		WITH FINES	SC 💦	Clayey sands, sand-clay mixtures, plastic fines.					
			ML ())))	Inorganic silts and very fine sands, with slight plasticity.					
FINE	SILT	AND CLAY	CL	Inorganic clays of low to medium plasticity, lean clays.					
GRAINED	Liqui	d limit < 50%	OL	Organic silts and organic clays of low plasticity.					
SOILS			MH	Inorganic silt, micaceous or diatomaceous fine sandy or silty soil.					
(> 50 % Fines)	SILT	AND CLAY	СН	Inorganic clays of high plasticity, fat clays.					
	Liqui	d limit > 50%	ОН	Organic clays of medium to high plasticity, organic silts.					
HIGHL	Y ORGANIC	SOILS	Pt 🐹	Peat and other highly organic soils.					
	BEDROCK		BR	Weathered bedrock.					

RELATIVE DENSITY

SAND & GRAVEL	BLOWS/FOOT*
VERY LOOSE	0 to 4
LOOSE	4 to 10
MEDIUM DENSE	10 to 30
DENSE	30 to 50
VERY DENSE	OVER 50

CONSISTENCY

SILT & CLAY	STRENGTH^	BLOWS/FOOT*
VERY SOFT	0 to 0.25	0 to 2
SOFT	0.25 to 0.5	2 to 4
FIRM	0.5 to 1	4 to 8
STIFF	1 to 2	8 to 16
VERY STIFF	2 to 4	16 to 32
HARD	OVER 4	OVER 32

GRAIN SIZES

BOULDERS	COBBLES	GRA	VEL		SAND	SILT & CLAY	
		COARSE	FINE	COARSE	MEDIUM	FINE	
	12 "	3"	0.75"	4	10	40	200
		U.S. S1	ANDARD SER	ES SIEVE			

- Classification is based on the Unified Soil Classification System; fines refer to soil passing a No. 200 sieve.
- * Standard Penetration Test (SPT) resistance, using a 140 pound hammer falling 30 inches on a 2 inch O.D. split spoon sampler; blow counts not corrected for larger diameter samplers.
- ^ Unconfined Compressive strength in tons/sq. ft. as estimated by SPT resistance, field and laboratory tests, and/or visual observation.



KEY TO SAMPLERS

Modified California Sampler (3-inch O.D.) Mid-size Sampler (2.5-inch O.D.)

Standard Penetration Test Sampler (2-inch O.D.)

KEY TO EXPLORATORY BORING LOGS WU-CHUNG HOTEL COMPLEX PALO ALTO, CALIFORNIA

FIGURE A-1 DECEMBER 2013 PROJECT NO. 2317-1A

ROMIG ENGINEERS, INC.

DEPTH TO GROUND WATER: Not Encountered. SURFACE F	ELEVATION	I: NA		D	ATE	DRI	LLEI): 11/	12/13
CLASSIFICATION AND DESCRIPTION	SOIL CONSISTENCY/ DENSITY or ROCK HARDNESS* (Figure A-2)	SOIL TYPE	SOIL SYMBOL	DEPTH (FEET)	SAMPLE INTERVAL	SPT RESISTANCE (Blows/ft)	WATER CONTENT (%)	SHEAR STRENGTH (TSF)*	UNCONFIN. COMP. (TSF)*
2-inches of asphalt concrete over 4-inches of baserock.	Damaa/	SC		0					
fine to coarse sand, fine to course gravel, low plasticity.	Dense/ Hard	CL	00						
$\blacksquare Liquid Limit = 33, Plasticity index = 16.$ $\blacksquare 51\% Passing No. 200 Sieve.$			2			45	13		
			000						
Becoming dark gravish brown, moderate plasticity.			200						
			9	5	4				
Young Bay Mud: Blue gray, Fat Clay, wet, fine sand,	Soft	СН							
						3	62		
Liquid Limit = 88, Plasticity Index = 40 .					-				
• 51701 assing 100. 200 Sieve.									
Ground water measured at 9.5 feet shortly after drilling.				▼ 10					
				10	1				
					-				
Gray, Clayey Sand, moist, fine to medium sand.	Medium	SC	000						
$\blacksquare Liquid Limit = 22, Plasticity index = 8.$ $\blacksquare 28\% Passing No. 200 Sieve$	Dense		2000			10			
				15	_	10			
Bottom of Boring at 14.5 feet.									
Note: The stratification lines represent the approximate					-				
boundary between soil and rock types, the actual									
transition may be gradual.									
				•	1				
				20	{				
	1				1	1			

EXPLORATORY BORING LOG EB-5 WU-CHUNG HOTEL COMPLEX PALO ALTO, CALIFORNIA

BORING EB-5

DECEMBER 2013 PROJECT NO. 2317-1A

DEPTH TO GROUND WATER: 9.5 Feet. SURFACE E	LEVATIO	N: NA		D	ATE	DRI	LLEI): 11/	12/13
CLASSIFICATION AND DESCRIPTION	SOIL CONSISTENCY/ DENSITY or ROCK HARDNESS* (Figure A-2)	SOIL TYPE	SOIL SYMBOL	DEPTH (FEET)	SAMPLE INTERVAL	SPT RESISTANCE (Blows/ft)	WATER CONTENT (%)	SHEAR STRENGTH (TSF)*	UNCONFIN. COMP. (TSF)*
2-inches of asphalt concrete over 4-inches of baserock.	Verv	CL		0			-	-	-
fine to medium sand, fine gravel, moderate plasticity,	Stiff								
gray mottling.									
 Liquid Limit = 38, Plasticity Index = 21. 56% Passing No. 200 Sieve. 						21	28		
							-		
				5	1				
Young Bay Mud: Blue gray, Fat Clay, wet, fine sand,	Soft	СН							
 Liquid Limit = 89, Plasticity index = 47. 95% Passing No. 200 Sieve. 						3	81		
				10	-				
					-				
\mathbf{V} Ground water measured at 14 feet shortly after drilling.				▼	-				
				15	{				
Transitioning from gray to brown.					-				
Brown, Sandy Fat Clay, very moist, fine to medium sand, moderate to high plasticity.	Very Stiff	CL/ CH							
						18	23		
Bottom of Boring at 18 feet.					-				
Note: The stratification lines represent the approximate boundary between soil and rock types, the actual				20	4				
transition may be gradual.									

EXPLORATORY BORING LOG EB-6 WU-CHUNG HOTEL COMPLEX PALO ALTO, CALIFORNIA **BORING EB-6** DECEMBER 2013 PROJECT NO. 2317-1A

DEPTH TO GROUND WATER: Not Encountered. SURFACE E	LEVATION	I: NA		D	ATE	DRI	LLEI): 11/	12/13
CLASSIFICATION AND DESCRIPTION	SOIL CONSISTENCY/ DENSITY or ROCK HARDNESS* (Figure A-2)	SOIL TYPE	SOIL SYMBOL	DEPTH (FEET)	SAMPLE INTERVAL	SPT RESISTANCE (Blows/ft)	WATER CONTENT (%)	SHEAR STRENGTH (TSF)*	UNCONFIN. COMP. (TSF)*
2-inches of asphalt concrete over 4-inches of baserock.				0					
Artificial Fill: Brown, Sandy Lean Clay with gravel, moist, fine to coarse sand, fine to course gravel, low plasticity.	Very Stiff to	CL							
 Liquid Limit = 27, Plasticity Index = 12. 61% Passing No. 200 Sieve. 	Hard					50/5"			
Becoming dark brown to black, Sandy Lean Clay, moist,									
fine to medium sand, low to moderate plasticity.				5	4				
 Liquid Limit = 43, Plasticity Index = 25. 71% Passing No. 200 Sieve. 									
Brown, Sandy Lean Clay/Sandy Fat Clay, moist, fine to medium sand, moderate to high plasticity (Bay Mud crust?).	Stiff	CL/ CH				15			
Gray Sandy Fat Clay yery moist fine sand high	Veru	СН		10	_				
 plasticity (possible stiffer area of Bay Mud). Liquid Limit = 53, Plasticity Index = 32. 	Stiff								
66% Passing No. 200 Sieve.						23	32		
Bottom of Boring at 13 feet.									
				15					
Note: The stratification lines represent the approximate boundary between soil and rock types, the actual transition may be gradual									
				20					
					1				

EXPLORATORY BORING LOG EB-7 WU-CHUNG HOTEL COMPLEX PALO ALTO, CALIFORNIA

BORING EB-7

DECEMBER 2013 PROJECT NO. 2317-1A

DEPTH TO GROUND WATER: Not Encountered. SURFACE I	ELEVATION	I: NA		DA	ATE	DRI	LLEI): 11/	12/13
CLASSIFICATION AND DESCRIPTION	SOIL CONSISTENCY/ DENSITY or ROCK HARDNESS* (Figure A-2)	SOIL TYPE	SOIL SYMBOL	DEPTH (FEET)	SAMPLE INTERVAL	SPT RESISTANCE (Blows/ft)	WATER CONTENT (%)	SHEAR STRENGTH (TSF)*	UNCONFIN. COMP. (TSF)*
2-inches of asphalt concrete over 4-inches of baserock.	Stiff	CI		0			•		•
fine to coarse sand, fine gravel, moderate plasticity.	5011								
Liquid Limit = 47, Plasticity Index = 29.						11			
• 57% Passing No. 200 Sieve.					_				
				5					
Young Bay Mud: Blue gray, Fat Clay, wet, fine sand, high plasticity.	Soft	СН							
I iguid Limit = 81 Plasticity Index = 40									
 92% Passing No. 200 Sieve. 						4	78		
									UNCONFIN. COMP. (TSF)
\checkmark Ground water measured at 10 feet shortly after drilling.				T					
Brown and gray, Sandy Lean Clay/Sandy Fat Clay, very	Stiff	CL/							
moist, fine sand, moderate plasticity.		СН							
				15		14	25		
Bottom of Boring at 15.5 feet							20		
Bottom of Borning at 15.5 feet.									
Note: The stratification lines represent the approximate boundary between soil and rock types, the actual transition may be gradual.					-				
*Measured using Torvane and Pocket Penetrometer devices.					-				
				20					
		1	1		1	1			

EXPLORATORY BORING LOG EB-8 WU-CHUNG HOTEL COMPLEX PALO ALTO, CALIFORNIA

BORING EB-8 DECEMBER 2013 PROJECT NO. 2317-1A

DRILL RIG: Truck-Mounted CME-75 with continuous hollow- stem flight augers	SURFACE ELEVATION: 7.34 feet (±)							LOGGED BY: Billy Lin					
GROUNDWATER: 7 feet below existing ground surface	BORING DIAMETER: 8 inches						DATE DRILLED: 10/13/2005						
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance	(DIOWS/1001) In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Strongly (1.5)			
PAVEMENT (1½" AC over 4" AB) CLAYEY SAND, fine- to coarse-grained, silty, with trace of coarse-grained, angular gravels (rock fragments)		Gray	Moderate Compaction	- sc			37	7.6	118.0				
SILTY SAND, fine-grained	an a	Dark Bluish Gray	Very Loose Compaction	- sm -	5 6 7 8	Fle	6	32.4 T	83.6 — Elev.	0.34			
FAT CLAY, with some fine-grained sands and trace of fine- grained gravels; desiccated, (Bay Mud) (*1 Test: Liquid limit = 60%, Plastic Limit = 17%, PI = 43%) (*2 Test: Initial void ratio = 0.960, maximum consolidation pressure = ±1,900 psf)		White & Gray mottled	Firm	СН	9 10 11 12 13	*1,*2	5	31.2	87.6				
CLEAN SAND, fine to coarse grained, with significant amount of fine-grained, round gravels; poorly graded (*3 Test: 74% fine to coarse sands, 23% fine gravels, and 3% fines) (grading with some silts below 18 feet)	a signa an a	Grayish Brown Gray	Medium Dense Very Dense	SP	14 15 16 17 18 19	*3	18	15.5	114.4				
Remark: Tem				EXPI	20 20 20 20 20 20 20 20 20 20 20 20 20 2		Calif 2-inc RY B M1NI	ornia Split ch inside di ORING	Spoon S iameter	ampter S X			
SAN JOSE, CALIFORNIA 95135		1700 Project N	DER	J ROA	O, CA								
PHUNE: (408) 551-9869 FAX: (408) 551-8913 E MAIL: hilly ling/Pick-selected-sel			110j0000										

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DRILL RIG: Truck-Mounted CME-75 with continuous hollow- stem flight augers	SUR	FACE F	ELEVATIO	N: 7.34 f	LOGGED BY: Billy Lin							
GROUNDWATER: 7 feet below existing ground surface	BORING DIAMETER: 8 inches						DATE	DRILLEI	D: 10/13	/2005		
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet).	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Strenoth (tsf)	Saturation (%)	
CLEAN SAND (continued) (*1 Test: 62% fine to coarse sands, 30% fine to coarse gravels and 8% fines)		Gray	Very Dense	SP	21 22 23 23 24	*1	69	11.8	124.6		90.	
SILTY CLAY CLEAN SAND, fine to coarse grained, fine gravelly, with some silts; poorly graded; locally with clayey sand pockets		Light Brown Grayish Brown Greenish	Stiff	- CL -	25 26 27 28 29	-	25	23.6 10.9	108.4 115.8	1.7		
(*2 Test: 60% fine to coarse sands, 32% fine gravels, and 8% silts)		Gray			30 31 32 33 33 34	*2	32	16.6	116.4		99.8	
(graded to fine-grained sands below 34 feet) LEAN CLAY, with some fine-grained sands		Gray & Brown mottled Bluish Gray	Medium Dense Very Stiff	CL-CH	35 36 37 38 39	Elev	12 -30.66	18.9	112.3			
Remark: Table Billy Lin and Associates				EXPL	40 [[./ORA		Califo 2-inch RY BC	mia Split inside dia DRING	Spoon Sameter	ampler,		
5088 CRIBARI BLUFFS SAN JOSE, CALIFORNIA 95135		HOTEL/CONDOMINIUM COMPLEX 1700 EMBARCADERO ROAD, PALO ALTO, CA Project Number Date Boring Number Page No.										
PHONE: (408) 531-9889 FAX: (408) 531-8913 F-MAIL: hilly lin@shealobal.net		L	Project N	umber	Dat	e	Bor	ing Numl	ber	Page	110.	

.
DRILL RIG: Truck-Mounted CME-75 with continuous hollow- stem flight augers	ow-SURFACE ELEVATION: 7.34 feet (±)						LOGG	ED BY: I	Billy Lin	•	
GROUNDWATER: 7 feet below existing ground surface	BÓł	UNG DI	AMETER:	8 inches			DATE	DRILLEI	D: 10/13	/2005	
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Strenøth (tsf)	Saturation (%)
LEAN CLAY (continued) (*1 Test: Liquid limit = 49%, plastic limit = 17%, PI = 32%)		Bluish Gray	Very Stiff	CL-CH	41 	*1	26	24.5	102.5		99. <i>6</i>
CLEAN SAND, fine to medium grained, with some coarse gravels		Grayish Brown	Dense	SP	44 45 46		29	21.6	104.4		
BOTTOM OF BORING = ±46.5 FEET					47 48 49 50 51 52 53 53 54 55 55 56 57 58 59 59 60						
Groundwater Table					[Π	Califor 2-inch	mia Split i inside dia	Spoon Sa uneter	impler,	
Billy Lin and Associates 5088 CRIBARI BLUFFS SAN JOSE, CALIFORNIA 95135			1700	EXPL HOTE EMBA	ORA' L/CON RCAD	TOF NDO DERC	RY BO MINIU) ROAI	RING M CON D, PAL(IG LOGS OMPLEX ILO ALTO, CA		
PHONE: (408) 531-9889 FAX: (408) 531-8913 E-MAIL: billy.lin@sbcglobal.net			Project No 267-0	umber 2	Date 11/16/2	005	Bori	ing Numt EB-1)er	Page 3 of	No. 3

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stem flight augers	SURFA	ACE F	ELEVATIO	N: 8.74	feet (±)		LOGG	ED BY:	Billy Li	1	
GROUNDWATER: 6 feet below existing ground surface	BORIN	₹G DI	AMETER:	8 inches			DATE	DRILLE	D: 10/1	3/2005	
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer	Surger (%)
PAVEMENT (2" AC over 6" AB) SILTY CLAY, with fine- to coarse-grained sends and some fine- to coarse-grained gravels (rock & brick fragments)	B	rown	Loose to Moderate Compaction	- 72	~ 1		15	17.9	108.8		
	T L Gr Br mo	.ight ray & rown ottled	Loose to Moderate Compaction	CL	4		10	22.4	Elev. 101.3	+2.74	
FAT CLAY, with organics, (Bay Mud)	Bi G	Luish Iray	– – – – – Soft	- сн	7 F 8 9	Elev.	+1.74				
(*1 Test: Liquid limit = 73%, Plastic Limit = 32%, PI = 41%)					10 11 12	*1	4	81.6	52.6		99.8
ILTY CLAY, locally with pockets of fine-grained sands and ne-grained gravels	Gree G	enisl ray	Stiff	CL	13 	Elev	-4.26				
(grading significantly siftier below 18 feet: locally with claves)		anigh			16 		15	23.0	102.3	1.5	
sand lenses)	Gra Bro mot	iy & own ttled			19 20						
emark: $\frac{\Psi}{\pi}$ Groundwater Table			<u></u>				Califon 2-inch i	nia Split S nside dia	Spoon Sa meter	mpler,	
* AC: Asphaltic Concrete, AB: Aggregate Base											
Billy Lin and Associates]	EXPL HOTE	ORAT	OR	Y BO	RING M COM	LOG:	5	
SAN JOSE, CALIFORNIA 95135 PHONE: (408) 531-9895 FAX: (408) 531-8913 E-MAIL: billy.lin@sbcglobal.net			1700] Project Nut	EMBA nber	RCADE Date	RO	ROAD Borin	, PALC) ALT(er	D, CA Page l	No.
, C		l l	267-02		11/16/200	5		EB-2		1 of	3

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stem flight augers	OW-SURFACE ELEVATION: 8.74 feet (±)						LOGGED BY: Billy Lin					
GROUNDWATER: 6 feet below existing ground surface	BOF	LING DI	AMETER:	8 inches			DATE	DRILLE	D; 10/13	/2005		
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Strength (tsf)	Sotrantion (8/)	
SILTY CLAY (continued) (*1 Test: Liquid limit = 32%, Plastic Limit = 21%, PI = 11%) (Grading with significantly less silts, but more fine-grained sands with depth below 22 feet)		Greenish Gray & Brown mottled Light Brown & some white	Stiff	CL	21 22 23 24 25	*1	12	27.2	96.8		99	
		mottled		1	26 27 27 28 29		8	27,1	96.3	0.6-1.1		
SANDY CLAY, fine- to coarse-grained sands (*2 Test: Liquid limit = 32%, Plastic Limit = 17%, PI = 15%) (*3 Test: Initial void ratio = 0.726, maximum consolidation pressure = ± 2,150 psf)		Brown	Stiff	CL	30 31 32 33 33 34	2 *3	11	26.2	99.5			
(with a 6" layer of fine- to coarse-grained sand and trace of sub-angular coarse-grained gravels below 35½ feet)	8111				35 36 37 38	Flev	9	22.1	104.2			
LEAN CLAY, with some fine-grained sands		Bluish Gray	Very Stiff	CL-CH	39 40		27.20					
Groundwater Table					[Califo 2-inch	mia Split inside dia	Spoon Sa ameter	ampler,		
Billy Lin and Associates				EXPL HOTE	ORA	TOF NDO	RY BC MINIU	ORING	LOG	S		
5088 / DI ADI DI TIETO		_										

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GROUNDWATER: 6 feet below existing ground surface	BOR	UNG DI	AMETER:	8 inches			DATE	DRILLEI	D: 10/13	/2005	
										Бис	· 🕤
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%	In-Place Dry Density (pcf	Pocket Penetromete Strenoth (tel	Saturation (%
SANDY SILT to SILTY SAND, fine-grained 30TTOM OF BORING = ±46.5 FEET		Light Bluish Gray	Very Stiff	CL-CH ML-SM	41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59		23	28.1	94.5	2.6	
Remark:					60		Califor 2-inch	mia Split inside di	Spoon Sa améter	ampler,	
-					-						
				FVDT		יתי		DINC	TOC	e	
- Billy Lin and Associates 5088 CRIBARI BLUFFS SAN JOSE, CALIFORNIA 95135			170(EXPL HOTE EMBA	/ORA [L/CO] RCAI	TOI NDO DER(RY BO MINIU D ROAI	ORING IM CON D, PAL	LOG MPLEX O ALT	S (0, CA	
- Billy Lin and Associates 5088 CRIEARI BLUFFS SAN JOSE, CALIFORNIA 95135 PHONE: (408) 531-9889 FAX: (408) 531-8913 E-MAIL: billy ling/scheelohab ret	,,,,,,,,,,,,,,,,,, ,,,,,,,,,,,,,,,,,,		170(Project N	EXPL HOTE EMBA umber	/ORA L/CO RCAI Dat	TOI NDO DER(RY BO MINIU D ROA Bor	PRING IM CON D, PAL	LOG MPLEX O ALT ber	S (O, CA Page	No.

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stem flight augers	"SUR	FACE I	ELEVATIO	N: 8,07 i	feet (±)		LOGG	ED BY:	Billy Lin		
GROUNDWATER: 5 feet below existing ground surface	BOF	RING DI	AMETER:	8 inches			DATE	DRILLE	D : 10/14	4/2005	
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Sirenoth (ref)	Saturation (%)
PAVEMENT (1" AC over 3" AB) SILTY CLAY, with significant amount of fifte- to coarse-grain sands, and some fine-grained gravels	ied 7	Dark Grayish Brown	Moderate Compaciton	- ĈL	- 1 2 3		29	6.4	124.7		
(grading very silty below 3.5 feet) (*1 Test: Liquid limit = 31%, Plastic Limit = 20%, Pl = 11%	6)	Brown	Loose Compaction		4 5 6	*1	7	₹. 27.0	Elev. 90. 6	+3.07	84.6
FAT CLAY, with organics, (Bay Mud)		Bluish Gray	Soft	CH	8 9 10	Elev	. +1.07				
(*2 Test: Liquid limit = 72%, Plastic Limit = 30%, PI = 42% CLEAN SAND, fine- to coarse-grained, fine gravelly, with som silts; poorly graded		Gray Gray & Brown mottled	Loose Medium Dense	- <u></u> SP -	11 12 13 14	*2 Elev	4 7 -3.93	83.1	51.9		99.7
(*3 Test: 72% fine to coarse sands, 18% fine gravels, and 10% silts)					15 16 17 18 19	*3		15.1	115.9		89.7
Remark:							Califor 2-inch	mia Split inside di	Spoon S ameter	ampler,	
He, Asphanie Conorcie, AD, Aggregate Date						TOT	V RO	DINC	TOC	C	
Billy Lin and Associates				EXPL			MINIT	MCC	MDLES	3 v	
Billy Lin and Associates 5088 CRIBARI BLUFFS SAN JOSE, CALIFORNIA 95135 PHONE: (408) 531-9889. FAY: (409) 531-9912			1700	EXPL HOTE EMBA	ORA		MINIU D ROAL	IM CO D, PAL	MPLEX O ALT	5 (0, CA	N

tem flight augers	- ISUR	FACE E		··· 0.07 10			1.0000			<u>.</u>	
ROUNDWATER: 5 feet below existing ground surface	BOI	RING DI	AMETER:	8 inches			DATE	ORILLE	D: 10/14	/2005	
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Strength (tsf)	Saturation (%)
CLEAN SAND (continued)		Gray & Brown	Medium Dense	SP	21		20	15.4	114.2		
. ••• · · ·		monted			22		1		· .		
					23						
(grading with no gravel below 24 feet)		Brown			25						
(*1 Test: 97% fine to medium sands, 3% fines)		Greenist Gray	Loose		26	*1	2	20.2	105.4		91.0
					2.7						
(grading fine gravelly again below 28 feet)		Brown	Medium Dense		28						
					30						
					31		22	17.7	114.6		
					33						
(grading to fine-grained CLEAN SAND below 33 feet)					34						
			Elev -2	7.93	35		11	17.4	110.7		
EAN CLAY, with some fine-grained sands		Bluish Gray	Very Stiff	CL-CH	37			:			
•					38						
			e		39 40						
emark:	Party Party						Califo	rnia Split	Snoon S	amnler	
Groundwater Table						_	2-inch	inside di	ameter	ampters	
Billy Lin and Associates	EXPLORATORY BORING LOGS										
5088 CRIBARI BLUFFS			HOTEL/CONDOMINIUM COMPLEX 1700 EMBARCADERO ROAD, PALO ALTO, CA								
SAN JUSH, CALIFURNIA 95133 PHONE: (408) 531-9889 FAX: (408) 531-8913			Project N	umber	Da	te	Boi	ing Num	ber	Page	No.
E-MAIL: billy.lin@sbcglobal.net			267-)2	11/16/	2005		EB-3		2 ol	3

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	we existing ground surface BODING DIAMETED & inches									
GROUNDWATER: 5 feet below existing ground surface	BOF	UNG DI	AMETER:	8 inches			DATE		D: 10/14	/2005
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Streneth (fsf) Saturation (%)
LEAN CLAY (continued)		Bluish Gray	Very Stiff	CL-CH	41 42 43 43 44 44 45 46		20	26.0	97.5	2.3
OTTOM OF BORING = ±46.5 FEET					47 48 49 50 51 52 53 53 54 55 55 56 57 58 58 59 60					
Groundwater Table Groundwater Table Billy Lin and Associates S088 CRIBARI BLUFFS			1700	EXPL HOTE			Califor 2-inch RY BO MINIU	nia Split inside dia RING M CON	Spoon Sa ameter LOG: MPLEX	S
SAN JOSE, CALIFORNIA 95135 PHONE: (408) 531-9889 FAX: (408) 531-8913 E-MAIL: billy lin@stycalabal.net		ŀ	Project Nu	mber	Date		Bori	ng Numl	per	Page No.
E-MAIL: billy.lin@shcatohal.net		- F		<u> </u>						_

DRILL RIG: Truck-Mounted CME-75 with continuous hollow- stem flight augers	SUR	FACE I	ELEVATIO	N: 6.50 f	eet (±)		LÖĞG	ED BY: 1	Billy Lin		
GROUNDWATER: 6 feet below existing ground surface	BOF	RING DI	AMETER:	8 inches			DATE	DRILLE	D: 10/14	/2005	
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer	Saturation (%)
PAVEMENT (2"AC over 3" AB') SILTY CLAY, with significant amount of fine-grained sands, and with trace of fine-grained gravels (broken rock fragments)		 Dark Grayish	Moderate Compaciton	CL	1 2 3		21	13.3	116.8		
FAT CLAY, with organics, desiccated, (Bay Mud) (*1 Test: Liquid limit = 76%, Plastic Limit = 31%, PI = 45%)		Light Bluish Gray	Firm	СН	4 5 6 7	Elev *1	. +2.50	57.9 Ele	64.4 v. +0.50	0.5	96.5
SILTY CLAY		Bluish Gray	- <u></u>		8 9 10	Elev	y -1.50				
					11 12 13		14	24.0	99.2	1.7	
 SANDY CLAY, fine- to coarse-grained sands (*2 Test: 28% fine to coarse sands, 2% fine gravels, and 70% silts & clays) (grading sandier below 16 feet) 		Light Bluish Gray	Firm to Stiff	CL	14 15 16 17	*2	9	26.8	97.8	0.8	99.6
SILTY CLAY		Light Gray & Brown mottled	Stiff	CL	18 19 20						
 Kemark: Groundwater Table AC: Asphaltic Concrete, AB: Aggregate Base 	_						Califor 2-inch	nia Split : inside dia	Spoon Sa Imeter	mpler,	
Billy Lin and Associates				EXPL HOTE	ORA' L/CO	TOR	Y BO MINIU	RING M CON	LOGS 1PLEX	5	
5088 CRIBARI BLUFFS SAN JOSE, CALIFORNIA 95135 BHONE: (408) 51 0880, DAY, (408) 51 0880		ļ	1700	EMBA	RCAD	ERC	ERO ROAD, PALO ALTO, CA				
FHUNE: (408) 531-9889 FAX: (408) 531-5913 E-MAIL: billy.lin@sbcglobal.net		┣	Project Nu 267-0	imber 2	Date 11/16/2	005	Bori	ng Numb EB-4	er	Page 1 of	No.
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DRILL RIG: Truck-Mounted CME-75 with continuous hollow- stem flight augers	OW- SURFACE ELEVATION: 6.50 feet (±)						LOGG	ED BY: 1	Billy Lin		•
GROUNDWATER: 6 feet below existing ground surface	BOI	RING DI	AMETER:	8 inches	· .		DATE	DRILLEI	D: 10/14	/2005	
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Strenoth (tsf)	Saturation (%)
SILTY CLAY (continued) (grading with some fine-grained sands below 23½ feet; locally with lenses and pockets of fine-grained sands)		Light Gray & Brown mottled Light Brown Reddish Brown mottled	Stiff Firm	CL	21 22 23 24 25 26 27	Elev	15 6 -20.50	24.8	99.8 101.7	. 1.7	-
CLEAN TO SILTY SAND, fine to coarse grained; locally with sandy clay pockets (*1 Test: 74% fine to coarse sands, 2% fine gravels, and 24% silts & clays)		Greenist Gray	Loose	SP-SM	28 29 30 31 32 33 33 34 35	*1	8	24.1	102.1		99.8
LEAN CLAY, with some fine-grained sands		Light Bluish Gray	Elev -2 Süff	9.50 CL-CH	36 37 38 39 40		9	32.3	86.2		
Remark:			<u></u>				Califor 2-inch	nia Split S inside dia	poon Sa neter	mpler,	
Billy Lin and Associates			EXPL HOTE	ORA' L/CON	FOR 1DO	Y BO	RING M COM	LOGS PLEX	}		
SUNS CRIBARI BLUFFS SAN JOSE, CALIFORNIA 95135 PHONE: (408) 531-9889 FAX: (408) 531-8913 E-MAIL: billy.lin@sbcglobal.net			1700 Project Nu 267-0	EMBA	RCAD Date	ERO	ROAI Bori), PALC ng Numbo EB-4	ALTO	D, CA Page N	No.
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DRILL RIG: Truck-Mounted CME-75 with continuous hollow- stem flight augers	SUR	FACE I	LEVATIO	N: 6.50 f	eet (±)		LOĠĠI	ED BY: I	Billy Lin		•
GROUNDWATER: 6 feet below existing ground surface	BOF	RING DI	AMETER:	8 inches			DATE I	DRILLEI	D: 10/14	/2005	
DESCRIPTION	Symbol	Color	Consistency	Soil Type	Depth (feet)	Sampler	Penetration Resistance (blows/foot)	In-Place Moisture Content (%)	In-Place Dry Density (pcf)	Pocket Penetrometer Streneth (tsf)	Saturation (%)
LEAN CLAY (confinued)		Light Bluish Gray	Stiff	CL-CH	41 42 43 44 45 46		13	30.9 35.7	90.1	2.0 0.8	
BOTTOM OF BORING = ±46.5 FEET					47 48 49 50 51 52 53 54 55 56 57 58 59 60						
Remark:							Califo 2-inch	mia Split inside dia	Spoon Sa ameter	ampler,	
Billy Lin and Associates			EXPL	ORA	ro)	RY BC	RING	LOG	S		
5088 CRIBARI BLUFFS SAN JOSE, CALIFORNIA 95135			1700	HOTE EMBA	EL/CON	IDO ERO	MINIU D ROA	JM CON D, PALA	MPLEX O ALT	(0, CA	
PHONE: (408) 531-9889 FAX: (408) 531-8913 E-MAIL: billy.lin@sbcglobal.net			Project N	umber 12	Date	005	Bor	ing Numi EB-4	ber	Page	No.
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APPENDIX B

SUMMARY OF LABORATORY TEST RESULTS

Samples from the subsurface exploration were selected for tests to help evaluate the physical and engineering properties of the soils. The tests performed are briefly described below.

The natural moisture content was determined in accordance with ASTM D2216 on selected samples recovered from the borings. This test determines the moisture content, representative of field conditions, at the time the samples were collected. The results are presented on the boring logs at the appropriate sample depths.

The Atterberg Limits were determined on ten samples in accordance with ASTM D4318. The Atterberg Limits are the moisture content within which the soil is workable or plastic. The results of these tests are presented in Figure B-1, B-2, and B-3 and on the boring logs at the appropriate sample depths.

The particle size distribution was determined on ten samples of soil in accordance with ASTM D422. The results of these tests are presented in Figure B-4 and B-5 and on the boring logs at the appropriate sample depths.

The following corrosion potential tests were performed by Cooper Testing Laboratory on six samples of surface and near-surface soil from the site: resistivity, pH, chloride content, sulfate content, and Redox Potential (Oxidation/Reduction Potential). The test methods that were used and the results of these tests are included in this appendix.





Chart Symbol	Boring Number	Sample Depth (feet)	Water Content (percent)	Liquid Limit (percent)	Plasticity Index (percent)	Liquidity Index (percent)	Passing No. 200 Sieve (percent)	USCS Soil Classification
-	EB-5	6-6.5	62	88	40	35	91	CH/OH
	EB-6	8.5-9	81	89	48	83	95	CH/OH
•	EB-7	12-12.5	32	53	32	34	66	СН
•	EB-8	6-6.5	78	81	40	93	92	CH/OH

PLASTICITY CHART WU-CHUNG HOTEL COMPLEX PALO ALTO, CALIFORNIA FIGURE B-1 DECEMBER 2013 PROJECT NO. 2317-1A









CTL #	192-126				rosivity	7 Test S	ummai	ry					
Client: Remarks:	Romig Engin	eers	Date: Project:	7/13/2009 Wu Chung Ho	- otel/Condos	Tested By:	PJ		Checked: Proj. No:	PJ 2317-1			
Sam	ple Location of	or ID	Resistiv	ity @ 15.5 °C (Ohm-cm)	Chloride	Sulfate-(wa	ater soluble)	pH	ORP	Sulfide	Moisture	
Boring	Sample, No.	Depth, ft.	As Rec.	Minimum	Saturated	mg/kg	mg/kg	%	1	(Redox)	Qualitative	%	Soil Visual Description
			ASTM G57	Cal 643	ASTM G57	Dry Wt. Cal 422-mod.	Dry Wt. Cal 417-mod.	Dry Wt. Cal 417-mod.	ASTM G51	mv SM 2580B	by Lead	At Test	
CPT-2	-	3	-		4,158	<2	<5	<0.0005	8.0	123	-	8.9	Brown Clayey SAND w/ Gravel
CPT-3	-	5	-	C≜ (1,502	<2	<5	<0.0005	7.9	-34	-	20.7	Dark Gray Clayey SAND

APPENDIX C

PILE CAPACITY ANALYSIS RESULTS

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ALLOWABLE CAPACITY FOR 14-INCH SQUARE CONCRETE PCPS PILE

ALLOWABLE 14-INCH SQUARE PCPS PILE CAPACITY MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE C-1 AUGUST 2015 PROJECT NO. 3489-1



ALLOWABLE CAPACITY FOR 12-INCH SQUARE CONCRETE PCPS PILE

ALLOWABLE 12-INCH SQUARE PCPS PILE CAPACITY MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE C-2 AUGUST 2015 PROJECT NO. 3489-1



ALLOWABLE CAPACITY FOR 16-INCH AUGER CAST PILE

ALLOWABLE 16-INCH AUGER CAST PILE CAPACITY MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE C-3 AUGUST 2015 PROJECT NO. 3489-1



ALLOWABLE CAPACITY FOR 18-INCH AUGER CAST PILE

ALLOWABLE 18-INCH AUGER CAST PILE CAPACITY MERCEDES-BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE C-4 AUGUST 2015 PROJECT NO. 3489-1

LATERAL DEFLECTION VS. DEPTH 16-inch Auger Cast Pile, Free Head Condition



Deflection (inch)

LATERAL PILE DEFLECTION - FREE HEAD CONDITION MERCEDES BENZ DEALERSHIP PALO ALTO, CALIFORNIA

FIGURE C-5 AUGUST 2015 PROJECT NO. 3498-1

BENDING MOMENT VS. DEPTH 16-inch Auger Cast Pile, Free Head Condition



Bending Moment (kips-in)

PILE BENDING MOMENT - FREE HEAD CONDITION MERCEDES BENZ DEALERSHIP PALO ALTO, CALIFORNIA FIGURE C-6 AUGUST 2015 PROJECT NO. 3498-1

SHEAR VS. DEPTH 16-inch Auger Cast Pile, Free Head Condition



PILE SHEAR - FREE HEAD CONDITION MERCEDES BENZ DEALERSHIP PALO ALTO, CALIFORNIA FIGURE C-7 AUGUST 2015 PROJECT NO. 3498-1

LATERAL DEFLECTION VS. DEPTH 16-inch Auger Cast Pile, Fixed Head Condition



LATERAL PILE DEFLECTION - FIXED HEAD CONDITION MERCEDES BENZ DEALERSHIP PALO ALTO, CALIFORNIA FIGURE C-8 AUGUST 2015 PROJECT NO. 3498-1

BENDING MOMENT VS. DEPTH 16-inch Auger Cast Pile, Fixed Head Condition



Bending Moment (kips-in)

PILE BENDING MOMENT - FIXED HEAD CONDITION MERCEDES BENZ DEALERSHIP PALO ALTO, CALIFORNIA FIGURE C-9 AUGUST 2015 PROJECT NO. 3498-1

SHEAR VS. DEPTH 16-inch Auger Cast Pile, Fixed Head Condition



PILE SHEAR - FIXED HEAD CONDITION MERCEDES BENZ DEALERSHIP PALO ALTO, CALIFORNIA FIGURE C-10 AUGUST 2015 PROJECT NO. 3498-1

Appendix D

Phase I Environmental Site Assessment

PHASE I ENVIRONMENTAL SITE ASSESSMENT 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA 94303

June 2013

Prepared for

Mr. Wu-Chung Hsiang c/o H. C. Associates Investments LP 63 Crescent Drive Palo Alto, California 94301

Project No. 2317-2

ROMIG ENGINEERS, INC.

GEOTECHNICAL & ENVIRONMENTAL SERVICES

June 11, 2013 2317-2

Mr. Wu-Chung Hsiang c/o H. C. Associates Investments LP 63 Crescent Drive Palo Alto, California 94301 RE: PHASE I PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT 1700 EMBACADERO RD (APN 008-03-084) PALO ALTO, CALIFORNIA

Dear Mr. Hsiang:

In accordance with your request we have performed a Phase I Preliminary Environmental Site Assessment for the above-referenced property in Palo Alto, California. The accompanying report summarizes the results of our field reconnaissance, regulatory and historical review, and presents our conclusions regarding the assessment.

This work was performed using guidance of the standard practice for phase one environmental assessments with the limitations noted in this report. We refer you to the report for detailed discussion of our study.

Thank you for the opportunity to work with you on this property. If you have any questions concerning our study, please call.

Very truly yours,

ROMIG ENGINEERS

Glenn A. Romig, P.E., G.E

Chinesoful M. Daluer



Christopher M. Palmer Senior Consulting Geologist C.E.G. 1262 Qualified Environmental Professional

Copies: Addressee (3)

GAR: CMP

PHASE I ENVIRONMENTAL SITE ASSESSMENT 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA 94303

PREPARED FOR: MR. WU-CHUNG HSIANG c/o H. C. ASSOCIATES INVESTMENTS LP 63 CRESCENT DRIVE PALO ALTO, CALIFORNIA 94301

PREPARED BY: ROMIG ENGINEERS, INC. 1390 EL CAMINO REAL, SECOND FLOOR PALO ALTO, CALIFORNIA 94070

JUNE 2013

TABLE OF CONTENTS

Page No.

	1 450 110.
Letter of transmittal	
Cover Page	
	1
	l
1.1 Purpose	1
1.2 Involved Parties	2
1.3 Scope of work	2
2.0 GENERAL SHE CHARACTERISTICS	
2.1 Site Location	3
2.2 Adjacent Properties.	3
3.0 ENVIRONMENTAL SETTING.	4
3.1 Regional Physiographic Conditions	4
3.2 Soil Conditions	4
3.3 Regional Geologic Conditions	4
4.0 RESULTS OF INVESTIGATON	5
4.1 Site Observations	5
4.2 Adjacent Site and Vicinity Observations	5
4.3 Results of Regulatory Agency Review	6
Table 1. Summary of Selected Contamination, Generator and Other	
Lists Reviewed	7
4.4 Results of the Site History Review	10
Table 2. Aerial Photographs Reviewed	10
4.5 Radon	12
5.0 CONCLUSIONS AND RECOMMENDATIONS	12
6.0 LIMITATIONS AND PROFESSIONAL DECLARATION	13
7.0 REFERENCES	15
FIGURE 1 - Site Topographic Map	
FIGURE 2 - Site Sketch Map	
FIGURES 3 through 7 - Site Photographs	
APPENDIX A - Lien Search Report, Sanborn Maps	
APPENDIX B - Selected Building Permits and/or Files, ESA Questionnaire	
APPENDIX C - Historical Topographic and Tax Maps, Aerial Photographs	
APPENDIX D - Qualifications of Environmental Professional	
APPENDIX E - EDR Radius Report (Provided on attached CD)	
APPENDIA F - EDK City Directory Abstract Report (Provided on attached CD) ADDENIDIX C EDD Vanar Engraphicant Sereen Depart (Provided or attached	
APPENDIA G - EDK vapor Encroachment Screen Report (Provided on attached CD)	u CD)
AFFENDIA π - EDK building remit Report (Provided on attached CD)	

PHASE I ENVIRONMENTAL SITE ASSESSMENT 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA

1.0 INTRODUCTION

We are pleased to present this Phase I Environmental Site Assessment (ESA) for the referenced property in Palo Alto, California. The site is located at 1700 Embarcadero Road in Palo Alto, California (APN 008-03-084), as shown on the Vicinity Map, Figure 1 and Site Sketch Map, Figure 2.

1.1 Purpose

The purpose of this ESA was to research the environmental setting of the property, site history, and contamination incidents reported at or near the site. The ESA may be used as a part of site inquiry to ascertain potential environmental problems that may be used to satisfy one of the requirements of CERCLA landowner liability (although it is our understanding that this site is not part of a specifically designated USEPA Brownfields Assessment). This work is performed using guidance of the standard practice for "all appropriate inquiry (AAI)" with the limitations noted in this report. Analysis of soil, soil vapor, ground water, lead paint, and mold or asbestos samples was not included in our scope of work. The purpose of the ESA was to ascertain whether a "recognized environmental concern" is present on the site property as outlined in the following definition;

Excerpt from ASTM E-1527-05: Definition of Recognized Environmental Concern

Excerpted from:

ASTM E-1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Published Nov. 2005, American Society of Testing and Materials.

3. Terminology

3.3 Definition of terms specific to this standard:

3.3.31 recognized environmental conditions - the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water or the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions

1.2 Involved Parties

We have been retained by Mr. Wu-Chung Hsiang (Client) to perform an ESA for the referenced property. According to the EDR research, H. C. investment Associates LP currently owns the property.

1.3 Scope of Work

The scope of work of this study was presented in detail in our agreement with you, dated April 24, 2013. This work was performed using guidance of ASTM E1527-05 standard that includes practice for "all appropriate inquiry" (AAI), per the final rule issued November 1, 2005 and effective November 1, 2006 (modified as noted below). In order to accomplish this work, we have performed the following services:

- Observation of current conditions at the site, on the adjoining properties and in the immediate site vicinity.
- Review of available physical and historical setting records to help establish the site history and environmental setting. This included review of aerial photographs, topographic maps, and geologic and hydrogeologic literature. We were not provided a 50-year title search or review for this work.

- Review of selected government lists and databases to help establish whether contamination incidents have been reported at the site, or in the immediate vicinity. We also contacted and reviewed information as available from the City of Palo Alto Building Department, the Santa Clara County Department of Environmental Health, Building and Assessors offices, the State Regional Water Quality Control Board (RWQCB) and the State Department of Toxic Substances for relevant information relating to property.
- Review of environmental lien and activity use limitation (if any) information provided by EDR and other information as available from the Client.
- Preparation of this report as a summary of our findings.

The following limitations/deviations to the phase one scope were as follows:

• We spoke briefly to the property owner Mr. Hsiang and received an ESA questionnaire from the property owner, but we did not speak to the neighbors or the former tenants.

2.0 GENERAL SITE CHARACTERISTICS

2.1 Site Location

The property is a rectangular-shaped parcel of about 2.5 acres at 1700 Embarcadero Road in Palo Alto California. The Site Topographic Map, Figure 1, shows the general location of the site and adjoining properties.

2.2 Adjacent Properties

The site is located in a mixed residential and commercial urban area in Palo Alto. The adjoining properties to the site include the Carlsen Audi automobile dealership and office buildings as shown on Figure 2.

2.3 Site Description and Current Site Uses

At the time of our site visit, the subject property was a relatively flat rectangular-shaped parcel of about 2.5 acres. The property is developed with a two-story building, asphalt parking lot and perimeter landscaped areas. Ming's Restaurant occupies the building.

The approximate site layout is shown on the Site Sketch Map, Figure 2.
3.0 ENVIRONMENTAL SETTING

3.1 Regional Physiographic Conditions

EDR provided a historic topographic map review for the property. Topographic maps were reviewed to gather physiographic information and included the 15-minute Palo Alto Quadrangle maps (1899, 1943, 1947, 1948, 1961); and the Santa Cruz 15-minute Quadrangle (1902). The 7.5-minute Palo Alto Quadrangle maps are either revised or photorevised in 1953, 1961, 1968 1973, 1991 and 1997. These topographic maps show that the site area is located at an elevation of about 8 feet above mean sea level and that the area gently slopes to the north-northeast toward the San Francisco Bay. The San Francisco Bay fringe is about 3,000 feet to the east-northeast. The subject property appears within a developed area beginning with the 1943 map. No other pertinent information was noted.

3.2 Soil Conditions

Geologic information for the area and our on-site experience (Romig, 2009) indicates the site is underlain by a layer of artificial fill about 6 feet thick that was placed prior to site development. Underlying the surface fill, approximately 6 feet of soft, compressible, younger Bay Mud is present. Below the fill and Bay Mud, Quaternary-age flood plain and bay deposits underlie the site region. The flood plain deposits are generally found to consist of silty clay, sandy clay and clayey sand. The site vicinity is almost completely covered by urban development.

3.3 Regional Geologic Conditions

The site is located near the fringe of San Francisco Bay in the eastern portion of San Francisco Peninsula, in the Coast Ranges. The region is underlain by thick sequences of Mesozoic and Cenozoic rocks, unconsolidated sand, gravel, silt and clay deposits that are cut by northwest-trending large, regional active fault systems that generate damaging earthquakes. Alluvium generated from the Coast Range hills has been deposited below the site. The San Andreas fault is about 7.5 miles southwest; the Hayward fault about 12 miles northeast; the Calaveras fault about 18 miles northeast and the San Gregorio fault is about 18 miles southwest of the property.

3.4 Ground Water Conditions

The site lies in the eastern portion of the Santa Clara Valley Ground Water Sub-basin along the San Francisco Bay fringe. Regional ground water flow direction in the area is estimated as northeasterly, toward the San Francisco Bay. The depth to shallow ground

water in the property was measured in boreholes at about 7 feet below the surface (Romig, 2009). Deeper large aquifers below about 150 to 300 feet supply quantities of groundwater for municipal, drinking water and industrial use.

The property occurs on relatively flat ground and is not listed within a 100-year flood plain and is not listed in a 500-flood zone (EDR-cited FEMA Flood Panel 060 7080001A; see EDR Radius Report).

We did not observe any water bodies or vegetation indicative of wetlands on the subject property. "Wetlands" is a general term used to describe a variety of ecosystems, which may include prairie potholes, marshes, fens, bogs, wet meadows, and swamps.

4.0 RESULTS OF INVESTIGATON

4.1 Site Observations

Our representative, Christopher Palmer visited the site on May 23, 2013 (see Figures 1 and 2). Mr. Wu-Chung Hsiang accompanied our representative on the ESA visit. Photographs taken during our site reconnaissance are presented in Figures 3 through 7. The subject property is developed with a two-story building. The building is divided into bar, restaurant and banquet spaces for patrons. A large kitchen and food preparation area is located at the rear of the building. Freezers and storage areas are located in the kitchen area. The building second floor is used for restaurant business office space.

A trash enclosure for dumpsters and a kitchen grease collector is located at the rear of the property. The building interior and exterior appeared well maintained. One concrete-pad mounted transformer is located in the rear parking lot. Suspect leakage was not observed.

We did not observe any pits, ponds, stains, odors or materials suggestive of hazardous storage or spills, and we did not observe any surface indications of underground storage tanks on the subject property.

4.2 Adjacent Site and Vicinity Observations

Our drive-by of the immediate site vicinity revealed that the general site vicinity is developed with office building development to the northwest, southwest and southeast. The Carlsen Audi dealership is located to the northeast. Please note that our site vicinity reconnaissance was limited to a visual observation of the exterior of the facilities in the immediate area around the site. Other facilities, which use hazardous materials, may exist in the general site vicinity.

4.3 Results of Regulatory Agency Review

City of Palo Alto

The Palo Alto Building and Planning Department was visited on May 23, 2013 to review the permit information. The Building Department had permits for outdoor dining and interior improvements, roofing and HVAC on file. The earliest permit was permit number 94-1292 dated 5/25/94 for a new addition to the building (see permits copies and EDR Building Permit Report and Appendix B).

Santa Clara County Environmental Health Department and Assessors Office

We contacted the Santa Clara County Environmental Health Department by email request for file review regarding any underground tank or hazardous materials files for the property addresses. There were no underground tanks or hazardous materials information at the property address according to Santa Clara County.

We contacted the Assessors Office website to check the property APN and general information.

Regional Water Quality Control Board (RWQCB)

We contacted the San Francisco Bay Area Regional Water Quality Control Board GEOTRACKER website and there was no information on file for the property address.

Department of Toxic Substances (DTSC)

We contacted the Department of Toxic Substances (DTSC) ENVIROSTOR and website to check the property addresses for listing as a contaminant site. According to the DTSC information there were no files listed for the site address.

Reported Spills

Several United States Environmental Protection Agency (EPA) and State of California environmental record lists or databases were reviewed for information on reported contamination incidents, and hazardous materials generators, in the general site vicinity. EDR prepared a database review of a number of the lists reviewed, the search radius, and an explanation of the abbreviations used in the following text are presented in Table 1 below. A more complete explanation of the lists reviewed, and a map showing the location of identified sites, are presented in Appendix E. EDR maintains contact with those agencies and periodically updates the lists. In some cases agencies no longer use or update certain lists.

No spill incidents were reported by EDR for the subject site. The EDR search of available ("reasonably ascertainable") government records did not reveal any mapped site for the following federal databases: National Priority List (NPL), Proposed National Priority List (Proposed NPL), nor the Emergency Response Notification System (ERNS). Selected regulatory database lists are shown below; please refer to the EDR database search in Appendix E for more information.

Table 1. Summary of Selected Contamination, Generator and Other Lists Reviewed 1700 Embarcadero Road Palo Alto, California

List Name	Date rept	Search	Subject	<1/8 mile	1/8-1/4	1/4-1/2	1/2-1	Over	Total
	active by	Radius	site		mile	mile	mile	1 Mile	
	EDR or	(mile/s)	Listed?						
	Updated								
NPL	3/13/13	1.0							0
Proposed NPL	3/13/13	1.0							0
Delisted NPL	3/13/13	1.0							0
NPL Liens	9/18/12	ТР							0
CERCLIS	3/13/13	0.5							0
CERCLIS-	3/13/13	1.0							0
NFRAP									
CORRACTS	2/27/13	1.0					1		1
RCRA-TSD	2/27/13	0.5							0
RCRA-LQG	2/27/13	0.25							0
RCRA-SQG	2.27/13	0.25							0
RCRA-CESQG	2.27/13	0.25							0
RCRA-NON	2/27/13	0.25		2	2				4
GEN									
ERNS	2/15/13	TP							0
HMIRS	2/27/13	ТР							0
US ENG	2/27/13	0.5							0
CONTROLS									
US INST	2/27/13	0.5							0
CONTROL									
DOD	4/30/12	1.0							0
FUDS	3/13/13	1.0							0
US BROWN-	12/20/12	0.5							0
FIELDS									
CONSENT	3/13/13	1.0							0
ROD	3/13/13	1.0							0
UMTRA	3/1/12	0.5							0
ODI	9/17/04	0.5							0
TRIS	9/17/04	TP							0
TSCA	3/21/11	TP							0
FTTS AND	4/10/07	TP							0
HIST FTTS									
SSTS	2/25/11	TP							0
US CDL	2/15/13	ТР				ļ			0
PADS	2/16/11	ТР							0
MLTS	9/13/11	0.25							0
MINES	9/29/11	ТР							0
FINDS	3/1/12	ТР							0
RAATS	8/7/95	1.0							0

Federal Records

TP = **Target Property**

STATE RECORDS

List Name	Date rept	Search	Subject	<1/8 mile	1/8-1/4	1/4-1/2	1/2-1	Over	Total
	active by	Radius	site		mile	mile	mile	1 Mile	
	EDR or	(mile/s)	Listed?						
	Updated								
	0.10.10.2	1.0							
Hist Cal-sites	8/24/06	1.0		1					1
Toxic Pits	9/26/95	1.0							0
CDL	2/21/12	ТР							0
CA Bond Exp.	6/02/94	1.0							0
Plan									
SCH	3/27/13	0.25							0
SWL/LF	12/13/11	0.5		1		1			2
CA WDS	6/29/07	TP							0
WMUDS/SWAT	5/10/00	0.5							0
NPDES	3/20/13	0.5							0
Cortese	2/22/13	0.5							0
Hist Cortese	4/8/09	0.5		2	1	6			9
Hist UST	2/18/10	0.5		2	1	7			10
LUST	1/2/12	0.5		2	1	12			15
SLIC	2/27/13	0.25		1	1	1			3
UST	2/27/13	0.25			1				1
CA FID UST	5/14/09	0.25		2	1				3
HIST UST	1/28/11	0.5							0
SWRCY	3/27/13	0.25			1				1
AST	10/1/09	1.0							0
WIP	8/3/09	0.25		2	1				3
SWEEPS UST	8/11/05	0.25							0
CHMIRS	3/19/13	ТР							0
Notify 65	11/19/93	1.0							0
DEED	3/25/13	0.5							0
VCP	2/27/13	0.5							0
DRY CLEANERS	1/4/13	0.25							0
RESPONSE	2/27/13	ТР							0
HAZNET	7/6/12	0.25				T			0
HWP	3/25/13	ТР				1			0
EMI	10/18/10	ТР				2			2
ENVIROSTAR	2/27/13	ТР		3	2	1			5
Santa Clara Cnty	3/25/13	1.0		-		1			0

TP = **Target Property**

EDR PROPRIETARY RECORDS

List Name	Updated	Search Radius (mile/s)	Subject site Listed?	<1/8 mile	1/8-1/4 mile	1/4-1/2 mile	1/2-1 mile	Over 1 Mile	Total
MANUF. GAS PLANTS		1.0							0
EDR Hist. Auto Stations		0.5		1	1				2
EDR Hist. Cleaners		0.25							0

TP = Target Property X - Target Property address listed on database

* - Date listed is date of activation of regulatory database by EDR for search or if list not updated, last date of EDR contact with agency. See EDR Radius report for more information.

The target property address is not listed on the databases by EDR (see Appendix E).

The area around the subject property has numerous listings for active and closed groundwater contaminant sites (see EDR report). The following sites were listed on databases prepared by EDR within about 1,700 feet of the subject property that may indicate a site use or site history that can be associated with ground water or soil vapor contamination:

Listed Site	Distance from	Brief Summary
	Subject Property as	
	Plotted by EDR	
Carlsen Porsche Audi Inc.	558 feet NE apparent	CA FID UST, HIST UST, SWEEPS UST, HIST
1730 Embarcadero Road	side to down gradient	CORTESE, HIST LUST, CUPA Listings: LUST
		Cleanup Site, completed case closed.
Stanford Honda 1766	558 feet ESE apparent	HIST CORTESE, HIST LUST, SLIC, CUPA
Embarcadero Road	side to up gradient	Listings: LUST Cleanup Site, completed case
		closed.
Collagen Inc., Angiotech	820 feet ENE apparent	CA FID UST, RCRA Nongen/NLR, HIST UST,
Biomaterials Corp. 2500	side to up gradient	SWEEPS UST, HIST CORTESE, HIST LUST,
Faber Place		CUPA Listings: LUST Cleanup Site, completed case
		closed.
Old Post Office Palo Alto	1489 feet WNW	HIST UST, SWEEPS UST, HIST CORTESE, HIST
2197 E Bayshore Rd	apparent side to	LUST, CUPA Listings, LUST: LUST Cleanup Site,
	upgradient	completed case closed.

In our opinion, the remaining listed sites in the table above are either closed or in locations that should not affect the subject property by either soil vapor or groundwater contaminants. Several sites that are open are under regulatory review. No other spill incidents listed by EDR were noted which appear to have the potential to impact the subject property in our opinion. Several facilities that reportedly use, generate, store or treat hazardous materials in the area were also identified in the property area on databases searched. No active landfills or transfer stations were identified within the radius searched.

<u>Environmental Lien Report</u>

Environmental Data Resources (EDR) researched whether environmental liens had been filed on the property APN number. No liens or activity use limitations were found. The environmental lien report is presented in Appendix A.

Preliminary Title Report

A Preliminary Title report was not forwarded to us for review.

4.4 Results of the Site History Review

Personnel Interviews

Our representative briefly interviewed Mr. Wu-Chung Hsiang, the property owner, on May 23, 2013. Mr. Hsiang owns the property and his wife Ms. Vicky Ching runs the Ming's Restaurant. The restaurant has been in the building for over 40 years. Mr. Hsiang stated there were no hazardous materials or contaminant problems on the property.

Aerial Photographs

We reviewed historical aerial photographs supplied by the EDR-Aerial Photography Print Service to help establish prior land use. The photographs reviewed are listed in Table 2 below. No aerial photographs were reviewed prior to 1939 or after 2012 for the property.

The property appears undeveloped in 1939, 1948, and 1956 photographs and appears to be occasionally used for row crop agriculture. The 1968 photograph shows what appears to be the existing building under construction. The building appears completed in the 1974 photograph, and no changes are noted for the property on the 1982 through 2012 photographs.

Date	<u>Scale</u>	Flyer
1939	1''=500'	Fairchild
1948	1''=500'	USGS
1956	1''=500'	Aero
1968	1"=500'	USGS
1974	1"=500'	USGS
1982	1"=500'	WSA
1991	1"=500'	EDR
1998	1"=500'	WAC
2005	1"=500'	EDR
2009	1"=500'	EDR
2010	1"=500'	EDR
2012	1"=500'	EDR

Table 2. Aerial Photographs Reviewed1700 Embarcadero RoadPalo Alto, California

Historical Maps

The 15-minute Palo Alto Quadrangle map (1899, 1943, 1947, 1948, 1961) Santa Cruz map (1902) and the Palo Alto 7.5-minute Quadrangle maps prepared in 1953 and either revised or photorevised in 1953, 1961, 1968, 1973, 1991 and 1997 were reviewed. These topographic maps show that the site area is located at an elevation of about 8 feet above mean sea level. The maps show increasing urban development in the property area from about 1953.

Sanborn Maps

Sanborn Mapping was researched through EDR, to establish whether historical Sanborn maps were available for the site. These maps were originally produced to show buildings in sufficient detail to allow insurance underwriters to estimate risks and premiums. EDR research showed that the property was not mapped.

City Directories

EDR prepared a City Directory search from available editions of the Haines and Company, Pacific Bell White Pages, Pacific Telephone, and Polk City Directories from 1922 to 2010 with address listings by year as follows (see EDR report, Appendix F, for complete listings). EDR provides images of the directory in their report. The following listings for subject property address by directory source, listed by year and property address were found:

- 1970 Polk: Mings Restr.
- 1978 Polk: Mings Restr.
- 1986 Pacific Bell, Pacific Telephone: Mings of Palo Alto.
- 1991 Pacific Bell White pages: Mings Villa of Palo Alto.
- 2001 Haines: OCHING Vicky Mings of Palo Alto.
- 2007 Cole Information Services: Mings Chinese Cuisine & Bar.
- 2012 Cole Information Services: Mings Chinese Cuisine & Bar.

Asbestos-Containing Materials (ACM) and Lead Paint (LBP)

A material is defined to be ACBM, under California State regulations, if it contains greater than 0.1% asbestos by weight. When referring to asbestos, friable means the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Friable ACBM are more likely than non-friable ACBM to release fibers when disturbed or damaged. The level of the preliminary screening performed was designed solely to identify the presence of the most obvious and common ACBM, not to comply with the survey requirements of the Asbestos Hazard Emergency Response Act (AHERA) of 1986. The Occupational Safety and Health Administration (OSHA) found the installation

of friable surfacing material and thermal system insulation after December 31, 1980 unlikely. The definition of suspect ACM and presumed asbestos containing material is taken from 29 CRF Parts 1910, et al. Occupational Exposure to Asbestos; Final Rule.

LBP, as defined in the department of Housing and Urban Development (HUD) regulations, are paints that contain greater than 0.5% or (5,000) ppm of lead, based on dry weight. Section 302 of the Lead-Based Paint Poison Prevention act requires public housing projects to be inspected for LBP. The sale of paints containing more than (600) ppm of lead to consumers was banned by the Consumer Product Safety Commission (CPSC) in 1978. The CPSC ban does not apply to structural steel building components, such as columns, beams, and decking, that are painted as part of the fabrication process.

The property building was constructed prior to 1970 so ACBM and LBP may be considered a potential concern for the property.

ESA User Questionnaire

Mr. Wu-Chung Hsiang the owner returned the ESA questionnaire and was not aware of any contaminant problems or hazardous materials issues with the property (Appendix B).

Data Gaps

In our opinion there are no data gaps in this study. The property was undeveloped according to topographic maps dating to 1899 and in aerial photographs dating from 1939 until about 1968. Ming's Restaurant has occupied the building since 1970. The property use appears verified by the historic research.

4.5 Radon

The California Department of Health Services has conducted radon testing of 2,858 sites in California. Of these sites, 3.8 percent had radon levels above 4 pCi/l (Pico curies per liter) with the highest level being 29 pCi/l. EPA recommends that action be taken to reduce levels with between 4 and 26 pCi/l over a period of a few years. The USEPA Radon Zone for Santa Clara County is 2. No radon was detected above 4 pCi/l for the sites tested for the County as reported in the EDR Radius report. Radon is not believed to be a concern at the subject property.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of our study was to briefly review the history and environmental setting of the property. Our history review revealed that the subject property was undeveloped until the late 1960s. The existing building was constructed by about 1970 and has been used by Ming's Restaurant since that time.

The State and local file review materials did not reveal any underground storage tanks, hazardous materials use or any contaminant problems reported for the property addresses. The City, County and State agency file reviews did not reveal the presence of an AST, motor oil or fuel UST, pits, lagoons or use or suspect disposal on the property or nearby sites with groundwater or soil vapor incidents that would likely impact the property.

Our review of federal and state environmental generator and spill lists revealed that several LUST and groundwater contaminant cases have been reported in the general site area and as discussed above. However, in our opinion the identified spills are being investigated or closed by the State or Federal agencies, or are located far enough from the site as to have little likelihood of impacting the site.

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 for the property at 1700 Embarcadero Road in Palo Alto California (APN 008-03-084). Any exceptions to, or deletions from, this practice are described in Section 1.3 and in text of this report.

This ESA did not reveal evidence of a recognized environmental condition in connection with the property. Romig recommends the following:

• The building was constructed prior to 1970 so ACBM and LBP may be a potential concern. If future building renovation or demolition is planned, a qualified consultant and/or contractor should be retained to evaluate and manage these materials so that they are properly disposed at the appropriate facility.

6.0 LIMITATIONS AND PROFESSIONAL DECLARATION

As with all preliminary site assessments, the amount of information obtained is a function of both time and budgetary constraints. Our conclusions regarding the site are based on observation of existing conditions, review of selected agency files and data collected by third parties, and our interpretation of readily available site history and usage data. Any study such as this must be qualified in that no soil, soil vapor, or ground water analysis was performed. Soil, soil vapor, ground water, lead paint or asbestos analysis lead to a more reliable assessment of environmental conditions; conditions which often are not apparent during typical Phase I activities. If you desire a greater degree of confidence, soil, soil vapor, ground water or additional analysis could be performed to more definitively establish current environmental conditions.

This report has been prepared for the exclusive use of Mr. Wu-Chung Hsiang our Client. We make no warranty, expressed or implied, except that our services were performed in accordance with environmental engineering principles generally accepted at this time and location. The professional staff of Romig Engineers, Inc., in accordance with the generally accepted professional practices and from guidance with the standard practice of ASTM E 1527-05, has prepared the findings and analysis contained in this Phase I Environmental Site Assessment Report with the exceptions or limitations noted in the report. Please note that this report is valid for 180 days from the date of report issuance.

Some of the information provided in this Phase I Environmental Site Assessment report is based upon personal interviews and research of available documents, records and maps held by appropriate government and private agencies. This is subject to the limitations of the historical documentation, availability and accuracy of pertinent records, and the recollection of those persons contacted and interviewed. The information contained in this report has received appropriate technical and peer review. The findings and analysis represent professional judgments and are based upon the investigations conducted and the review and interpretation of such data based on our experience and expertise according to the existing standard. No warranty or guarantee is expressed or implied. The scope of services within this Phase I Environmental Site Assessment did not include sample collection and/or analysis for hazardous materials. In addition, it did not include a property title search or evaluation of mold/fungi, asbestos, lead paint, radon or seismic risk.

The findings and analysis set forth in this report are strictly limited in time and scope to the date of the evaluation(s), and for the use of our client.

The Qualified Environmental Professional preparing this report declares, to the best of his professional knowledge and belief, that he meets the definition of the Environmental Professional as defined in sec. 312.10 of 40 CFR 312 and has the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR part 312.

7.0 REFERENCES

California Department of Health Services, September 1991, "Annual Average Radon Concentrations in California Residences."

California Department of Water Resources, California's Groundwater Bulletin 118, Update 2003.

California Regional Water Quality Control Board.

California Department of Toxic Substances.

County of Santa Clara Department of Environmental Health and Assessors Office.

City of Palo Alto Building and Fire Departments.

EDR Radius Report, Property at 1700 Embarcadero Road, Palo Alto, CA 94063 dated May 20, 2013 Inquiry Number: 3611943.2s with Topographic Map, Aerial Photograph, City Directory, Sanborn Map and Environmental Lien coverage.

Google Earth web-based aerial photography.

Jennings, C. W., 1994, California Division of Mines and Geology, <u>Fault Activity Map of</u> <u>California and Adjacent Areas</u>, Scale 1:750,000.

Romig Engineers, Inc., report dated July 2009, <u>Geotechnical Investigation for Hotel</u> <u>Complex 1700 Embarcadero Road Palo Alto, CA</u>; prepared for Mr. Wu-Chung Hsiang, Project No. 2317-1.

United States Geological Survey; 15-minute Palo Alto Quadrangle map (1899, 1943, 1947, 1948, 1961) Santa Cruz map (1902) and the Palo Alto 7.5-minute Quadrangle maps prepared in 1953 and either revised or photorevised in 1961, 1968, 1973, 1991 and 1997.

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SITE TOPOGRAPHIC MAP 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, SANTA CLARA COUNTY, CA FIGURE 1 JUNE 2013 PROJ. NO. 2317-2



1700 EMBARCADERO ROAD PALO ALTO, SANTA CLARA COUNTY, CA FIGURE 2 JUNE 2013 PROJ. NO. 2317-2

PHOTOGRAPH #1 - View of 1700 Embarcadero Road and Ming Restaurant building.



PHOTOCRAPH #2 - View of Ming Restaurant rear parking lot.



SITE PHOTOGRAPHS 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA FIGURE 3 JUNE 2013 PROJ. NO. 2317-2

PHOTOGRAPH #3 - View of transformer in rear parking lot.



PHOTOGRAPH #4 - View of rear parking lot looking north with aerial power-line tower to left.



SITE PHOTOGRAPHS 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA

FIGURE 4 JUNE 2013 PROJ. NO. 2317-2

PHOTOGRAPH #5 - View of trash dumpster and dark green kitchen grease collector at rear of building.



PHOTOGRAPH #6 - View of entry way and restaurant bar.



SITE PHOTOGRAPHS 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA FIGURE 5 JUNE 2013 PROJ. NO. 2317-2

PHOTOGRAPH #7 - View of banquet room.



PHOTOGRAPH #8 -- View of kitchen and food preparation area.



SITE PHOTOGRAPHS 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA FIGURE 6 JUNE 2013 PROJ. NO. 2317-2

PHOTOGRAPH #9 - View of cold storage and wash area sinks.



PHOTOGRAPH #10 - View of attic storage area.



SITE PHOTOGRAPHS 1700 EMBARCADERO ROAD (APN 008-03-084) PALO ALTO, CALIFORNIA FIGURE 7 JUNE 2013 PROJ. NO. 2317-2

APPENDIX A

REGULATORY AGENCY SITE LIST DATA

(EDR Environmental Lien Search Report, Sanborn Maps)

Property At

1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.7 May 22, 2013 · · · · ·

Environmenial Liemand AUL Search

EDR® Environmental Data Resources inc

440 Wheelers Farms Road Milford, CT 06461 800.352.0050 www.edmet.com

EDR Environmental Lien and AUL Search	

The EDR Environmental Lien and AUL Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;

.

- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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TARGET PROPERTY INFORMATION

ADDRESS

1700 Embarcadero Road Property At Palo Alto, CA 94303

RESEARCH SOURCE

Source 1: Santa Clara County Santa Clara, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	Grant Deed
Title is vested in:	HC Investment Associates LP
Title received from:	Vicky Kwoh Ching, trustee
Deed Dated	4/27/2006
Deed Recorded:	7/11/2006
Book:	NA
Page:	NA
Volume:	NA
Instrument:	10010187
Docket:	NA
Land Record Comments:	See Exhibit
Miscellaneous Commenta:	NA
Legal Description:	See Exhibit
Legal Corrent Owner:	HC investment Associates LP
Parcel # / Property Idontifier:	008-03-084
Comments:	See Exhibit
ENVIRONMENTAL LIEN	
Environmental Lien:	Found 🔲 Not Found 🖹
OTHER ACTIVITY AND USE LIMITA	TIONS (AULs)

<u>отн</u>

AULS:

Found

Not Found 🛛 🗙

Deed Exhibit 1

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the second s	SPACE ABOVE THIS LINE	e fon recorder's use
Palo Alto, CA 94303		
1700 Embarcadero Road		
HC Investment Associates LP	Recorded at the request of Attorney	2:14 PM
MAIL TAX STATEMENTS TO	BRENDA DAVIS SANTA CLARA COUNTY RECORDE	RDE # 908 R 7/11/2006
Tel. (650) 798-2400		
2465 E. Bayshore Rd, Suite 302 Palo Alto, California 94303-3227		Copies.
GLICKMAN ASSOCIATES PC		Fees 20 00
ATTENTION: Jacob M. Glickman	DOCUMENT: 19010187	Pages: 2
RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO:) .	

Documentary transfer tax is \$ -0-

NO TRANSFER TAX DUE. NO CHANGE IN OWNERSHIP PERCENTAGES PURSUANT TO RTC \$11925(d).

() computed on full value of property conveyed, or

() computed on full value less value of liens and encumbrances remaining at time of sale.

() Unincorporated area: (X) City of Palo Aito, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

VICKY KWOH CHING as Trustee for Felicity Partnership, a California general partnership,

hereby GRANT(S) to HC INVESTMENT ASSOCIATES LP, a California limited partnership, the following described real property in the County of Santa Clara, State of California:

That real property situated in the City of Palo Alto, County of Santa Clara, State of California, described as follows:

A partion of Parcel One shown on map of Record of Survey filed October 23, 1967, Book 229 of Maps, page 24, Santa Clara County Records, described as follows:

BEGINNING at the most southerly corner of the parcel of land described in the Deed to CHYNA ASSOCIATES, INC., a corporation, recorded December 22, 1967, Book 7972 Official Records, page 286, in the northeast line of East Bayshore Road; thence from said Point of Beginning N. 16° 19' 50" W. along said line of said road, 248,83 feet; thence northeast along a curve to the right, with a radius of S0 feet, through an angle of 49° 05' 08" for an arc distance of 42,84 feet to the southeast line of Embarcadero Road 86 feet wide; thence N. 52° 42' 10" E. along said line, 251,52 feet to the most northerly corner of said Chyna Associates, Inc., Parcel; thence S. 37°17'50" £, along the northeast line of said parcel and the southeast prolongation of said line, 341.83 feet; thence S. 55° 41' 07" W, and parallel with the southeast line of said Chyna Associates, Inc., Parcel and the southwest prolongation of said line 393.67 feet to the said northeast line of East Bayshore Road; thence N. 16°19'50" W. 64.13 feet to the Point of Beginning.

Real Property Commonly Known As: 1700 Embarcadero Rd., Palo Alto, CA 94303.

Dated: April 27,

CHING Truatée

MAIL TAX STATEMENTS AS DIRECTED ABOVE

32455;1

GRANT DEED APN: 008-03-064 & 008-03-065

State of California

County of Santa Clara

89

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On <u><u><u>April 21</u></u>, 2006, before me, Bonnie L. Fredrickson, a notary public in and for the State of California, personally appeared VICKY KWOH CHING, proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument, the person, or the entity upon behalf of which the person acted, executed the instrument.</u>

WITNESS my hand and official seal.

Bonnie J. Frederickson Signature

BONNEL, FREORICKSON Commission # 1871396 Notary Public - California Santa Claro County My Comm. Espires May 15, 2009

(SEAL)

Property At 1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.3 May 20, 2013

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Centifical Standboun® Map Report



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Certified Sanborn® Map Report

5/20/13

Environmental Data Resources Inc.

Site Name: Property At 1700 Embarcadero Road Palo Alto, CA 94303

EDR Inquiry # 3611943.3

Client Name: Romig Consulting Engineers 1390 El Camino Real San Carlos, CA 94070

Contact: Chris Palmer

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target properly location provided by Romig Consulting Engineers were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edmet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the cellection.

Certified Sanborn Results:

Site Name:Property AtAddress:1700 Embarcadero RoadCity, State, Zip:Palo Alto, CA 94303Cross Street:NAProject:NACertification #D032-4589-9949

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

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Sanbora 3 Library search zosults Certification # 20032-4589-8949

The Senborn Library incluties more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

Elbrary of Congress
 University Publications of America
 EDR Private Collection

The Senborn Librery LLC Since 1866 **

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APPENDIX B

SELECTED BUILDING PERMITS AND/OR FILES, ESA QUESTIONNAIRE

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X3. USER QUESTIONNAIRE

INTRODUCTION

In order to qualify for one of the Landowner Liability Protections (LLPs)35 offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownflishly Amendments"),35 the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

(1.) Environmental cleanup ilons that are filed or recorded egainst the site (40 CFR 312.25). No

Are you sware of env environmental deanup sens upshat the property that are Red or recorded under fadersi, tribal, state or local law?

(2.) Activity and land use limitations that are in place on the also or that have been filed or tecordad in a registry (40 CFR 312.29),

Are you aware of any AULs, such as onginesring controls, lated use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under followsi, tribel, state or local few? \mathcal{N}_6

(0.) Specialized incovidings or experience of the parson serving to quality for the LLP (40 CFR 312.28). As the user of this ESA do you have any specialized knowledge or experience related to the property or searby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chamicals and processes used by this type of business? N_{b}

(4.) Relationship of the purchase price to the fair merkel value of the property it it were not contaminated (40 CFR 312.29). Does the purchase price being paid for this property reasonably reliant the bar market value of the property? If you conclude that there is a difference, have your considered whether the lower purchase price is because contamination is known or believed to be present at Λ_{j0} the property?

(5.) Commonly known or reasonably ascertainable information about the property (46CFR 312.80). Are you aware of commonly knows or reasonably ascartainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

a.) Do you know the past uses of the property?

b.) On you know of specific chemicals that are present or once were present at the property? $\chi h eta$

c.) Do you know of spills or other chemical releases that have taken place at the property?

d.) Do you know of any environmental cleanurs that have taken place at the property?

(6.) The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 317.31).

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property? Nb

³⁵ Londowner Liability Protections, or LLPs, is the term used to describe the three types of potential defenses to Superfund liability in EPA's Interim Guidance Regarding Criteria Landowners Must Meet in Order for Bana Fide Prospective Parchaser, Configuous Property Owner, or Innocent Landowner Linutations on CERCD Liability ("Common Elements" Guide) issued on March 6, 2003.

³⁶ P.L. 107-118.
APPENDIX C

HISTORICAL TOPOGRAPHIC AND TAX MAPS, AERIAL PHOTOGRAPHS

Property At 1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.4 May 20, 2013

EDR Historical Topographic Map Report



440 Wheelers Farms Road Milford, CT 06461 800.352.0050 www.edmet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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N	TARGET QUAD NAME: PALO ALTO MAP YEAR: 1899	SITE NAME: Property At ADDRESS: 1700 Embarcadero Road Palo Alto, CA 94303 LAT/LONG: 37.4495 / -122.1191	CLIENT: Romig Consulting Engineers CONTACT: Chris Palmer INQUIRY#: 3611943.4 RESEARCH DATE: 05/20/2013
<u>I</u>	SERIES: 15 SCALE: 1:62500		



N T	TARGET QUAD NAME: SANTA (MAP YEAR: 1902	RUZ SITE NAME	: Property At 1700 Embarcadero Road Palo Alto, CA 94303	CLIENT: CONTACT: INQUIRY#:	Romig Consulting Engineers Chris Palmer 3611943.4
38	SERIES: 30 SCALE: 1:125000	LAT/LONG:	37.4495 / -122.1191	RESEARCH	DATE: 05/20/2013



≯≥	TARGET QUA NAME: F MAP YEAR: SERIES: SCALE:	AD PALO ALTO 1943 15 1:62500	SITE NAME: ADDRESS: LAT/LONG:	Property At 1700 Embarcadero Road Palo Alto, CA 94303 37.4495 / -122.1191	CLIENT: CONTACT: INQUIRY#: RESEARCH	Romig Consulting Engineers Chris Palmer 3611943.4 DATE: 05/20/2013
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N T	TARGET QUAD NAME: PALO ALTO MAP YEAR: 1947	SITE NAME: Property At ADDRESS: 1700 Embarcadero Road Palo Alto, CA 94303	CLIENT: Romig Consulting Engineers CONTACT: Chris Palmer INQUIRY#: 3611943.4
9	SERIES: 15 SCALE: 1:50000	LAT/LONG: 37.44937-122.1191	RESEARCH DATE. 03/20/2013



N I	TARGET QUA NAME: MAP YEAR: SERIES: SCALE:	AD PALO ALTO 1948 15 1:62500	SITE NAME: ADDRESS: LAT/LONG:	Property At 1700 Embarcadero Road Palo Alto, CA 94303 37.4495 / -122.1191	CLIENT: CONTACT: INQUIRY#: RESEARCH I	Romig Consulting Engineers Chris Palmer 3611943.4 DATE: 05/20/2013
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N	TARGET QUAD NAME: MOUNTAINVIEW MAP YEAR: 1953	SITE NAME: Property At ADDRESS: 1700 Embarcadero Palo Alto, CA 9430 LAT/LONG: 37,4495 / -122,119	CLIENT: Romig Consulting Engineers Road CONTACT: Chris Palmer INQUIRY#: 3611943.4 RESEARCH DATE: 05/20/2013
69	SERIES: 7.5 SCALE: 1:24000		



	TARGET QU NAME: MAP YEAR: SERIES: SCALE:	AD MOUNTAINVIEW 1961 7.5 1:24000	SITE NAME: ADDRESS: LAT/LONG:	Property At 1700 Embarcadero Road Palo Alto, CA 94303 37.4495 / -122.1191	CLIENT: CONTACT: INQUIRY#: RESEARCH	Romig Consulting Engineers Chris Palmer 3611943.4 DATE: 05/20/2013
	SCALE:	1:24000				



1 1 1			LAT/LONG:	37.4495 / -122.1191	RESEARCH	DATE: 05/20/2013
т:	SERIES: SCALE:	15 1:62500				



≥	TARGET QUAD NAME: MOUNTAINVIEW MAP YEAR: 1968 PHOTOREVISED FROM :1961 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Property At ADDRESS: 1700 Embarcadero Road Palo Alto, CA 94303 LAT/LONG: 37.4495 / -122.1191	CLIENT: Romig Consulting Engineers CONTACT: Chris Palmer INQUIRY#: 3611943.4 RESEARCH DATE: 05/20/2013
	SCALE: 1:24000		



SITE NAME: Property At TARGET QUAD N NAME: MOUNTAINVIEW ADDRESS: 1700 Embarcadero Road MAP YEAR: 1973 Palo Alto, CA 94303 PHOTOREVISED FROM :1961 LAT/LONG: 37.4495 / -122.1191 SERIES: 7.5 1:24000 SCALE:

CLIENT: Romig Consulting Engineers CONTACT: Chris Palmer INQUIRY#: 3611943.4 RESEARCH DATE: 05/20/2013



TARGET QUAD SITE NAME: Property At CLIENT: **Romig Consulting Engineers** N NAME: MOUNTAIN VIEW ADDRESS: 1700 Embarcadero Road CONTACT: Chris Palmer MAP YEAR: 1981 Palo Alto, CA 94303 3611943.4 INQUIRY#: PHOTOREVISED FROM :1961 37.4495 / -122.1191 RESEARCH DATE: 05/20/2013 LAT/LONG: SERIES: 7.5 SCALE: 1:24000



≥	TARGET QU/ NAME: MAP YEAR:	AD MOUNTAINVIEW 1991	SITE NAME: ADDRESS: LAT/LONG:	Property At 1700 Embarcadero Road Palo Alto, CA 94303 37.4495 / -122.1191	CLIENT: CONTACT: INQUIRY#: RESEARCH I	Romig Consulting Engineers Chris Palmer 3611943.4 DATE: 05/20/2013
5.23	SERIES: SCALE:	7.5 1:24000				



≥	TARGET QU NAME: MAP YEAR:	IAD MOUNTAINVIEW 1997	SITE NAME: ADDRESS: LAT/LONG:	Property At 1700 Embarcadero Road Palo Alto, CA 94303 37,4495 / -122,1191	CLIENT: CONTACT: INQUIRY#: RESEARCH I	Romig Consulting Engineers Chris Palmer 3611943.4 DATE: 05/20/2013
2	SERIES: SCALE:	7.5 1:24000				



≥ ▲	ADJOINING NAME: MAP YEAR:	QUAD PALO ALTO 1953	SITE NAME: ADDRESS:	Property At 1700 Embarcadero Road Palo Alto, CA 94303	CLIENT: CONTACT: INQUIRY#:	Romig Consulting Engineers Chris Palmer 3611943.4
1	SERIES: SCALE:	7.5 1:24000	LAT/LONG:	37.4495 / -122.1191	RESEARCH	DATE: 05/20/2013



	ADJOINING QUAD					
N 🕇	NAME:	PALO ALTO	SITE NAME:	Property At	CLIENT:	Romig Consulting Engineers
	MAP YEAR:	1961	ADDRESS:	1700 Embarcadero Road	CONTACT:	Chris Palmer
				Palo Alto, CA 94303	INQUIRY#:	3611943.4
1,52	SERIES:	7.5	LAT/LONG:	37.4495 / -122.1191	RESEARCH	DATE: 05/20/2013
	SCALE:	1:24000				



ADJOINING QUAD NAME: PALO ALTO SITE NAME: Property At CLIENT: **Romig Consulting Engineers** Ν MAP YEAR: 1968 ADDRESS: 1700 Embarcadero Road CONTACT: Chris Palmer PHOTOREVISED FROM :1961 Palo Alto, CA 94303 INQUIRY#: 3611943.4 SERIES: 7.5 LAT/LONG: 37.4495 / -122.1191 RESEARCH DATE: 05/20/2013 SCALE: 1:24000



	ADJOINING	QUAD				
N	NAME:	PALO ALTO	SITE NAME:	Property At	CLIENT:	Romig Consulting Engineers
	MAP YEAR:	1973	ADDRESS:	1700 Embarcadero Road	CONTACT:	Chris Palmer
	PHOTOREVISED FROM :1961			Palo Alto, CA 94303	INQUIRY#:	3611943.4
	SERIES:	7.5	LAT/LONG:	37.4495 / -122.1191	RESEARCH	DATE: 05/20/2013
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	ADJOINING QUAD				_	
	NAME:	PALO ALTO	SITE NAME:	Property At	CLIENT:	Romig Consulting Engineers
N	MAP YEAR:	1991	ADDRESS:	1700 Embarcadero Road	CONTACT:	Chris Palmer
				Palo Alto, CA 94303	INQUIRY#:	3611943.4
191	SERIES:	7.5	LAT/LONG:	37.4495 / -122.1191	RESEARCH	DATE: 05/20/2013
833	SCALE:	1:24000				



	ADJOINING QUAD					
≥	NAME:	PALO ALTO	SITE NAME:	Property At	CLIENT:	Romig Consulting Engineers
	MAP YEAR:	1997	ADDRESS:	1700 Embarcadero Road	CONTACT:	Chris Palmer
				Palo Alto, CA 94303	INQUIRY#:	3611943.4
	SERIES:	7.5	LAT/LONG:	37.4495 / -122.1191	RESEARCHI	DATE: 05/20/2013
	SCALE:	1:24000				
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Property At 1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.8 May 20, 2013

The EDR Property Tax Map Report



440 Wheelers Farms Road Milford, CT 06461 800,352.0050 www.edrnet.com

EDR Property Tax Map Report

Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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Property At 1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.5 May 23, 2013

The EDR Aerial Photo Decade Package



440 Wheelers Farms Road Milford, CT 06461 800.352.0050 www.edmet.com

EDR Aerial Photo Decade Package

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Date EDR Searched Historical Sources:

Aerial Photography May 23, 2013

Target Property:

1700 Embarcadero Road Palo Alto, CA 94303

<u>Year</u>	Scale	<u>Details</u>	Source
19 39	Aerial Photograph. Scale: 1"=500'	Flight Year: 1939 Best Copy Available from original source	Fairchild
1948	Aerial Photograph. Scale: 1"=500'	Flight Year: 1948	USGS
19 56	Aerial Photograph. Scale: 1"=500'	Flight Year: 1956	Aero
1968	Aerial Photograph. Scale: 1"=500'	Flight Year: 1968	USGS
1974	Aerial Photograph. Scale: 1"=500'	Flight Year: 1974	USGS
1982	Aerial Photograph. Scale: 1"=500'	Flight Year: 1982	WSA
1991	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1991	EDR
1999	Aerial Photograph. Scale: 1"=500'	Flight Year: 1999	WAC
2006	Aerial Photograph. Scale: 1"=500'	Flight Year: 2006	EDR
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	EDR
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	EDR
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	EDR
























APPENDIX D

QUALIFICATION OF ENVIRONMENTAL PROFESSIONAL

RESUME OF QUALIFICATIONS

REPRESENTATIVE EXPERIENCE

Christopher M. Palmer has diversified experience in hydrogeologic and engineering geologic studies in California and other States. He has performed and supervised hundreds of investigations for contaminant soil and groundwater assessment, sampling, and groundwater monitoring well design and installation, and aquifer data analysis and report preparation. Additional work includes onsite sewage wastewater absorption system testing and Phase One Environmental Site Assessments and other geologic studies. Mr. Palmer is also experienced in regulatory negotiation and compliance for petroleum, solvent, and metals contamination, shallow soil pesticide contaminants, and development and implementation of work plans for soil and groundwater site cleanup and site "closure" (no further work required).

Project experience includes contaminant assessments at military and industrial sites, RCRA RI/FS studies, underground storage tanks, onsite wastewater disposal for residential and light commercial development, municipal landfill site investigations and expansion of municipal and hazardous waste disposal sites. Mr. Palmer has provided contaminant hydrogeology instruction through university extension classes and to professional societies and government agencies, and has authored professional journal publications and the book "Principles of Contaminant Hydrogeology (1991; 1996)."

EDUCATION

California State University, Fresno, B. A. Geology, Jan. 1975. California State University, Fresno, M. A. Geology, Dec. 1978. Continuing Education Classes in hydrogeology, chemistry, regulations, 1981-present.

CERTIFICATIONS

OSHA 29 CFR 1910.120 Hazardous Waste Training (40 hr., with 8 hr. updates).

PROFESSIONAL REGISTRATIONS

State of California Professional Geologist No. 3989; Certified Engineering Geologist No. 1262; Certified Hydrogeologist No. 246. State of Arkansas Registered Geologist No. 320. State of Pennsylvania Registered Geologist No. 892.

PROFESSIONAL SOCIETIES

National Groundwater Association. Groundwater Resources Association of California

APPENDIX E

EDR RADIUS REPORT

(Provided On Attached CD)

ROMIG ENGINEERS, INC.

Property At

1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.2s May 20, 2013 .

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The EDR Radius Map[™] Report with GeoCheck®

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440 Wheelers Farms Road Milford, CT 06461 Toll Free: 800.352.0050 www.edrnet.com

TABLE OF CONTENTS

SECTION

PAGE

Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	79
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-7
Physical Setting Source Map Findings	A-8
Physical Setting Source Records Searched	A-21

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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 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1700 EMBARCADERO ROAD PALO ALTO, CA 94303

COORDINATES

 Latitude (North):
 37.4495000 - 37' 26' 58.20"

 Longitude (West):
 122.1191000 - 122° 7' 8.76"

 Universal Tranverse Mercator:
 Zone 10

 UTM X (Meters):
 577917.9

 UTM Y (Meters):
 4144898.8

 Elevation:
 8 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: Most Recent Revision:

Most Recent Revision:

37122-D1 MOUNTAIN VIEW, CA 1999

37122-D2 PALO ALTO, CA 1999

AERIAL PHOTOGRAPHY IN THIS REPORT

West Map:

Photo Year: Source: 2012 USDA

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

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 NPL LIENS...... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL_____ National Priority List Deletions

Federal CERCLIS list

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 RCRA-CESQG.....RCRA - Conditionally Exempt Small Quantity Generator

Federal Institutional controls / engineering controls registries

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

UST...... Active UST Facilities INDIAN UST...... Underground Storage Tanks on Indian Land FEMA UST...... Underground Storage Tank Listing

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

ODL	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
WMUDS/SWAT	Waste Management Unit Database
SWRCY	Recycler Database
HAULERS.	Registered Waste Tire Haulers Listing
INDIAN OD	Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL	Clandestine Drug Labs
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
CDL	Clandestine Drug Labs
US HIST CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information
LIENS	Environmental Liens Listing
DEED	Deed Restriction Listing

Records of Emergency Release Reports

CHMIRSCalifornia Hazardous Material Incident Report System LDSLand Disposal Sites Listing MCSMilltary Cleanup Sites Listing	HMIRS	Hazardous Materials Information Reporting System
LDS Land Disposal Sites Listing MCS Military Cleanup Sites Listing	CHMIRS	California Hazardous Material Incident Report System
MCS Military Cleanup Sites Listing	LDS	Land Disposal Sites Listing
	MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT.	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide
	Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing

SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
CA BOND EXP. PLAN	Bond Expenditure Plan
NPDES	NPDES Permits Listing
UIC	UIC Listing
Cortese	"Cortese" Hazardous Waste & Substances Sites List
SAN JOSE HAZMAT	Hazardous Material Facilities
Notify 65	Proposition 65 Records
DRYCLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
ENF	Enforcement Action Listing
HAZNET	Facility and Manifest Data
EML	Emissions Inventory Data
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
WDS	Waste Discharge System
PRP	Potentially Responsible Parties
US AIRS	Aerometric Information Retrieval System Facility Subsystem
LEAD SMELTERS	Lead Smelter Sites
2020 COR ACTION	2020 Corrective Action Program List
Financial Assurance	Financial Assurance Information Listing
EPA WATCH LIST	EPA WATCH LIST
US FIN ASSUR	Financial Assurance Information
PCB TRANSFORMER	PCB Transformer Registration Database
PROC	Certified Processors Database
MWMP	Medical Waste Management Program Listing
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
HWT	Registered Hazardous Waste Transporter Database
HWP	EnviroStor Permitted Facilities Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners

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 CERCLIS NFRAP site List

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS 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 this 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. This 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 a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 02/05/2013 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PALO ALTO MUNI REFUSE DSPL ARE	2380 EMBARCADERO RD	NE 1/4 - 1/2 (0.388 mi.)	G24	65

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 02/12/2013 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KAPTRON INC	2525 E BAYSHORE FRONTA	AG S 1/8 - 1/4 (0.154 mi.)	12	28

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 identifies 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 03/13/2013 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map (D	Page
PALO ALTO MUNICIPAL SANITARY L Status: Refer: RWQCB	2380 EMBARCADERO RD	NE 1/4 - 1/2 (0.388 ml.)	G25	66

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GEMFIRE CORPORATION	2440 EMBARCADERO WAY	ENE 1/4 - 1/2 (0.420 mi.)	28	73
Status: Inactive - Needs Evaluation				1. 1
			* .	н 1 м. ^{су}

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, and dated 03/18/2013 has revealed that there are 15 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARLSEN MOTORS Status: Completed - Case Closed	1730 EMBARCADERO RD	NNE 0 - 1/8 (0.063 ml.)	A2	10
STANFORD HONDA Status: Completed - Case Closed	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 ml.)	C7	16
ANGIOTECH BIOMATERIALS CORP Status: Completed - Case Closed	2500 FABER PL	ENE 1/8 - 1/4 (0.155 mi.)	D14	31
GOPOWER Status: Completed - Case Closed	1890 EMBARCADERO RD	NE 1/4 - 1/2 (0.357 mi.)	21	56
PALO ALTO AIRPORT Status: Completed - Case Closed	1901 EMBARCADERO RD	NE 1/4 - 1/2 (0.371 mi.)	G22	59
DYNA BELL Status: Completed - Case Closed	151 LAURA LN	WNW 1/4 - 1/2 (0.374 mi.)	23	63
EQUILON ENTERPRISES SHELL Status: Completed - Case Closed	1161 EMBARCADERO 1161 EMBARCADERO RD	WSW 1/4 - 1/2 (0.411 mi.) WSW 1/4 - 1/2 (0.411 mi.)	H26 H27	70 70
PALO ALTO MAIN POST OFFICE Status: Completed - Case Closed	2085 E BAYSHORE	WNW 1/4 - 1/2 (0.421 mi.)	129	74
UNITED STATES POSTAL SERVICE (Status: Completed - Case Closed	2085 EAST BAYSHORE ROAD	WNW 1/4 - 1/2 (0.421 mi.)	130	75
PALO ALTO POST OFFICE	2085 E BAYSHORE RD	WNW 1/4 - 1/2 (0.421 mi.)	131	76
Lower Elevation	Address	Direction / Distance	Map ID	Page
OLD POST OFFICE PALO ALTO Status: Completed - Case Closed	2197 E BAYSHORE RD	WNW 1/4 - 1/2 (0.282 ml.)	E16	47
OLD POST OFFICE PALO ALTO PALO ALTO GOLF COURSE Status: Completed - Case Closed	2197 E BAYSHORE RD 1875 EMBARCADERO RD	WNW 1/4 - 1/2 (0.282 mi.) NE 1/4 - 1/2 (0.323 mi.)	E17 <i>F19</i>	48 49
PALO ALTO GOLF COURSE	1875 EMBARCADERO RD	NE 1/4 - 1/2 (0.323 mi.)	F20	55

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 03/18/2013 has revealed that there are 3 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	<u>Map I</u> D	Page
STANFORD HONDA Facility Status: Open - Site Assessment	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 mi.)	C7	16
PALO ALTO SANITATION CO Facility Status: Open - Site Assessment	2000 GENG RD	NNW 1/8 - 1/4 (0.224 mi.)	15	38
MOON DRY CLEANERS Facility Status: Open - Remediation	2125 SAINT FRANCIS DRIV	WSW 1/4 - 1/2 (0.425 mi.)	32	78

HIST LUST: 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.

A review of the HIST LUST list, as provided by EDR, and dated 03/29/2005 has revealed that there are 10 HIST LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARLSEN MOTORS	1730 EMBARCADERO RD	NNE 0 - 1/8 (0.063 mi.)	A2	10
STANFORD HONDA	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 ml.)	C7	16
COLLAGEN INC.	2500 FABER PL	ENE 1/8 - 1/4 (0.155 ml.)	D13	31
GOPOWER	1890 EMBARCADERO RD	NE 1/4 - 1/2 (0.357 mi.)	21	56
PALO ALTO AIRPORT	1901 EMBARCADERO RD	NE 1/4 - 1/2 (0.371 ml.)	G22	59
DYNA BELL	151 LAURA LN	WNW 1/4 - 1/2 (0.374 mi.)	23	63
SHELL	1161 EMBARCADERO RD	WSW 1/4 - 1/2 (0.411 mi.)	H27	70
PALO ALTO POST OFFICE	2085 E BAYSHORE RD	WNW 1/4 - 1/2 (0.421 mi.)	131	76
Lower Elevation	Address	Direction / Distance	Map ID	Page
OLD POST OFFICE PALO ALTO	2197 E BAYSHORE RD	WNW 1/4 - 1/2 (0.282 ml.)	E16	47
PALO ALTO GOLF COURSE	1875 EMBARCADERO RD	NE 1/4 - 1/2 (0.323 mi.)	F20	55

State and tribal registered storage tank lists

AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the AST list, as provided by EDR, and dated 08/01/2009 has revealed that there is 1 AST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PALO ALTO SANITATION CO	2000 GENG RD	NNW 1/8 - 1/4 (0.224 mi.)	15	38

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

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 are 3 CA FID UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARLSEN PORSCHE AUDI, INC. CARL R. CARLSEN INC.	1730 EMBARCADERO RD 1766 EMBARCADERO RD	NNE 0 - 1/8 (0.063 mi.) NE 0 - 1/8 (0.106 mi.)	A1 C6	8 15
ANGIOTECH BIOMATERIALS CORP	2500 FABER PL	ENE 1/8 - 1/4 (0.155 mi.)	D14	31

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 3 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARLSEN PORSCHE AUDI, INC.	1730 EMBARCADERO RD	NNE 0 - 1/8 (0.063 mi.)	A1	8
CARL R. CARLSEN INC.	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 mi.)	C5	14
ANGIOTECH BIOMATERIALS CORP	2500 FABER PL	ENE 1/8 - 1/4 (0.155 mi.)	D14	31

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 3 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARLSEN PORSCHE AUDI, INC.	1730 EMBARCADERO RD	NNE 0 - 1/8 (0.063 mi.)	A1	8
CARL R. CARLSEN INC.	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 mi.)	C6	15
ANGIOTECH BIOMATERIALS CORP	2500 FABER PL	ENE 1/8 - 1/4 (0.155 mi.)	D14	31

Other Ascertainable Records

RCRA NonGen / NLR: 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.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 02/12/2013 has revealed that

there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	<u>Map I</u> D	Page
MICROELECTRONICS TECHNOLOGY CO	2446 WATSON COURT	SSW 0 - 1/8 (0.093 mi.)	B3	12
ANDERSON HONDA ISUZU	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 ml.)	C8	20
ANGIOTECH BIOMATERIALS CORP	2500 FABER PL	ENE 1/8 - 1/4 (0.155 mi.)	D14	31
PALO ALTO SANITATION CO	2000 GENG RD	NNW 1/8 - 1/4 (0.224 mi.)	15	38

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
CARLSEN MOTORS	1730 EMBARCADERO RD	NNE 0 - 1/8 (0.063 ml.)	A2	10
STANFORD HONDA	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 ml.)	C7	16
ANGIOTECH BIOMATERIALS CORP	2500 FABER PL	ENE 1/8 - 1/4 (0.155 mi.)	D14	31
GOPOWER	1890 EMBARCADERO RD	NE 1/4 - 1/2 (0.357 mi.)	21	56
PALO ALTO AIRPORT	1901 EMBARCADERO RD	NE 1/4 - 1/2 (0.371 ml.)	G22	59
DYNA BELL	151 LAURA LN	WNW 1/4 - 1/2 (0.374 ml.)	23	63
SHELL	1161 EMBARCADERO RD	WSW 1/4 - 1/2 (0.411 mi.)	H27	70
Lower Elevation	Address	Direction / Distance	Map ID	Page
OLD POST OFFICE PALO ALTO	2197 BAYSHORE	WNW 1/4 - 1/2 (0.284 ml.)	E18	49
PALO ALTO GOLF COURSE	1875 EMBARCADERO RD	NE 1/4 - 1/2 (0.323 ml.)	F19	49

CUPA Listings: 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.

A review of the CUPA Listings list, as provided by EDR, has revealed that there are 5 CUPA Listings sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CARLSEN MOTORS	1730 EMBARCADERO RD	NNE 0 - 1/8 (0.063 mi.)	A2	10
ST-EYE INSTITUTE	2452 WATSON CT	SSW 0 - 1/8 (0.094 mi.)	B4	13
STANFORD HONDA	1766 EMBARCADERO RD	NE 0 - 1/8 (0.106 mi.)	C7	16
MATHEWS CARLSEN BODY WORKS	2480 FABER PLACE	ENE 1/8 - 1/4 (0.152 mi.)	D11	23
ANGIOTECH BIOMATERIALS CORP	2500 FABER PL	ENE 1/8 - 1/4 (0.155 ml.)	D14	31

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: 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 US Hist Auto Stat list, as provided by EDR, has revealed that there are 2 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	1766 EMBARCADERO RD	NE 0 - 1/8 (0.107 mi.)	C9	21
Not reported	2480 FABER PL	ENE 1/8 - 1/4 (0.152 mi.)	D10	22
·				

Due to poor or inadequate address information, the following sites were not mapped. Count: 4 records.

Site Name

CALMAC CHEMICAL AT & T MOBILITY-BAYSHORE RD 13328 ACE FIRE EQUIPMENT & SVC CO INC PALO ALTO CITY OF

Database(s)

CERC-NFRAP San Mateo Co. BI San Mateo Co. BI MANIFEST **OVERVIEW MAP - 3611943.2s**



SITE NAME: Property At	CLIENT: Romig Consulting Engineers
ADDRESS: 1700 Embarcadero Road	CONTACT: Chris Palmer
Palo Alto CA 94303	INQUIRY #: 3611943.2s
LAT/LONG: 37.4495 / 122.1191	DATE: May 20, 2013 5:11 pm
Paio Alto CA 94303	INQUIRY #: 3611943.2s
LAT/LONG: 37.4495 / 122.1191	DATE: May 20, 2013 5:11 pm

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DETAIL MAP - 3611943.2s



SITE NAME: ADDRESS: LAT/LONG:	Property At 1700 Embarcadero Road Palo Alto CA 94303 37.4495 / 122.1191	CLIENT: CONTACT: INQUIRY #: DATE:	Romig Consulting Engineers Chris Palmer 3611943.2s May 20, 2013 5:18 pm
		A	L + 2010 F22 L + 2010 T 410 - D-1 - 02/2000

Copyright @ 2013 EDR, Inc. @ 2010 Tele Atlas Rel. 07/2009.

Database	Search Distance (Miles)	Target Property	< 1/8	<u>1/8 - 1/4</u>	1/4 - 1/2	<u>1/2 - 1</u>	<u>> 1</u>	Total Plotted
STANDARD ENVIRONMEN	ITAL RECORDS							
Federal NPL site list								
NPL Proposed NPL NPL LIENS	1.000 1.000 TP		0 0 NR	0 0 NR	0 0 NR	0 0 NR	NR NR NR	0 0 0
Federal Delisted NPL si	te llst							
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS FEDERAL FACILITY	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Federal CERCLIS NFRA	P site List							
CERC-NFRAP	0.500		0	0	1	NR	NR	1
Federal RCRA CORRAC	CTS facilities lis	st						
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-COR	RACTS TSD fa	acilities list						
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generato	rs list							
RCRA-LQG RCRA-SQG RCRA-CESQG	0.250 0.250 0.250		0 0 0	0 1 0	NR NR NR	NR NR NR	NR NR NR	0 1 0
Federal institutional con engineering controls re	ntrols / gistrles							
US ENG CONTROLS US INST CONTROL LUCIS	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Federal ERNS list								
ERNS	ΤP		NR	NR	NR	NR	NR	0
State- and tribal - equiva	alent NPL							
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equive	alent CERCLIS	•						
ENVIROSTOR	1.000		0	0	2	0	NR	2
State and tribal landfill a solid waste disposal site	and/or e lists							
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking	storage tank li	sts						
LUST	0.500		2	1	12	NR	NR	15

Database	Search Distance (Miles)	Target Property	<u>< 1/8</u>	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC HIST LUST INDIAN LUST	0.500 0.500 0.500		1 2 0	1 1 0	1 7 0	NR NR NR	NR NR NR	3 10 0
State and tribal register	ed storage tai	nk lists				· .		
UST AST INDIAN UST FEMA UST	0.250 0.250 0.250 0.250		0 0 0 0	0 1 0 0	NR NR NR NR	NR NR NR NR	NR NR NR NR	0 1 0 0
State and tribal voluntar	y cleanup site	es						
VCP INDIAN VCP	0.500 0.500		0	0 0	0	NR NR	NR NR	0 0
ADDITIONAL ENVIRONMEN	TAL RECORD	<u>s</u>						
Local Brownfield lists		÷						
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / S Waste Disposal Sites	Solid							
ODI DEBRIS REGION 9 WMUDS/SWAT SWRCY HAULERS INDIAN ODI	0.500 0.500 0.500 0.500 TP 0.500		0 0 0 NR 0	0 0 0 NR 0	0 0 0 NR 0	NR NR NR NR NR	NR NR NR NR NR NR	0 0 0 0 0
Local Lists of Hazardous Contaminated Sites	s waste /							
US CDL HIST Cal-Sites SCH Toxic Pits CDL US HIST CDL	TP 1.000 0.250 1.000 TP TP		NR 0 0 NR NR	NR 0 0 NR NR	NR 0 NR 0 NR NR	NR 0 NR 0 NR NR	NR NR NR NR NR	0 0 0 0 0
Local Lists of Registere	d Storage Tan	nks						
CA FID UST HIST UST SWEEPS UST	0.250 0.250 0.250		2 2 2	1 1 1	NR NR NR	NR NR NR	NR NR NR	3 3 3
Local Land Records								
LIENS 2 LIENS DEED	TP TP 0.500		NR NR 0	NR NR 0	NR NR 0	NR NR NR	NR NR NR	0 0 0
Records of Emergency I	Release Repo	rts						
HMIRS CHMIRS	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0

Database	Search Distance (Miles)	Target Property	<u>< 1/8</u>	<u> 1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	> 1	Total Plotted
LDS MCS SPILLS 90	TP TP TP		NR NR NR	NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0
Other Ascertainable Re	cords							
RCRA NonGen / NLR DOT OPS DOD FUDS CONSENT ROD	0.250 TP 1.000 1.000 1.000 1.000		2 NR 0 0 0	2 NR 0 0 0	NR NR 0 0 0	NR NR 0 0 0 0	NR NR NR NR NR	4 0 0 0 0
US MINES TRIS TSCA	0.300 0.250 TP TP		0 NR NR	0 NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0
HIS HIST FTTS SSTS ICIS PADS	TP TP TP TP TP		NR NR NR NR NR	NR NR NR NR NR	NR NR NR NR NR	NR NR NR NR NR	NR NR NR NR NR	0 0 0 0
MLTS RADINFO FINDS RAATS	TP TP TP TP		NR NR NR NR	NR NR NR NR	NR NR NR NR	NR NR NR NR	NR NR NR NR	0 0 0 0
RMP CA BOND EXP. PLAN NPDES UIC	TP 1.000 TP TP		NR 0 NR NR	NR 0 NR NR	NR 0 NR NR	NR 0 NR NR	NR NR NR NR	0 0 0
Cortese HIST CORTESE CUPA Listings SAN JOSE HAZMAT	0.500 0.500 0.250 0.250		0 2 3 0	0 1 2 0	0 6 NR NR	NR NR NR NR	NR NR NR NR	0 9 5 0
Notity 65 DRYCLEANERS WIP ENF	1.000 0.250 0.250 TP		0 0 NR	0 0 NR	NR NR NR	NR NR NR	NR NR NR NR	0 0 0
EMI INDIAN RESERV SCRD DRYCLEANERS	TP 1.000 0.500		NR 0 0	NR NR 0 0	NR NR 0 0	NR 0 NR	NR NR NR	0 0 0
WDS PRP US AIRS LEAD SMELTERS	TP TP TP TP		NR NR NR NR	NR NR NR NR	NR NR NR	NR NR NR	NR NR NR	0 0 0
2020 COR ACTION Financial Assurance EPA WATCH LIST US FIN ASSUR	0.250 TP TP TP		0 NR NR NR	0 NR NR NR	NR NR NR NR	NR NR NR NR	NR NR NR NR	0 0 0
PCB TRANSFORMER PROC MWMP	TP 0.500 0.250		NR 0 0	NR 0 0	NR 0 NR	NR NR NR	NR NR NR	U 0 0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	<u>1/2 - 1</u>	<u>> 1</u>	Total Piotted
COAL ASH DOE COAL ASH EPA HWT HWP	TP 0.500 0.250 1.000		NR 0 0 0	NR 0 0 0	NR 0 NR 0	NR NR NR 0	NR NR NR NR	0 0 0 0
EDR HIGH RISK HISTORICAL	RECORDS							
EDR Exclusive Records								
EDR MGP EDR US Hist Auto Stat EDR US Hist Cleaners	1.000 0.250 0.250		0 1 0	0 1 0	0 NR NR	0 NR NR	NR NR NR	0 2 0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Database(s)

A1 NNE < 1/8 0.063 mi. 334 ft.	CARLSEN PORSCHE AU 1730 EMBARCADERO F PALO ALTO, CA 94303 Site 1 of 2 in cluster A	JDI, INC. ID	CA FID UST HIST UST SWEEPS UST	1000292290 N/A
Relative: Higher Actual: 8 ft.	CA FID UST: Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Address 2:	43007072 UTNKA 00019810 Not reported Not reported 4158566300 Not reported 1730 EMBARCADERO RD Not reported		an a
	Mailing City,St,Zip: Contact: DUNs Number: NPDE S Number: EPA ID: Comments: Status:	PALO ALTO 94303 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Active		
	HIST UST: Region: Facility ID: Facility Type: Other Type: Total Tanks: Contact Name: Telephone: Owner Name: Owner Address: Owner City,St,Zip:	STATE 00000019810 Other CAR DEALER 0004 CHARLES A. BURTON 4158566300 CARL R., CARLSEN 2480 FABER PLACE PALO ALTO, CA 94303		
	Tank Num: Container Num: Year Installed: Tank Capacity: Tank Used for: Type of Fuel: Tank Construction: Leak Detection:	001 1 1979 00010000 PRODUCT UNLEADED Not reported Stock Inventor		
	Tank Num: Container Num: Year Installed: Tank Capacity: Tank Used for: Type of Fuel: Tank Construction: Leak Detection:	002 2 Not reported 00001000 PRODUCT DIESEL Not reported Stock Inventor		
	Tank Num: Container Num: Year Installed: Tank Capacity:	003 3 Not reported 00001000		

MAP FINDINGS

Database(s)

Tank Used for:	WASTE		
Type of Fuel:	WASTE OIL		
Tank Construction:	Not reported		
Leak Detection:	Not reported		
			÷:,
Tank Num:	004		
Container Num:	4		
Year Installed:	Not reported		
Tank Capacity:	0000000		
Tank Used for:	WASTE		
Type of Fuel:	Not reported		
Tank Construction:	Not reported		· · ·
Leak Detection:	None		
		:	
OWEEDO LLOT.			
SWEEPS UST:	A - 41		
Status:	Active		·
Comp Number:	19810		
Number:	9		
Board Of Equalization	: 44-026081		· · ·
Referral Date:	07-01-85		
Action Date:	Not reported		
Created Date:	02-29-88		
Tank Status:	Α		
Owner Tank Id:	1		
Swrcb Tank Id:	43-006-019810-000001		
Actv Date:	07-01-85		
Capacity:	10000		
Tank Use:	M.V. FUEL		
Stg:	Р		
Content:	REG UNLEADED		
Number Of Tanks:	4		
Statua	Activo		
Comp Number	10910		
Number	19910		· · · · · · · · · · · · · · · · · · ·
	9		· .
Board Of Equalization	: 44-026081		
Referral Date:	07-01-85		
Action Date:	Not reported		
Created Date:	02-29-88		
Tank Status:	A		
Owner Tank Id:	2		
Swrcb Tank Id:	43-006-019810-000002		
Actv Date:	07-01-85		
Capacity:	1000	·, ·	
Tank Use:	M.V. FUEL		
Stg:	P		
Content:	DIESEL		
Number Of Tanks:	Not reported		
Statues	Activo		
Giaius: Comp Number	10910		
Comp Number:	19010	4	
	9		
Board Of Equalization	C 44-026081		
Referral Date:	U7-U1-85		
Action Date:	Not reported		
Created Date:	02-29-88		

MAP FINDINGS

Database(s)

	CARLSEN PORSCHE AUDI	, INC. (Cont	tinued)		1000292290
	Owner Tank Id:	3		1	
	Swrcb Tank Id:	43-006-019	9810-000003	1	
	Actv Date:	07-01-85			
	Capacity:	1000			
	Tank Use:	OIL			
	Stg:	w			
	Content:	WASTE OI	L	· · · · · · · · · · · · · · · · · · ·	
	Number Of Tanks:	Not reporte	d		
	Status:	Active		:	
	Comp Number:	19810			
	Number:	9			
	Board Of Equalization:	44-026081			
	Referral Date:	07-01-85			
	Action Date:	Not renorte	d		
	Created Date:	02-29-88	-	. : .	· ·
	Tank Status:	Δ		1	
	Owner Tank Id:	A			
	Switch Tank Id:	43 006 010	840.00004	5 - 5 - 5	
	Antu Date:	43-000-013	010-000004		
	Activ Date.	Not reported	4	and the second	
	Capacity:	INOUTO PORTE		and the second se	
	Tank Use;		4		
	Stg:	VV Notice to the			
	Content:	Not reporte			
A2	CARLSEN MOTORS			HIST CORTESE	S103177425
A2 NNE	CARLSEN MOTORS 1730 EMBARCADERO RD			HIST CORTESE	S103177425 N/A
A2 NNE < 1/8	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA			HIST CORTESE LUST HIST LUST	S103177425 N/A
A2 NNE < 1/8 0.063 mi.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA			HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A			HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative:	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE:			HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region:	COR	TESE	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code:	COR 43	TESE	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual:	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By:	COR 43 LTNK	TESE	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id:	COR 43 LTNk 43-22	TESE KA 214	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id:	COR 43 LTNk 43-22	TESE KA 214	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST:	COR 43 LTNk 43-22	TESE KA 214	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region:	COR 43 LTNk 43-22	TESE KA 214 STATE	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latítude: Longitude:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type:	COR 43 LTNK 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site	HIST CORTESE LUST HIST LUST CUPA Listings	S103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status: Status Date: Lead Acency:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status: Status Date: Lead Agency: Case Worker:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Anency:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number:	COR 43 LTNk 43-22	TESE KA 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP Not reported	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: L OC Case Number:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP Not reported Not reported	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: Elle Location:	COR 43 LTNk 43-22	TESE KA 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP Not reported Not reported Not reported	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: File Location: Potential Media Affect	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP Not reported Not reported Stored electronically as an E-file Other Groundwater (uses other f	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: File Location: Potential Media Affect:	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP Not reported Not reported Stored electronically as an E-file Other Groundwater (uses other t Gasoline	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A
A2 NNE < 1/8 0.063 mi. 334 ft. Relative: Higher Actual: 8 ft.	CARLSEN MOTORS 1730 EMBARCADERO RD PALO ALTO, CA Site 2 of 2 in cluster A CORTESE: Region: Facility County Code: Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: File Location: Potential Media Affect: Potential Media Affect: Potential Contaminants	COR 43 LTNk 43-22	TESE (A 214 STATE T0608502032 37.449859 -122.119257 LUST Cleanup Site Completed - Case Closed 01/30/1998 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP Not reported Not reported Stored electronically as an E-file Other Groundwater (uses other to Gasoline Not reported	HIST CORTESE LUST HIST LUST CUPA Listings	\$103177425 N/A

MAP FINDINGS

Database(s)

(CARLSEN MOTORS (Cont	inued)			۰.		S1031	77425
	Click here to access the	e California G	GeoTrack	er records for this facility:		· .		
	Contact:							
	Global Id:		T06085	02032				
	Contact Type:		Regiona	al Board Caseworker				
	Contact Name:		ZSČ					
	Organization Name:		SAN FF	RANCISCO BAY RWQCB (REGION 2)				
	Address:		1515 C	AY STREET, SUITE 1400		1.1		
	City		OAKI A	ND				
	Email:		Not ren	nted				
	Phone Number:		Not rep	orted				
	Global Id:		T06085	02032				
	Contact Type:		Local A	gency Caseworker				
	Contact Name:		UST CA	SE WORKER				
	Organization Name:		SANTA	CLARA COUNTY LOP				
	Address:		1555 Be	erger Drive, Suite 300				
	City:		SAN JC	DSE				
	Email:		Not rep	orted				
	Phone Number:		408918	3400				
	Regulatory Activities:		-					
	Global Id:		106085	02032				
	Action Type:		Other					
	Date:		01/01/1	950				
	Action:		Leak Re	aported				
	Global Id:		T06085	02032				
	Action Type:		REMED	IATION				
	Date:		01/01/1	950				
	Action:		Excaval	lion				
	Global Id:		T06085	02032				
	Action Type:		ENFOR	CEMENT				
	Date:		11/12/1	996				
	Action:		Notice o	of Responsibility - #39186				
	LUST REG 2:							
	Region:	2						
	Facility Id:	Not reported	ч					
	Facility Status		d d					
	Case Number:	0592W/31R	02F					
	How Discovered:	Not reported	d d					
	Leek Cause:	Not reported	ц Н					
		Not reported	น ส					
	Deta Look Confirmed	Not reported	บ ส					
	Oversight Program:	THET	u					
	Dreilin Site Assessment	LUGI	hadttad	Not reported				
	Preliminant Otto Assesment	avokpian Su	omitted:					
	Presiminary Site Assess	nent began:		10/0/1990				
	Poliution Characterizati	on Began:		10/0/1990				
	Pollution Remediation F	-ian Submitte	90;					
	Date Remediation Actio	on Underway:						
	Date Post Remedial Ac	uon Monitorir	ng Begar	1: 5/1/1997				

Site

MAP FINDINGS

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Database(s)

	CARLSEN MOTORS (Continued)	the second s	S103177425
	LUST SANTA CLARA: Region: SANTA Cl SCVWD ID: 05S2W311 Date Closed: 01/30/1990	LARA R02F 8	· · · · · · · · · · · · · · · · · · ·	
	HIST LUST SANTA CLARA: Region: SANTA CL Region Code: 2 SCVWD ID: 05 S 2W31F Oversite Agency: SCVWD Date Listed: 1996-11-1 Closed Date: 1998-01-30	LARA R02 2 00:00:00 0 00:00:00		
	CUPA SANTA CLARA: Region: Program Description:	SANTA CLARA GENERATES 100 KG YR TO <5 TONS/	YR	
	Region: Program Description:	SANTA CLARA PALO ALTO FIRE-BUSINESS PLAN (HI	/BP)	
B3 SSW < 1/8 0.093 mi. 491 ft.	MICROELECTRONICS TECHNOL 2446 WATSON COURT PALO ALTO, CA 94303 Site 1 of 2 in cluster B	LOGY CORP	RCRA NonGen / NLR FINDS	1000366875 CAD085310928
Relative: Higher Actual: 8 ft.	RCRA NonGen / NLR: Date form received by agenc Facility name: Facility address: EPA ID: Mailing address: Contact: Contact address: Contact country: Contact delephone: Contact telephone: Contact telephone: Contact email: EPA Region: Classification: Description: Owner/Operator Summary: Owner/Operator name: Owner/Operator name: Owner/Operator address: Owner/operator country: Owner/operator telephone: Legal status: Owner/Op start date: Owner/Op end date:	y: 08/15/1980 MICROELECTRONICS TECHNOLOGY 2446 WATSON CT PALO ALTO, CA 94303 CAD085310928 2446 WATSON COURT PALO ALTO, CA 94303 ENVIRONMENTAL MANAGER 2446 WATSON CT PALO ALTO, CA 94303 US (415) 856-0300 Not reported 09 Non-Generator Handler: Non-Generators do not present MICROELECTRONICS TECHNOLOGY NOT REQUIRED NOT REQUIRED, ME 99999 Not reported (415) 555-1212 Private Owner Not reported Not reported Not reported Not reported	CORP y generate hazardous waste CORPORATION	
	Owner/operator name:	NOT REQUIRED		

MAP FINDINGS

Database(s)

	MICROELECTRONICS TECHNO	LOGY CORP (Continued)			1000366875
	Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999			
	Owner/operator country:	Not reported			
	Owner/operator telephone:	(415) 555-1212	÷.	11.11	14 E
	Legal status:	Private			
	Owner/Operator Type:	Operator			
	Owner/Op start date:	Not reported			
	Owner/Op end date:	Not reported			
	Handler Activities Summary:	· · · · · · · · · · · · · · · · · · ·			
	U.S. importer of hazardous w	vaste: No			
	Mixed waste (haz. and radio	active): No			
	Recycler of hazardous waste	e: No			
	Transporter of hazardous wa	iste: No			
	Treater, storer or disposer of	HW: No			
	Underground injection activity	y: No			
	On-site burner exemption:	No			
	Furnace exemption:	No			
	Used oil fuel burner:	No			
	Used oil processor:	No			
	User oll refiner:	No			
	Used oil fuel marketer to burn	ner: No			
	Used oil Specification market	ter: No			
	Used oil transfer facility:	No			
	Used oil transporter:	No		· .	
	Violation Status:	No violations found			
	FINDS:				
	Registry ID:	110006467974			
	Environmental Interest/inform	nation System			
	RCRAInfo Conservat events and and treat, s program si corrective	is a national information system that supports the Res- ion and Recovery Act (RCRA) program through the tra- d activities related to facilities that generate, transport, store, or dispose of hazardous waste. RCRAinfo allows taff to track the notification, permit, compliance, and action activities required under RCRA.	ource cking of 8 RCRA	·	
B4 SSW < 1/8 0.094 mí.	ST-EYE INSTITUTE 2452 WATSON CT PALO ALTO, CA 94303		CUPA	Listings	S103645733 N/A
497 ft.	Site 2 of 2 in cluster B				
Relative: Higher	CUPA SANTA CLARA: Region: Program Description:	SANTA CLARA PALO ALTO FIRE-BUSINESS PLAN (HMBP)			
Actual: 8 ft.					

Site

MAP FINDINGS

Database(s)

C5 NE < 1/8 0.106 mi.	CARL R. CARLSEN INC. 1766 EMBARCADERO R PALO ALTO, CA 94303	D	HIST UST	U001595862 N/A
558 ft. Relative:	Site 1 of 5 in cluster C HIST UST:			
Higher Actual:	Region: Facility ID:	STATE 00000007431 Other		
8 ft.	Other Type: Total Tapks:	NEW CAR DEALERSHIP		
	Contact Name: Telephone:	GARY WHEELER		
	Owner Name: Owner Address:	CARL R. CARLSEN INC. 1766 EMBARCADERO ROAD		
	Owner City,St,Zip:	PALO AL TO, CA 94303		
	Tank Num: Container Num:	001 1		
	Year Installed: Tank Capacity:	1976 00010000		
	Tank Osed for: Type of Fuel: Tank Construction:	UNLEADED Not reported		
	Leak Detection:	None		
	Tank Num: Container Num:	002 4		
	Year Installed: Tank Capacity:	1968 00000300		
	Tank Used for: Type of Fuel:	WASTE UNLEADED		
	Leak Detection:	Not reported None		
	Tank Num: Container Num:	003 3		
	Year installed: Tank Capacity:	1968 00000550		
	Tank Used for: Type of Fuel:	PRODUCT 06		
	Tank Construction: Leak Detection:	Not reported None		
	Tank Num: Container Num:	004 2		
	Year Installed: Tank Capacity:	1968 00001000		
	Tank Used for: Type of Fuel:	PRODUCT DIESEL		
	Tank Construction: Leak Detection:	Not reported None		

Site

MAP FINDINGS

Database(s)

C6 NE < 1/8 0.106 mi. 558 ft.	CARL R. CARLSEN INC. 1766 EMBARCADERO RI PALO ALTO, CA 94303 Site 2 of 5 in cluster C)	CA FID UST SWEEPS UST	3101623392 N/A
Relative: Higher Actual: 8 ft.	CA FID UST: Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Address 2: Mailing Address 2: Mailing City,St,Zip: Contact: Contact Phone: DUNs Number: NPDES Number: NPDES Number: EPA ID: Comments: Statue:	43001388 UTNKA 00007431 Not reported Not reported 4158566000 Not reported 1766 EMBARCADERO RD Not reported PALO ALTO 94303 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Active		
	SWEEPS UST: Status: Comp Number: Number: Board Of Equalization Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id: Swrcb Tank Id: Actv Date: Capacity: Tank Use: Stg: Content: Number Of Tanks:	Active 7431 9 1: 44-026048 07-01-85 Not reported 02-29-88 A 1 43-006-007431-000001 07-01-85 10000 M.V. FUEL P REG UNLEADED 4		
	Status: Comp Number: Number: Board Of Equalization Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id: Swrcb Tank Id: Actv Date: Capacity: Tank Use: Stg: Content: Number Of Tanks:	Active 7431 9 10: 44-026048 07-01-85 Not reported 02-29-88 A 4 43-006-007431-000002 07-01-85 300 M.V. FUEL W REG UNLEADED Not reported		

C7

NE

< 1/8

558 ft.

0.106 mi.

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S101623392

CARL R. CARLSEN INC. (Continued)

Status:	Active
Comp Number:	7431
Number:	9
Board Of Equalization:	44-026048
Referral Date:	07-01-85
Action Date:	Not reported
Created Date:	02-29-88
Tank Status:	А
Owner Tank Id:	3
Swrcb Tank Id:	43-006-007431-000003
Actv Date:	07-01-85
Capacity:	550
Tank Use:	UNKNOWN
Stg:	Р
Content:	Not reported
Number Of Tanks:	Not reported
Status:	Active
Status: Comp Number:	Active 7431
Status: Comp Number: Number:	Active 7431 9
Status: Comp Number: Number: Board Of Equalization:	Active 7431 9 44-026048
Status: Comp Number: Number: Board Of Equalization: Referral Date:	Active 7431 9 44-026048 07-01-85
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date:	Active 7431 9 44-026048 07-01-85 Not reported
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A 2
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A 2 43-006-007431-000004
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id: Actv Date:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A 2 43-006-007431-000004 07-01-85
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id: Actv Date: Capacity:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A 2 43-006-007431-000004 07-01-85 1000
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id: Actv Date: Capacity: Tank Use:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A 2 43-006-007431-000004 07-01-85 1000 M.V. FUEL
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id: Swrcb Tank Id: Capacity: Tank Use: Stg:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A 2 43-006-007431-000004 07-01-85 1000 M.V. FUEL P
Status: Comp Number: Number: Board Of Equalization: Referral Date: Action Date: Created Date: Tank Status: Owner Tank Id: Swrcb Tank Id: Actv Date: Capacity: Tank Use: Stg: Content:	Active 7431 9 44-026048 07-01-85 Not reported 02-29-88 A 2 43-006-007431-000004 07-01-85 1000 M.V. FUEL P DIESEL

LUST SLIC HIST LUST **CUPA Listings**

HIST CORTESE 1000314835 N/A

Relative: Higher Actual: 8 ft.	CORTESE: Region: Facility County Code: Reg By: Reg Id:	CORTESE 43 LTNKA 43-2107
	Region: Facility County Code: Reg By: Reg Id:	CORTESE 43 LTNKA 43-1388
	LUST: Region: Global Id: Latitude: Longitude: Case Type:	STATE T0608501363 37.4508259562855 -122.117307186127 LUST Cleanup Site

STANFORD HONDA

Site 3 of 5 in cluster C

PALO ALTO, CA

1766 EMBARCADERO RD

TC3611943.2s Page 16

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

1000314835

STANFORD HONDA (Continued)

Completed - Case Closed Status Date: 07/17/1995 SANTA CLARA COUNTY LOP Lead Agency: Case Worker: UST Local Agency: SANTA CLARA COUNTY LOP Not reported **RB** Case Number: Not reported LOC Case Number: Stored electronically as an E-file File Location: Other Groundwater (uses other than drinking water) Potential Media Affect: Potential Contaminants of Concern: Waste Oil / Motor / Hydraulic / Lubricating Not reported Site History:

Click here to access the California GeoTracker records for this facility:

Contact:

Status:

Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:

Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:

Regulatory Activities:

Global ld: Action Type: Date: Action:

Global Id: Action Type: Date:

T0608501363 Regional Board Caseworker zsc SAN FRANCISCO BAY RWQCB (REGION 2) 1515 CLAY STREET, SUITE 1400 OAKLAND Not reported Not reported

T0608501363 Local Agency Caseworker UST CASE WORKER SANTA CLARA COUNTY LOP 1555 Berger Drive, Suite 300 SAN JOSE Not reported 4089183400

T0608501363 ENFORCEMENT 07/17/1995 Closure/No Further Action Letter

T0608501363 Other 01/01/1950 Leak Reported

T0608501363 RESPONSE 04/28/1995 Other Report / Document

T0608501363 ENFORCEMENT 04/25/1991 Notice of Responsibility - #39181

T0608501363 REMEDIATION 01/01/1950
Database(s)

EDR ID Number EPA ID Number

STANFORD HONDA (Continued)

Action:

Excavation

1	0	0	0	3	1	4	8	3	5	
---	---	---	---	---	---	---	---	---	---	--

Region:	STATE
Global Id:	T0608502336
Latitude:	37.4507578173723
Longitude:	-122.11754322052
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/12/1996
Lead Agency:	SANTA CLARA COUNTY LOP
Case Worker:	UST
Local Agency:	SANTA CLARA COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Stored electronically as an E-file
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:

City:

Email:

Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number: Global Id: Contact Type: Contact Type: Contact Name: Organization Name: Address: T0608502336 Regional Board Caseworker ZSC SAN FRANCISCO BAY RWQCB (REGION 2) 1515 CLAY STREET, SUITE 1400 OAKLAND Not reported Not reported

T0608502336 Local Agency Caseworker UST CASE WORKER SANTA CLARA COUNTY LOP 1555 Berger Drive, Suite 300 SAN JOSE Not reported 4089183400

Regulatory Activities: Global Id: Action Type: Date: Action;

Phone Number:

T0608502336 Other 01/01/1950 Leak Reported

LUST REG 2: Region: 2 Facility Id: Not reported Case Closed Facility Status: Case Number: 05S2W31J01f How Discovered: Not reported Leak Cause: Not reported Not reported Leak Source: Date Leak Confirmed: Not reported

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

STANFORD HONDA (Continued)

Oversight Program:LUSTPrelim. Site Assesment Wokplan Submitted:Not reportedPreliminary Site Assesment Began:12/28/1990Pollution Characterization Began:Not reportedPollution Remediation Plan Submitted:Not reportedDate Remediation Action Underway:Not reportedDate Post Remedial Action Monitoring Began:Not reported

Region:	2	
Facility Id:	Not reported	
Facility Status:	Case Closed	
Case Number:	05S2W31J02f	
How Discovered:	Not reported	
Leak Cause:	Not reported	
Leak Source:	Not reported	
Date Leak Confirmed:	Not reported	
Oversight Program:	LUST	
Prelim. Site Assesment	Wokplan Submitted:	Not reported
Preliminary Site Assesm	ient Began:	Not reported
Pollution Characterization	on Began:	Not reported
Pollution Remediation P	lan Submitted:	Not reported
Date Remediation Action	n Underway:	Not reported
Date Post Remedial Act	ion Monitoring Began:	Not reported

LUST SANTA CLARA:

Region:	SANTA CLARA
SCVWD ID:	05\$2W31J02F
Date Closed:	01/12/1996
	·

Region:SANTA CLARASCVWD ID:05S2W31J01FDate Closed:07/17/1995

SLIC:

Region: Facility Status: Status Date: Global Id: Lead Agency: Lead Agency Case Number: Latitude: Longitude: Case Type: Case Worker: Local Agency: **RB Case Number:** File Location: Potential Media Affected: Potential Contaminants of Concern: Site History:

STATE **Open - Site Assessment** 11/25/2008 T1000000584 SAN FRANCISCO BAY RWQCB (REGION 2) Not reported 37.4505534002603 -122.117414474487 Cleanup Program Site MBR Not reported 43S1123 Regional Board Other Groundwater (uses other than drinking water), Soil Diesel, Waste Oil / Motor / Hydraulic / Lubricating Typical UST petroleum products have been used onsite. The USTs were removed in 1991 and case closure was granted in 1995/1996. Hydraulic lifts were removed from the site in 1994. 1 1996 Stanford Honda 2. 1995 Stanford Auto Plaza 3, 1986 - Carlson Volkswagon/Saab/Chrysler Plymouth 4, 1982 -Carlsen VW & Saab 5, 1978 - Carleen Carl R new cars 6. 1975 - Carson Carl R VW 7. 1970 - Mozart VW 8. 1968 - auto dealership 9. 1939-1965 - agricultural use

1000314835

Database(s)

EDR ID Number EPA ID Number

STANFORD HONDA	(Continued)	i			an an an an Arrange. An Arrange	ter to se	100031
Click here to acc	ness the Califi	ornia GeoTracker recorr	ts for this facility		· ·	 	
				•		4 - M	
HIST LUST SANTA	CLARA:				1		
Region:	SANTA CL	ARA			· · · · · ·		
Region Code:	2					ter e	
SCVWD ID:	05S2W31J	01					
Date Listed:	1991-04-23	00.00.00		•		1. S. 19	
Closed Date:	1995-07-17	00:00:00				1	
Region:	SANTA CL	ARA					
Region Code:	2			110.11		1.11	
SCVWD ID: Oversite Ageney	0552 W3 1J)2		÷		· .	
Date Listed:	1996-01-12	00.00.00		e			
Closed Date:	1996-01-12	00:00:00			• •	· · · ·	
CUPA SANTA CLA	RA:						
Region:		SANTA CLARA					
Program Descrip	otion:	GENERATES 5 TO <2	25 TONS/YR				
Pegion:							
Program Descrir	tion.		SINESS PLAN (HMBP)			
ANDERSON HONDA 1766 EMBARCADER	ISUZU O RD				RCRA NonGen	/ NLR FINDS	100098 CAD98
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943	ISUZU O RD 803			·	RCRA NonGen	/ NLR FINDS	100098 CAD98
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster	ISUZU O RD 803 C				RCRA NonGen	/ NLR FINDS	100098 CAD982
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / Ni	ISUZU ORD 303 C LR:				RCRA NonGen	/ NLR FINDS	100098 CAD98
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / Ni Date form receiv	ISUZU O RD 303 C LR: ed by agency	:03/01/1995			RCRA NonGen	/ NLR FINDS	100098 CAD98
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / Ni Date form receiv Facility name:	ISUZU O RD 303 C LR: red by agency	:03/01/1995 ANDERSON HONDA I	ISUZU		RCRA NonGen	/ NLR FINDS	1000984 CAD982
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster of RCRA NonGen / Ni Date form receiv Facility name: Facility address:	ISUZU O RD 303 C LR: red by agency	:03/01/1995 ANDERSON HONDA I 1766 EMBARCADERC	ISUZU D RD		RCRA NonGen	/ NLR FINDS	1000984 CAD982
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster of RCRA NonGen / NI Date form receiv Facility name: Facility address: EPA ID:	ISUZU O RD 303 C LR: ed by agency	:03/01/1995 ANDERSON HONDA I 1766 EMBARCADERC PALO ALTO, CA 9430 CAD982014227	ISUZU D RD 3		RCRA NonGen	/ NLR FINDS	100098 CAD982
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / NI Date form receiv Facility name: Facility address: EPA ID: Contact:	ISUZU O RD 303 C LR: ed by agency	:03/01/1995 ANDERSON HONDA I 1766 EMBARCADERC PALO ALTO, CA 9430 CAD982014227 JOHN BISHOP	ISUZU D RD 13		RCRA NonGen	/ NLR FINDS	1000984 CAD982
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / Ni Date form receiv Facility name: Facility address: EPA ID: Contact: Contact address	ISUZU O RD 303 C LR: ed by agency	:03/01/1995 ANDERSON HONDA I 1766 EMBARCADERC PALO ALTO, CA 9430 CAD982014227 JOHN BISHOP 1766 EMBARCADERC	ISUZU D RD 3 D RD		RCRA NonGen	/ NLR FINDS	1000984 CAD982
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / Ni Date form receiv Facility name: Facility address: EPA ID: Contact: Contact address	ISUZU O RD 303 C LR: ed by agency	:03/01/1995 ANDERSON HONDA I 1766 EMBARCADERC PALO ALTO, CA 9430 CAD982014227 JOHN BISHOP 1766 EMBARCADERC PALO ALTO, CA 9430	ISUZU D RD 3 D RD 13		RCRA NonGen	/ NLR FINDS	100098 CAD98
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ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / Ni Date form receiv Facility name: Facility address: EPA ID: Contact: Contact address Contact country: Contact telephor Contact telephor Contact telephor Contact telephor Contact telephor Contact telephor Contact telephor Contact telephor Contact telephor Contact country: EPA Region: Classification: Description: Owner/Operator Su Owner/operator 1 Owner/operator 1 Comer/operator 1	ISUZU O RD 303 C LR: ed by agency : : : : : : : : : : : : : : : : : : :	:03/01/1995 ANDERSON HONDA I 1766 EMBARCADERC PALO ALTO, CA 9430 CAD982014227 JOHN BISHOP 1766 EMBARCADERC PALO ALTO, CA 9430 US (415) 856-6000 Not reported 09 Non-Generator Handler: Non-Generator Handler:	ISUZU D RD 3 D RD 3 ors do not prese D RD 3	ntly genera	RCRA NonGen	A NLR FINDS	100098/ CAD982
ANDERSON HONDA 1766 EMBARCADER PALO ALTO, CA 943 Site 4 of 5 in cluster (RCRA NonGen / Ni Date form receiv Facility name: Facility address: EPA ID: Contact: Contact country: Contact delephor Contact telephor Contact telephor Contact telephor Contact telephor Contact telephor Contact telephor Contact delephor Contact email: EPA Region: Classification: Description: Owner/Operator Su Owner/Operator for Owner/operator for Owner/operator for Contact status: Owner/Operator for Contact status: Owner/Operator for Contact status: Owner/Operator for Contact status: Owner/Operator for Contact status: Owner/Operator for Contact status: Contact status:	ISUZU O RD 303 C LR: ed by agency : : : : : : : : : : : : : : : : : : :	:03/01/1995 ANDERSON HONDA I 1766 EMBARCADERC PALO ALTO, CA 9430 CAD982014227 JOHN BISHOP 1766 EMBARCADERC PALO ALTO, CA 9430 US (415) 856-6000 Not reported 09 Non-Generator Handler: Non-Generator Handler: Non-Generator Handler: Non-Generator Handler: Non-Generator Handler: Non-Generator Handler: Non-Generator Handler: Non-Generator Og Not reported (415) 856-6000 Other Owner	ISUZU DRD 3 DRD 3 ors do not prese DRD 3	ոԱy genera	RCRA NonGen	aste	1000984 CAD982

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MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

1000984883

Owner/Op end date:	Not reported		
Handler Activities Summary:			
U.S. importer of hazardous wa	aste: No		
Mixed waste (haz. and radioa	ctive): No	1 - E	
Recycler of hazardous waste:	No		
Transporter of hazardous was	te: No		
Treater, storer or disposer of	IW: 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 burn	er: No		
Used oil Specification markete	r: No		
Used oil transfer facility:	No		
Used oil transporter:	No		
Violation Status:	No violations found		
INDS:		·	
Registry ID:	110006476330		
Environmental Interest/Inform California H provides Ca generators, facilities. RCRAInfo i Conservatio events and and treat, s	ation System azardous Waste Tracking System - ilifornia with information on hazardo transporters, and treatment, storag is a national information system that on and Recovery Act (RCRA) progra activities related to facilities that ge tore, or dispose of hazardous waste of to track the patification promite	Datamart (HWTS-DAT/ bus waste shipments for e, and disposal supports the Resource arm through the tracking nerate, transport, c. RCRAInfo allows RCR	AMART) of XA
corrective a	ction activities required under RCR	A.	

EDR US Hist Auto Stat 1015274356 N/A

C9 NE < 1/8 0.107 mi. 567 ft.	1766 EMBARCADER PALO ALTO, CA 943 Site 5 of 5 in cluster	80 RD 303 C
Relative:	EDR Historical Auto	o Stations:
Higher	Name:	AR AUTOMOTIVE LLC
-	Year:	2002
Actual:	Address:	1766 EMBARCADERO RD

6 ft.

TC3611943.2s Page 21

Database(s)

EDR ID Number EPA ID Number

D10			EDR US Hist Auto Stat	1015360792
ENE	2480 FABER PL		4	N/A
1/8-1/4	PALO ALTO, CA 94303			
0.152 mi.				
801 ft.	Site 1 of 4 in cluster D		the second second second second	
Palotiva	EDR Historical Auto Sta	lions:	and the second second second second	
Higher	Name:	MATHEWS CARLSEN BODY WORKS		
ingiloi	Year:	1999	1	
Actual:	Address:	2480 FABER PL		
8 ft.				
	Name:	MATHEWS CARLSEN BODY WORKS		
	Year:	2000		
	Address:	2480 FABER PL		
	Name:	MATHEWS CARLSEN BODY WORKS		
	Year:	2001		
	Address:	2480 FABER PL		
	Name:	MATHEWS CARLSEN BODY WORKS		
	Year:	2002	1	
	Address:	2480 FABER PL	1	
			~	
	Name:	MATHEWS CARLSEN BODY WORKS		:
	Year:	2005		
	Address:	2480 FABER PL		
	Name:	MATHEWS CARLSEN BODY WORKS INC		
	Year:	2006		
	Address:	2480 FABER PL		
	Namo	MATHEWS CARLSEN BODY WORKS INC		
	Voor	2007		
	Addross:			
	Add(655.	2400 TADENTE		
	Name	MATHEWS CARLSEN BODY WORKS INC		
	Year:	2008		
	Address:	2480 FABER PI		
	,			
	Name:	MATHEWS CARLSEN BODY WORKS		
	Year:	2009		
	Address:	2480 FABER PL		
	Name:	MATHEWS CARLSEN BODY WORKS		
	Year:	2010		
	Address:	2480 FABER PL		
	Name:	MATHEWSCARLSEN BODY WORKS		
	Year:	2011		
	Address:	2480 FABER PL		
	N1			
	Name:	MATHEWSCARLSEN BODY WORKS		
	Y OBI:			
	Address:			

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MAP FINDINGS

Database(s)

D11 ENE 1/8-1/4 0.152 mi. 801 ft.	MATHEWS CARLSEN BODY WC 2480 FABER PLACE PALO ALTO, CA 94303 Site 2 of 4 in cluster D	ORKS		FINDS CUPA Listings EMI	1004440504 N/A
Potetivo	FINDS:				
Relative: Higher	Registry ID:	110001191852	2		
Actual: 8 ft.	Environmental Interest/inform The NEI (I on stationa their precu	nation System National Emission ary and mobile so rsors, as well as	is Inventory) database contains ir urces that emit criteria air polluta hazardous air pollutants (HAPs).	nformation nts and	
	CRITERIA	AND HAZARDO	US AIR POLLUTANT INVENTOR	RY	
	CUPA SANTA CLARA: Region:	SANTA CI ARA	A		
	Program Description:	GENERATES	100 KG YR TO <5 TONS/YR	÷.,	
	FMI				
	Year:		1987	· • •	
	County Code:		43		
	Air Basin: Eacility ID:		5r 3762	· .	
	Air District Name		BA		
	SIC Code:		7532	. '	
	Air District Name:		BAY AREA AQMD		
	Community Health Air Polluti	on Info System:	Not reported		
	Consolidated Emission Repo	rting Rule:	Not reported		
	Total Organic Hydrocarbon G	ases Tons/Yr:	1		
	Reactive Organic Gases Ton	s/Yr:	1		
	Carbon Monoxide Emissions	Tons/Yr:	0		
	NUX - Uxides of Nitrogen To SOX - Oxides of Sulphur Tor	ns/Yr: e/Vr:	0		
	Particulate Matter Tons/Yr:	5/11.	0		
	Part. Matter 10 Micrometers	& Smlir Tons/Yr:	0		
	Year;		1990		
	County Code:		43	1.	
	Air Basin:		SF		
	Facility ID:		3762		
	Air District Name:		BA 7532		
	Air District Name:		BAY AREA AQMD		
	Community Health Air Polluti	on Info System:	Not reported		
	Consolidated Emission Repo	rting Rule:	Not reported		
	Total Organic Hydrocarbon G	ases Tons/Yr:	1		
	Reactive Organic Gases Ton	s/Yr:	1		
	Carbon Monoxide Emissions	ions/Yr:	0		
	NUX - Uxides of Nitrogan To SOX - Oxides of Sulebur Ter	ns/YE	0		
	Particulate Matter Tons/Yr	ar (T.	õ		
	Part. Matter 10 Micrometers	& Smlir Tons/Yr:	0		
	Year:		1995		

MAP FINDINGS

Database(s)

County Code:	43	
Air Basin:	SF	· · ·
Facility ID:	3762	
Air District Name:	вА	·
SIC Code:	7532	· · ·
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:	1	
Carbon Monoxide Emissions Tons/Yr:	0	
NOX - Oxides of Nitrogen Tons/Yr:	1	
SOX - Oxides of Sulphur Tons/Yr:	0	
Particulate Matter Tons/Yr:	0	
Part. Matter 10 Micrometers & Smilr Tons/Yr:	0	
Year:	1996	
County Code:	43	
Air Basin:	SF	N
Facility ID:	3762	
Alr District Name:	BA	
SIC Code:	7532	
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:	1	
Carbon Monoxide Emissions Tons/Yr:	0	
NOX - Oxides of Nilfogen Tons/ Yr.	0	
Barticulate Matter Tene/Vr:	0	
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0	
Year:	1997	
County Code:	43	
Air Basin:	SF	
Facility ID:	3762	
Air District Name:	BA	
SIC Code:	7532	
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:	1	
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	ĩ
Part. Matter 10 Micrometers & Smilr Tons/Yr:	0	· · · · ·
Year:	1998	
County Code:	43	
Alr Basin:	SF	
Facility ID:	3762	
Air District Name:	BA	
SIC Code:	7532	
Alr District Name:	BAY AREA AQMD	

MAP FINDINGS

EDR Database(s) EPA

MATHEWS CARLSEN BODY WORKS (Continue	d)		1004440504
Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smlir Tons/Yr:	Not reported Not reported 1 0 0 0 0 0 0		
Voor	1000		
County Code:	43		
Air Basin	SF	· · ·	
Facility ID:	3762		
Air District Name:	ВА		
SIC Code:	7532		
Air District Name:	BAY AREA AQMD		
Community Health Alr Pollution Info System:	Not reported		
Consolidated Emission Reporting Rule:	Not reported		
Total Organic Hydrocarbon Gases Tons/Yr:	1		
Carbon Monovide Emissions Tons/Tr	1		
NOX - Oxides of Nitrogen Tons/Yr:	0		
SOX - Oxides of Sulphur Tons/Yr:	0		
Particulate Matter Tons/Yr:	0		
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0		
Voor	2000	· · · · · · · · · · · · · · · · · · ·	
County Code:	43		
Air Basin:	SF		
Facility ID:	3762		
Air District Name:	BA		
SIC Code:	7532		
Air District Name:	BAY AREA AQMD		
Community Health Air Pollution Info System:	Not reported		
Consolidated Emission Reporting Rule:	Not reported		
Reactive Organic Gases Tons/Yr:	1		
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 & Smilr Tons/Yr:	U		
Year	2001	· · ·	
County Code:	43		
Air Basin:	SF		
Facility ID:	3762		
Alr District Name:	BA		
SIC Code:	7532		
Air District Name:			
Consolidated Emission Peretting Pule:	Not reported		
Total Organic Hydrocarbon Gases Tons/Vr	1		
Reactive Organic Gases Tons/Yr	1		
Carbon Monoxide Emissions Tons/Yr:	0		
NOX - Oxides of Nitrogen Tons/Yr:	0		

Database(s)

SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Alr District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr: Part. Carbon Monoxide Emissions Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: Part. Part. Matter 10 Micrometers & Smilr Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr: Part. Natter 10 Micrometers & Smilr Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr:	0 0 2002 43 SF 3762 BA 7532 BAY AREA AQMD Not reported Not reported 1 1 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Particulate Matter Tons/Yf: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Alr District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	0 2002 43 SF 3762 BA 7532 BAY AREA AQMD Not reported 1 1 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Part. Matter 10 Micrometers & Smitr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Alr District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr:	0 2002 43 SF 3762 BA 7532 BAY AREA AQMD Not reported 1 1 0 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Alr District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr:	2002 43 SF 3762 BA 7532 BAY AREA AQMD Not reported 1 1 0 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported Not reported	
County Code: Air Basin: Facility ID: Air District Name: SIC Code: Alr District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr:	43 SF 3762 BA 7532 BAY AREA AQMD Not reported 1 1 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Air Basin: Facility ID: Air District Name: SIC Code: Alr District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr:	SF 3762 BA 7532 BAY AREA AQMD Not reported Not reported 1 1 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Facility ID: Facility ID: Air District Name: SIC Code: Alr District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr:	3762 BA 7532 BAY AREA AQMD Not reported 1 1 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported Not reported	
Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	BA 7532 BAY AREA AQMD Not reported Not reported 1 1 0 0 0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
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SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolldated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr:	0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Alr Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolldated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr:	0 0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Part. Matter 10 Micrometers & Smllr Tons/Yr: Year: County Code: Alr Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	0 2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Year: County Code: Air Basin; Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolldated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	2003 43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Community Health Air Pollution Info System: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smlir Tons/Yr:	43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smlir Tons/Yr:	43 SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Air Basin; Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolldated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	SF 16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	16315 BA 7532 BAY AREA AQMD Not reported Not reported	
Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	BA 7532 BAY AREA AQMD Not reported Not reported	
SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	7532 BAY AREA AQMD Not reported Not reported	
Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	BAY AREA AQMD Not reported Not reported	
Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	Not reported Not reported	
Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	Not reported	
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Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	2	·
NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	0	
SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	0	
Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	Ő.	
Part. Matter 10 Micrometers & Smlir Tons/Yr:	0	
	0	
Year:	2004	
County Code:	43	
Alr Basin:	SF	
Facility ID:	16315	
Air District Name:	BA	
SIC Code:	7532	
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:	2.697	
Reactive Organic Gases Tons/Yr:	2 4460332	
Carbon Monoxide Emissions Tons/Vr	0.001	
NOY - Ovides of Nitrogen Tens/Vet	0.001	
COX - Oxides of Sulphus Teac/Vrs	0.004	
Bartleylate Motter Tape V/m	U 0	
Particulate Matter Tons/Yr:	0	
Part. Matter 10 Micrometers & Smlir Tons/Yr:	U	
Year:	2005	
County Code:	43	

MAP FINDINGS

EDR II Database(s) EPA II

	00			
AIF BASIN:			di ser di se	
Facility ID:	16315		11 A.	
Air District Name:	BA	· · ·	1	
SIC Code:			•	
Air District Name:	BAY AREA AQMD			
Community Health Air Pollution Info System:	Not reported			
Consolidated Emission Reporting Rule:				
Total Organic Hydrocarbon Gases Tons/ Fr.	2.007			
Cerbon Menovide Emissions Tone Vr.	2.3201932			
NOX Ovides of Nitrogen Tens/Vr	100.			
NOX - Oxides of Nilloyer Tons/11.	003			
Bodiculate Matter Tens/Vr	0	1		
Part Matter 10 Micrometers & Smilt Tons/Vr	0	•		
Fait. Matter 10 Micromotors & Crimin Toris/Tr.	v			
Year.	2006			
County Code:	43			
Air Basin:	SF			an teora
Facility ID:	16315	54 Sta		
Air District Name:	BA		the second	
SiC Code:	7532	· · · ·		· · ·
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:	1.077		-1	
Reactive Organic Gases Tons/Yr:	1.0272188			
Carbon Monoxide Emissions Tons/Yr:	.001			
NOX - Oxides of Nitrogen Tons/Yr:	.003			
SOX - Oxides of Sulphur Tons/Yr:	0			
Particulate Matter Tons/Yr:	0			
Part. Matter 10 Micrometers & Smlir Tons/Yr:	0			
Year:	2007			
County Code:	43			
Air Basin:	SF			
Facility ID:	16315			
Air District Name:	BA			
SIC Code:	7532		N	
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:	1.557			
Reactive Organic Gases Tons/Yr:	1.4918588			
Carbon Monoxide Emissions Tons/Yr:	.001			
NOX - Oxides of Nitrogen Tons/Yr:	.003	•		
SOX - Oxides of Sulphur Tons/Yr:	0			
Particulate Matter Tons/Yr:	0			
Part. Matter 10 Micrometers & Smilr Tons/Yr:	0			
Year:	2007			
County Code:	43			
Air Basin:	SF			
Facility ID:	16315			
Air District Name:	BA			
SIC Code:	7532			
Air District Name:	BAY AREA AQMD			
Community Health Air Pollution Info System:	Not reported			

Map ID Direction		٧	IAP FINDINGS		
Elevation	Site	·		Database(s)	EDR ID Number EPA ID Number
	MATHEWS CARLSEN BODY WO	RKS (Continue	d)		1004440504
	Consolidated Emission Repo Total Organic Hydrocarbon G Reactive Organic Gases Ton Carbon Monoxide Emissions NOX - Oxides of Nitrogen To SOX - Oxides of Sulphur Ton Particulate Matter Tons/Yr: Part. Matter 10 Micrometers	rling Rule: Bases Tons/Yr: s/Yr: Tons/Yr: ns/Yr: Is/Yr: & Smilr Tons/Yr:	Not reported 1.557 1.4918588 .001 .003 0 0 0		
12 South 1/8-1/4 0.154 mł. 814 ft.	KAPTRON INC 2525 E BAYSHORE FRONTAGE PALO ALTO, CA 94003			RCRA-SQG FINDS HAZNET	1000420303 CAD982522005
Relative: Higher	RCRA-SQG: Date form received by agenc	v:09/01/1996			
Actual:	Facility name: Facility address:	KAPTRON INC 2525 E BAYSH	: IORE FRONTAGE		
8 ft.	EPA ID:	PALO ALTO, C CAD98252200	CA 94003 5		
	Contact: Contact address:	Nat reported Not reported Not reported	· · · · ·		
	Contact country: Contact telephone:	Not reported			
	Contact email:	Not reported			
	Classification: Description:	Small Small Qu Small Small Qu Handler: gener waste during au hazardous was waste during au hazardous was	uantity Generator ates more than 100 and less than 1000 ny calendar month and accumulates les te at any time; or generates 100 kg or le ny calendar month, and accumulates mo te at any time	kg of hazardous s than 6000 kg of ess of hazardous ore than 1000 kg of	
	Owner/Operator Summary:			· · ·	
	Owner/operator name: Owner/operator address:	NOT REQUIRE	; ED ED, ME 99999	· ·	
	Owner/operator country: Owner/operator telephone: Legal status:	Not reported (415) 555-1212 Private	2		
	Owner/Operator Type: Ownar/Op start date: Owner/Op end date:	Owner Not reported Not reported			
	Owner/operator name: Owner/operator address:	NOT REQUIRE NOT REQUIRE NOT REQUIRE	ED ED ED, ME 99999		
	Owner/operator country: Owner/operator telephone: Legal status: Owner/Operator Type: Owner/Op start date: Owner/Op end date:	Not reported (415) 555-1212 Private Operator Not reported Not reported	2		

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Database(s)

EDR ID Number EPA ID Number

KAPTRON INC (Continued)	
Handler Activities Summary:	

No
No

Historical Generators:

Date form received b	y agency: 11/21/1989
Facility name:	KAPTRON INC
Classification:	Large Quantity Generator

Violation Status:

FINDS:

Registry ID:

110009547570

No violations found

Environmental Interest/Information System

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

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.

CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY

HAZNET:	
Year:	2000
Gepaid:	CAD982522005
Contect:	ENVIRONMENTAL MANAGER
Telephona:	6508128603
Mailing Name:	Not reported
Mailing Address:	2525 E BAYSHORE FRONTAGE
Mailing City, St, Zip:	PALO ALTO, CA 940033210
Gen County:	Not reported
TSD EPA ID:	CAT080014079
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Not reported

TC3611943.2s Page 29

1000420303

Site

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

KAPTRON INC (Continued)

0.22 Tons: Facility County: Santa Clara Year: Gepaid: Contact: Telephone: Mailing Name: Mailing Address: Mailing City, St, Zip: Gen County: TSD EPA ID: TSD County: Waste Category: Disposal Method: Tons:

2000 CAD982522005 ENVIRONMENTAL MANAGER 6508128603 Not reported 2525 E BAYSHORE FRONTAGE PALO ALTO, CA 940033210 Not reported CAT080014079 Not reported Alkaline solution (pH >= 12.5) with metals Transfer Station 0.24 Santa Clara

Year: Gepaid: Contact: Telephone: Mailing Name: Mailing Address: Mailing City,St,Zip: Gen County: TSD EPA ID: TSD County: Waste Category: Disposal Method: Tons: Enality County:

Facility County:

2000

CAD982522005

6508128603

Not reported

Not reported

Not reported

Not reported

CAT080014079

Other organic solids

ENVIRONMENTAL MANAGER

2525 E BAYSHORE FRONTAGE

PALO ALTO, CA 940033210

Tons: Facility County: Year: Gepaid: Contact: Telephone: Mailing Name: Mailing Address: Mailing Address: Mailing City,St,Zip: Gen County: TSD EPA ID: TSD County: Waste Category: Disposal Method:

0.05 Santa Clara 2000 CAD982522005 ENVIRONMENTAL MANAGER 6508128603 Not reported 2525 E BAYSHORE FRONTAGE PALO ALTO, CA 940033210 Not reported CAT080014079 Not reported Laboratory waste chemicals Transfer Station 0.08 Santa Clara

Year: Gepaid: Contact: Telephone: Mailing Name: Mailing Address: Mailing City,St,Zip: Gen County: TSD EPA ID:

Facility County:

Tons:

2000 CAD982522005 ENVIRONMENTAL MANAGER 6508128603 Not reported 2525 E BAYSHORE FRONTAGE PALO ALTO, CA 940033210 Not reported CAT080014079

1000420303

the test of the

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TC3611943.2s Page 30

MAP FINDINGS Map ID Direction EDR ID Number Distance EPA ID Number Database(s) Elevation Site 1000420303 **KAPTRON INC** (Continued) TSD County: Not reported Waste Category: Alkaline solution (pH >= 12.5) with metals **Disposal Method:** Not reported 0.05 Tons: Facility County: Santa Clara Click this hyperlink while viewing on your computer to access 31 additional CA_HAZNET: record(s) in the EDR Site Report. HIST LUST \$103880593 COLLAGEN INC. D13 ENE 2500 FABER PL N/A 1/8-1/4 PALO ALTO, CA 0.155 ml. 820 ft. Site 3 of 4 in cluster D HIST LUST SANTA CLARA: **Relative:** Region: SANTA CLARA Higher Region Code: 2 Actual: SCVWD ID: 05S2W31R01 8 ft. Oversite Agency: SFRWQCB 1989-01-01 00:00:00 Date Listed: Closed Date: 1994-07-20 00:00:00 RCRA NonGen / NLR 1000276300 D14 ANGIOTECH BIOMATERIALS CORP HIST CORTESE CAD982006892 2500 FABER PL ENE LUST 1/8-1/4 PALO ALTO, CA 94303 CA FID UST 0.155 mi. HIST UST Site 4 of 4 in cluster D 820 ft. **CUPA Listings Relative:** SWEEPS UST Higher RCRA NonGen / NLR: Actual: Date form received by agency:02/04/2005 ANGIOTECH BIOMATERIALS CORP 8 ft. Facility name: 2500 FABER PL Facility address: PALO ALTO, CA 94303 CAD982006892 EPA ID: Mailing address: 1254 WILLO MAR DRIVE ENV AND SAFETY MGMT LLC SAN JOSE, CA 95118 Contact: SCOTT RENDLEMAN 1254 WILLO MAR DRIVE ENV AND SAFETY MGMT LLC Contact address: SAN JOSE, CA 95118 Contact country: บร Contact telephone: 408-605-0322 Contact email: Not reported EPA Region: 09 Classification: Non-Generator Handler: Non-Generators do not presently generate hazardous waste Description: Owner/Operator Summary: ANGIOTECH BIOMATERIALS CORP Owner/operator name: Not reported Owner/operator address: Not reported Owner/operator country: US Owner/operator telephone: Not reported

Site

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

IGIOTECH BIOMATERIALS C	DRP (Continued)	1000276300
Legal status:	Private	$\frac{1}{2} = \frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \right)^2$
Owner/Operator Type:	Operator	
Owner/Op start date:	12/20/2004	
Owner/Op end date:	Not reported	
Owner/operator name:	ANGIOTECH BIOMATERIALS CORI	P
Owner/operator address:	2500 FABER PL	
-	PALO ALTO, CA 94303	
Owner/operator country:	US	
Owner/operator telephone:	Not reported	
Legal status:	Private	
Owner/Operator Type:	Owner	
Owner/Op start date:	12/20/2004	
Owner/Op end date:	Not reported	
Handler Activities Summary:		
U.S. importer of hazardous w	vaste: No	
Mixed waste (haz, and radio	active): No	
Recycler of hazardous waste	· No	
Transporter of hazardous wa	ster No	
Treater, storer or disposer of	HW No	
Underground injection activit	r No	
On-site burner exemption:	No No	
Furnace exemption:	No	
Used oil fuel burner:	No	
Used oil processor:	No	
User oil refiner:	No	
Used oil fuel marketer to bur	no No	
Lood of Specification market	or: No	
Used oil transfer facility		
Used oil transporter:	No	
Osed on nanaporter.		
Historical Generators:		
Date form received by agence	v:08/04/1998	
Facility name:	ANGIOTECH BIOMATERIALS CORP	5 · · · .
Site name:	COHESION TECHNOLOGIES INC	
Classification:	Small Quantity Generator	
Hazardous Waste Summary:		
Waste code:	D001	
Waste name:	IGNITABLE HAZARDOUS WASTES	ARE THOSE WASTES WHICH HAVE A FLASHPOIL
	LESS THAN 140 DEGREES FAHRE	NHEIT AS DETERMINED BY A PENSKY-MARTENS
	CLOSED CUP FLASH POINT TEST	ER. ANOTHER METHOD OF DETERMINING THE
	FLASH POINT OF A WASTE IS TO F	REVIEW THE MATERIAL SAFETY DATA SHEET,
	WHICH CAN BE OBTAINED FROM	THE MANUFACTURER OR DISTRIBUTOR OF THE
	MATERIAL. LACQUER THINNER IS	SAN EXAMPLE OF A COMMONLY USED SOLVENT
	WHICH WOULD BE CONSIDERED	AS IGNITABLE HAZARDOUS WASTE.
Wasta anda:	D002	
Weste nome		
waste name:		
	CONSIDERED TO BE A CORROSIV	E RAZARUOUS WASTE, SOUIUM HTUKUXIUE, A
	CAUSTIC SOLUTION WITH A HIGH	
	OR DEGREASE PARTS, HYDROCH	ILURIU AUIU, A SULUTION WITH A LOW PH, IS
	LICED BY HANY INDUCTORS TO C	
	USED BY MANY INDUSTRIES TO C	LEAN METAL PARTS PRIOR TO PAINTING. WHE

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MAP FINDINGS

EDR ID Number EPA ID Number

Database(s)

ANGIOTECH BIOMATERIALS C	CORP (Continued)				1000276300
Waste code: Waste name:	D009 MERCURY				
Waste code: Waste name:	D035 METHYL ETHYL KE	TONE		• .	
Waste code: Waste name:	D038 PYRIDINE				
Waste code: Waste name:	F003 THE FOLLOWING S ACETATE, ETHYL E ALCOHOL, CYCLOF MIXTURES/BLENDS NON-HALOGENATE CONTAINING, BEFC SOLVENTS, AND, A MORE OF THOSE S BOTTOMS FROM T MIXTURES.	PENT NON-HALOG BENZENE, ETHYL F HEXANONE, AND M S CONTAINING, BE ED SOLVENTS; AN DRE USE, ONE OR NOTAL OF TEN PH SOLVENTS LISTED HE RECOVERY OF	GENATED SOLVEN ETHER, METHYL IS METHANOL; ALL SI FORE USE, ONLY D ALL SPENT SOL MORE OF THE AE ERCENT OR MORI IN F001, F002, FO THESE SPENT SO	ITS: XYLEN SOBUTYL KI PENT SOLV THE ABOVI VENT MIXTO 30VE NON-F E (BY VOLU 04, AND FOO OLVENTS A	E, ACETONE, ETHYL ETONE, N-BUTYL ENT E SPENT URES/BLENDS HALOGENATED ME) OF ONE OR 15, AND STILL ND SPENT SOLVENT
Waste code: Waste name:	F005 THE FOLLOWING S KETONE, CARBON 2-ETHOXYETHANO CONTAINING, BEFO ONE OR MORE OF LISTED IN F001, F0 THESE SPENT SOL	PENT NON-HALOG DISULFIDE, ISOBU L, AND 2-NITROPF DRE USE, A TOTAL THE ABOVE NON- 02, OR F004; AND VENTS AND SPEN	GENATED SOLVEN JTANOL, PYRIDINE ROPANE; ALL SPEI L OF TEN PERCEN HALOGENATED SI STILL BOTTOMS F IT SOLVENT MIXTU	ITS: TOLUE 3, BENZENE NT SOLVEN IT OR MORE OLVENTS O ROM THE F URES.	NE, METHYL ETHYL ;, T MIXTURES/BLENDS E (BY VOLUME) OF OR THOSE SOLVENTS RECOVERY OF
Violation Status:	No violations found	•			
CORTESE: Region: Facility County Code: Reg By: Reg Id:	CORTESE 43 LTNKA 43-0392				
LUST: Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: File Location: Potential Media Affect: Potential Contaminants of C Site History:	STATE T0608500443 37.4501 -122.1155 LUST Cleanup Completed - C 10/01/1997 SAN FRANCIS UNK SANTA CLAR 43-0392 Not reported Not reported Soil Concern: Waste Oil / Mo Not reported	o Site case Closed SCO BAY RWQCB A COUNTY LOP otor / Hydraulic / Lut	(REGION 2) pricating		

Database(s)

California GeoTracker records for this facility:		,
T 0000500//0		
10608500443		
Local Agency Caseworker		
UST CASE WORKER		а.
SANTA CLARA COUNTY LOP		
1555 Berger Drive, Suite 300		
SAN JOSE		
Not reported		
4089183400		
T0608500443		
Regional Board Caseworker		
RB 2		
SAN FRANCISCO BAY RWQCB (REGION 2)		
1515 CLAY STREET, SUITE 1400		
OAKLAND		
Not reported		
Not reported		
·		
T0000500110		
TU608500443		
ENFORGEMENT		
0//20/1994		
Closure/No Further Action Letter		
T0608500443		
Other		
01/01/1950		
Leak Reported		
T0608500443		
Other		
01/01/1950		
Leak Stopped		
T0608500443		
Other		
01/01/1950		
Leak Discovery		
T0608500443		
RESPONSE		
08/14/1987		
Other Report / Document		
	T0608500443 Local Agency Caseworker UST CASE WORKER SANTA CLARA COUNTY LOP 1555 Berger Drive, Suite 300 SAN JOSE Not reported 4089183400 T0608500443 Regional Board Caseworker RB 2 SAN FRANCISCO BAY RWQCB (REGION 2) 1515 CLAY STREET, SUITE 1400 OAKLAND Not reported Not reported Not reported Not reported Closure/No Further Action Letter T0608500443 Other 01/01/1950 Leak Reported T0608500443 Other 01/01/1950 Leak Stopped T0608500443 Other 01/01/1950 Leak Stopped T0608500443 Other 01/01/1950 Leak Discovery T0608500443 RESPONSE 08/14/1987 Other Report / Document	T0608500443 Local Agency Caseworker UST CASE WORKER SANTA CLARA COUNTY LOP 1555 Berger Drive, Suite 300 SAN JOSE Not reported 4089183400 T0608500443 Regional Board Caseworker RB 2 SAN FRANCISCO BAY RWQCB (REGION 2) 1515 CLAY STREET, SUITE 1400 OAKLAND Not reported Not reported Not reported Closure/No Further Action Letter T0608500443 ENFORCEMENT 07/20/1994 Closure/No Further Action Letter T0608500443 Other 01/01/1950 Leak Reported T0608500443 Other 01/01/1950 Leak Stopped T0608500443 Other 01/01/1950 Leak Stopped T0608500443 Other 01/01/1950 Leak Discovery T0608500443 RESPONSE 08/14/1987 Other Report / Document

Database(s)

EDR ID Number EPA ID Number

ANGIOTECH BIOMATER	RIALS CORP (Continued)	•	
Date Leak Confirme Oversight Program: Prelim. Site Assess Preliminary Site Ass Pollution Character Pollution Remediati Date Remediation A Date Post Remedia	ed: Not reported LUST nent Wokplan Submitted: sesment Began: zation Began: on Plan Submitted; action Underway: I Action Monitoring Began:	Not reported Not reported Not reported Not reported Not reported	
LUST SANTA CLARA: Region: S SCVWD ID: 0 Date Closed: 0	ANTA CLARA 5S2W31R01F 7/20/1994		
CA FID UST: Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Address 2: Mailing Address 2: Mailing City,St,Zip: Contact: Contact Phone: DUNs Number: NPDES Number: EPA ID: Comments: Status:	43000578 UTNKA 00001818 Not reported A158560200 Not reported 2500 FABER PL Not reported PALO ALTO 94303 Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Not reported Active		
HIST UST: Region: Facility ID: Facility Type: Other Type: Total Tenks: Contact Name: Telephone: Owner Name: Owner Address: Owner City,St,Zip: Tank Num: Container Num: Year Installed: Tank Capacity: Tank Used for: Type of Fuel: Tank Construction: Leak Detection:	STATE 0000001818 Other BIOMEDICAL RESEARC 0006 PHIL KENT 4158560200 COLLAGEN CORPORAT 2500 FABER PLACE PALO ALTO, CA 94303 001 I 1982 00001000 WASTE Not reported 2.5 inches Visual 002 014	Ή TON	
Container Num:	SUMP2		

1000276300

MAP FINDINGS

Database(s)

Year Installed:	1977	
Tank Capacity:	00001000	
Tank Used for:	WASTE	
Type of Fuel:	Not reported	
Tank Construction:	2.5 inches	
Leak Detection:	Visual	
Tank Num:	003	
Container Num:	7204	
Year Installed	1984	
Tank Capacity:	00005900	
Tank Used for:	WASTE	
Type of Fuel:	Not reported	
Tank Construction:	0.316 inches	
Leak Detection:	Visual, 10	
Tank Num:	004	
Container Num:	1200	
rear installed:	1984	
Tank Capacity:	00001480	
Tank Used for:	WASTE Not served and	
Type of Fuel:		
rank Construction:	U.200 Inches	
Leak Detection:	visual, 10	
Tank Num:	005	
Container Num:	T206	
Year Installed:	1984	· · · · · · · · · · · · · · · · · · ·
Tank Canacity	00002015	
Tank Used for:	PRODUCT	
Type of Fuel:	Not reported	
Tank Construction:	0.268 inches	· · · · · · · · · · · · · · · · · · ·
Leak Detection:	Visual, Stock Inventor, 10	
Tools Norma	000	
Tarik Nuri: Containar Num:		
Container Num:	1093	
Tear Installed:	1900	
Tarik Capacity:		
Tank Used for:		
Type of Fuel:	DIESEL	
Leak Defection:	Not reported Stock Inventor	
Leak Delection.		
JPA SANTA CLARA:		
Region:	SANTA CLARA	
Program Description	: GENERATES < 10 GAL/YR	
VEEPS UST:		:
Status:	Active	
Comp Number;	1818	
Number:	9	
Board Of Equalizatio	n: 44-026037	
Referral Date:	07-01-85	
Action Date:	Not reported	
	00.00 00	
Created Date:	VZ-29-00	

Database(s)

EDR ID Number EPA ID Number

Owner Tank Id:	SUMP2	
Swrcb Tank Id:	43-006-001818-000001	
Actv Date:	07-01-85	
Capacity:	1000	
Tank Use:	UNKNOWN	
Stg:	W	
Content:	Not reported	
Number Of Tanks:	5	
Statue:	Active	
Comp Number	1818	
Number:	9	
Board Of Equalization:	44-026037	
Referral Date:	07-01-85	
Action Date:	Not reported	
Created Date:	02-29-88	
Tank Status:	A	
Owner Tank Id:	T204	
Swreb Tank Id:	43-006-001818-000002	
Actv Date:	07-01-85	
Capacity:	5900	
Tank Use:	UNKNOWN	
Stg:	W	
Content:	Not reported	
Number Of Tanks:	Not reported	
Status	Active	
Comp Numbar:	1818	
Number:	9	
Board Of Equalization:	44-026037	
Raferral Date:	07-01-85	
Action Date:	Not reported	
Created Date:	02-29-88	
Tank Status:	Α	
Owner Tank Id:	T205	
Swrcb Tank Id:	43-006-001818-000003	
Actv Date:	07-01-85	
Capacity:	1480	
Tank Use:	UNKNOWN	
Stg:	W	
Content:	Not reported	
Number Of Tanks:	Not reported	
Status:	Active	
Comp Number:	1818	
Number:	9	
Board Of Equalization:	44-026037	
Referral Date:	07-01-85	
Action Date:	Not reported	
Created Date:	02-29-88	
Tank Status:	A	
Owner Tank Id:	T206	
Swrcb Tank Id:	43-006-001818-000004	
Actv Date:	U/-U1-85	
Capacity:		
Tank Use:		
ວເບ:	Г	

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MAP FINDINGS

Database(s)

	ANGIOTECH BIOMATERIA	LS CORP (Continued)		· · · · ·	1000276300
	Content: Number Of Tanks:	Not reported Not reported			
	Status:	Active			
	Number:	1818 9		. · ·	
	Board Of Equalization:	44-026037		· · ·	
	Referral Date:	07-01-85			
	Action Date:	Not reported			
	Created Date: Tank Status:	02-29-88			
	Owner Tank Id:	TD			
	Swrcb Tank Id:	43-006-001818-000005	9 9	·	
	Actv Date:	07-01-85			
	Capacity:	971	1999 - 1999 -		
	Tank Use:	M.V. FUEL			
	Content:	DIESEL			
	Number Of Tanks:	Not reported			
15	PALO ALTO SANITATION C	:0		RCRA NonGen / NLR	1000324047
NNW	2000 GENG RD			FINDS	CAD981688823
1/8-1/4 0 224 mi	PALO ALTO, CA 94303			SLIC AST	
1184 ft.				HAZNET	
Relative:				EMI WDS	
Higner	RCRA NonGen / NLR:			. '	
Actual:	Date form received by a	gency: 10/28/1986			
8 ft.	Facility name:	PALO ALTO SANITATION CO			
	Facility address:	2000 GENG RD			
		PALO ALTO, CA 94303			
	EPAID: Contact:	CAD981088823 ENVIRONMENTAL MANAGER			
	Contact address:	2000 GENG RD			
		PALO ALTO, CA 94303			
	Contact country:	US			
	Contact telephone:	(415) 493-4575			
	Contact email:				
	Classification:	Non-Generator			
	Description:	Handler: Non-Generators do not pre-	sently gener	ate hazardous waste	
	Owner/Operator Summary	:			
	Owner/operator name.	PALO ALTO SANITATION			
	Owner/operator address	S: NOT REQUIRED			
		NOT REQUIRED, ME 99999			
	Owner/operator country Owner/operator telepho	ne: (415) 555-1212			
	Legal status:	Private			
	Owner/Operator Type:	Owner			
	Owner/Op start date:	Not reported			
	Owner/Op end date:	Not reported			
	Owner/operator name:	NOT REQUIRED			
	Owner/operator address	NOT REQUIRED			
	·				

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

1000324047

		······				
		NOT REQUIRED	, ME 99999	5. S	÷.,	
Owner/operator	country:	Not reported				
Owner/operator	telephone:	(415) 555-1212	+ f + g			
Legal status:		Private				
Owner/Operator	Type	Operator				
Owner/Operator	Type.	Netroported				
Owner/Op start c	late:	Not reported			· · ·	
Owner/Op end d	ate:	Not reported				1.1
			1			
Handler Activities S	ummony		· · ·			
LC innerter of	hanandaya wa	atar bla	1. Start 1	· .		
0.5. Importer of I	nazaroous wa	ISLO: INC				
Mixed waste (ha:	z. and radioac	tive): No				
Recycler of haza	rdous waste:	No				
Transporter of ha	azardous was	te: No				
Treater, storer or	disposer of H	IW: No				
Underground inic	ction activity:	No				
On alla humar a	south activity.	No				
On-site burner ex	xemption:	NO				
Furnace exempti	on:	No				
Used oil fuel burr	ner:	No				
Used oil process	or:	No				
User oil refiner:		No				
Llood oil fuol mar	kotor ta huma	no No				
	Reter to burne	71. INO				
Used oil Specific	ation markete	r: No				
Used oil transfer	facility:	No				
Used oil transpor	rter:	No				
Violation Status:		No violations four	nd			
FINDS:						
						•
Registry ID:		110002410524				
Registry ID; Environmental In	terest/Informa The NEI (Na on stationary their precurs	110002410524 ation System ational Emissions I y and mobile sour sors, as well as ha	inventory) database ces that emit criteria izardous air pollutar	contains infor a air pollutants its (HAPs).	rmation and	
Registry ID; Environmental In	terest/informa The NEI (Na on stationary their precurs California Ha provides Ca generators, facilities.	110002410524 ation System ational Emissions I y and mobile sour sors, as well as ha azardous Waste T lifornia with inform transporters, and	Inventory) database ces that emit criteria izardous air pollutar Tracking System - D nation on hazardous treatment, storage,	e contains infor a air pollutants ats (HAPs). atamart (HWT s waste shipme and disposal	rmation and S-DATAMAR ents for	т)
Registry ID: Environmental In	terest/Informa The NEI (Na on stationary their precurs California Ha provides Ca generators, facilities. RCRAInfo is Conservatio events and a and treat, sta program sta corrective an	110002410524 ation System ational Emissions I y and mobile sour sors, as well as ha azardous Waste T lifornia with inform transporters, and s a national inform n and Recovery A activities related to ore, or dispose of ff to track the notili ction activities req	Inventory) database ces that emit criteria izardous air pollutar fracking System - D nation on hazardous treatment, storage, ation system that su ct (RCRA) program o facilities that gene hazardous waste. F fication, permit, corr uired under RCRA.	contains infor a air pollutants its (HAPs). atamart (HWT waste shipme and disposal upports the Re through the tr rate, transport RCRAInfo allow plance, and	rmation and S-DATAMAR ents for source acking of ws RCRA	т)
Registry ID; Environmental In	terest/informa The NEI (Na on stationary their precurs California Ha provides Ca generators, i facilities. RCRAInfo is Conservatio events and a and treat, sta program sta corrective ac CRITERIA A	110002410524 ation System ational Emissions I y and mobile sour sors, as well as ha azardous Waste T lifornia with inform transporters, and a a national inform n and Recovery A activities related to ore, or dispose of ff to track the notifi- ction activities req AND HAZARDOUS	Inventory) database ces that emit criteria izardous air pollutar fracking System - D hation on hazardous treatment, storage, ation system that su cat (RCRA) program o facilities that gene hazardous waste. F fication, permit, corr uired under RCRA. S AIR POLLUTANT	contains infor a air pollutants its (HAPs). atamart (HWT waste shipme and disposal upports the Re through the tr rate, transport RCRAInfo allov apliance, and INVENTORY	rmation and S-DATAMAR ents for source racking of , ws RCRA	т)
Registry ID; Environmental In SLIC: Region: Facility Status: Status Date: Giobal Id;	terest/informa The NEI (Na on stationary their precurs California Ha provides Ca generators, i facilities. RCRAInfo is Conservatio events and a and treat, sta program sta corrective ad CRITERIA A	110002410524 ation System ational Emissions I y and mobile sour- sors, as well as ha azardous Waste T lifornia with inform transporters, and a a national inform n and Recovery A activities related to ore, or dispose of ff to track the notifi- ction activities req AND HAZARDOUS STATE Open - Sit 04/08/2011 T10000002	Inventory) database ces that emit criteria izardous air pollutar fracking System - D hation on hazardous treatment, storage, ation system that su cit (RCRA) program o facilities that gene hazardous waste. F fication, permit, corr uired under RCRA. S AIR POLLUTANT e Assessment	contains infor a air pollutants its (HAPs). atamart (HWT waste shipme and disposal upports the Re through the tr rate, transport RCRAInfo allow pliance, and INVENTORY	rmation and S-DATAMAR ents for source racking of ws RCRA	т)

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

1000324047

PALO ALTO SANITATION CO (Continued)

Lead Agency Case Number:	05S2W31J03s
Latitude:	37.4522824107127
Longitude:	-122.120300531387
Case Type:	Cleanup Program Site
Case Worker:	LL
Local Agency:	SANTA CLARA COUNTY LOP
RB Case Number:	Not reported
File Location:	Stored electronically as an E-file
Potential Media Affected:	Other Groundwater (uses other than drinking water), Soil
Potential Contaminants of Concern:	Arsenic, Lead, Waste Oil / Motor / Hydraulic / Lubricating
Site History:	The site is bounded by Geng Road to the east, a parking lot to the
	north, a baseball field to the west and a commercial building complex
	to the south. Site was previously used as a maintenance area for
	refuse and recyclable collection vehicles and collection bins. Lease
	terminated in 2009 and facility closure was performed. During closure
	process, diesel AST, waste oil UST and oil/water separator were
	removed. Soil samples reported elevated concentrations of arsenic,
	lead, molybdenum, zinc and petroleum hydrocarbons (C10-C36).

Click here to access the California GeoTracker records for this facility:

AST:

PALO ALTO SANITATION CO
8,220
Santa Clara County

HAZNET:

.

Year:	2011
Gepaid:	CAD981688823
Contact:	TIANNA NOUROT
Telephone:	9254557325
Mailing Name:	Not reported
Mailing Address:	10840 ALTAMONT PASS RD
Mailing City,St,Zip:	LIVERMORE, CA 945510000
Gen County:	Not reported
TSD EPA ID:	CAD980887418
TSD County:	Not reported
Waste Category:	Alkaline solution without metals pH >= 12.5
Disposal Method:	Storage, Bulking, And/Or Transfer Off SiteNo Treatment/Reovery
	(H010-H129) Or (H131-H135)
Tons:	0.1251
Facility County:	Santa Clara
	2010
Year:	2010
Gepaid:	GAD981688823
Contact:	
relephone:	9254557325
Mailing Name:	Not reported
Mailing Address:	10840 ALTAMONT PASS RD
Mailing City,St,Zip:	LIVERMORE, CA 945510000
Gen County:	Not reported
ISD EPA ID:	CAD980887418
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Discharge To Sewer/Potw Or Npdes(With Prior StorageWith Or Without
	Treatment)

.

Site

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

1000324047

PALO ALTO SANITATION CO (Continued)

Tons:	7.17657	
Facility County:	Santa Clara	
Year:	2009	
Gepaid:	CAD981688823	
Contact:	JIM CAHILL/MAINT MGR	
Telephone:	6504934575	
Mailing Name:	Not reported	
Mailing Address:	2000 GENG RD	
Mailing City.St.Zin:	PALO ALTO, CA 943033317	
Gen County:	Not reported	
TSD EPA ID:	NVT330010000	
TSD County:	Not reported	
Waste Cateoory	Other organic solids	
Disnosal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To	
Disposal method.	Include On-Site Treatment And/Or Stabilization)	
Tone	A 75	
Facility County:	Santa Clara	
Facility County.	Santa Glara	
Year:	2009	
Gepaid:	CAD981688823	
Contact:	JIM CAHILL/MAINT MGR	
Telephone:	6504934575	
Mailing Name:	Not reported	
Mailing Address:	2000 GENG RD	
Mailing City,St,Zip:	PALO ALTO, CA 943033317	
Gen County:	Not reported	
TSD EPA ID:	NVD98235848 3	
TSD County:	Not reported	
Waste Category:	Unspecified oll-containing waste	
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration,	
	Organics Recovery Ect	
Tons:	1.668	
Facility County:	Santa Clara	
Year:	2009	
Gepaid:	CAD981688823	
Contact:	JIM CAHILL/MAINT MGR	
Telephone:	6504934575	
Mailing Name:	Not reported	
Mailing Address:	2000 GENG RD	
Malling City.St.Zip:	PALO ALTO, CA 943033317	
Gen County:	Not reported	
TSD EPA ID:	CAD980887418	
TSD County:	Not reported	
Waste Category:	Unspecified oil-containing waste	
Disposal Method:	Storage, Bulking, And/Or Transfer Off SiteNo Treatment/Reovery	
	(H010-H129) Or (H131-H135)	
Tons:	0.15	
Facility County:	Santa Clara	

<u>Click this hyperlink</u> while viewing on your computer to access 9 additional CA_HAZNET: record(s) in the EDR Site Report.

EMI:

Year:	1995
County Code:	43

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

PALO ALTO SANITATION CO (Continued)			•
Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	SF 7276 BA 4953 BAY AREA AQMD Not reported Not reported 1 1 0 0 0 0 0		
Year: County Code: Alr Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolldated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	1996 43 SF 7276 BA 4953 BAY AREA AQMD Not reported Not reported 1 1 0 0 0 0		
Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smilr Tons/Yr:	1997 43 SF 7276 BA 4953 BAY AREA AQMD Not reported Not reported 1 1 0 0 0 0 0	• • •	
Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System:	1998 43 SF 7276 BA 4953 BAY AREA AQMD Not reported		

_

MAP FINDINGS

Database(s)

ALTO SAMITATION CO (Continued)	14 A.	· · ·
Consolidated Emission Reporting Rule:	Not reported	
Totel Organic Hydrocarbon Gases Tons/Yr:	1	
Reactive Organic Gases Tons/Yr:	1	
Carbon Monoxide Emissions Tons/Yr:	0	
NOX - Oxides of Nitrogen Tons/Yr:	0	· .
SOX - Oxides of Sulphur Tons/Yr:	0	· · · · ·
Particulate Matter Tons/Yr:	ů.	
Part. Matter 10 Micrometers & Smilr Tons/Yr:	õ	
	4000	
Year:	1999	
County Code:	43	· · · · ·
Air Basin:	SF	
Facility ID:	7276	
Air District Name:	BA	
SIC Code:	4953	
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:	1	
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 & Smllr Tons/Yr:	0	· · ·
Vear	2000	
County Code:	43	· · · · · · · · · · · · · · · · · · ·
Alt Desint		
	7076	
raciilly iD. Air Diafrich Nomer		
Air District Name:	6052	
SIC Code:		
	BATAREAAQMU	
Community Health Air Pollution into System:	Not reported	
Consolidated Emission Reporting Rule:	Not reported	
Total Organic Hydrocarbon Gases Tons/Yr:	1	
Reactive Organic Gases Tons/Yr:	1	
Carbon Monoxide Emissions Tons/Yr:	0	
NOX - Oxides of Nitrogen Tons/Yr:	0	
SOX - Oxides of Sulphur Tons/Yr:	0	
Particulete Matter Tons/Yr:	0	
Part. Matter 10 Micrometers & Smlir Tons/Yr:	0	
Year:	2001	
County Code:	43	
Air Basin:	SF	
Facility ID:	7 276	
Air District Name:	BA	
SIC Code:	4953	
Air District Name:	BAY AREA AOMD	
Community Health Air Pollution Info System	Not reported	
Consolidated Emission Penarting Pula	Not reported	
Total Organic Hydrocarbon Cases ToneMr	1	
Total Organic Hydrocarbon Gases Tons/11.	1	
Reactive Organic Gases Tons/TT:	۱ ۵	
Carbon Monoxide Emissions Lons/Yr:	0	
	11	

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

PALO ALTO SANITATION CO (Continued)	
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Sulphur Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	2002 43 SF 7276 BA 4953 BAY AREA AQMD Not reported Not reported 1 1 0 0 0 0
Year:	2003
County Code:	43
Air Basin:	SF
Facility ID:	7276
Air District Name:	BA
SIC Code:	4953
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:	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 & Smllr Tons/Yr:	0
Year: County Code: Air Basin: Facility ID: Air District Name: SIC Code: Air District Name: Community Health Air Pollution Info System: Consolidated Emission Reporting Rule: Total Organic Hydrocarbon Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Reactive Organic Gases Tons/Yr: Carbon Monoxide Emissions Tons/Yr: NOX - Oxides of Nitrogen Tons/Yr: SOX - Oxides of Nitrogen Tons/Yr: Particulate Matter Tons/Yr: Part. Matter 10 Micrometers & Smllr Tons/Yr:	2004 43 SF 7276 BA 4953 BAY AREA AQMD Not reported Not reported 0.587 0.5636362 0 0 0 0 0
Year:	2005
County Code:	43
Air Basin:	SF

1000324047

Site

MAP FINDINGS

Database(s)

PALO ALTO SANITATION CO (Continued)			1000324047
Eacility ID:	7276		
Air Dietrict Name:	RA RA		
SIC Coder	4052	· ·	
Air District Name:			
Air District Name,	Not reported		
Community Health Air Poliution into System:	Not reported	and the first state of the state of the	
Consolidated Emission Reporting Rule:	Not reported		
Total Organic Hydrocarbon Gases Tons/Yr:	.587		
Reactive Organic Gases Tons/Yr:	.5636362		
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 & Smilr Tons/Yr:	0		
Year:	2008		
County Code:	43		
Alr Basin:	SF		
Facility ID:	7276		
Air District Name:	вА		
SIC Code:	4953		
Air District Name:	BAY AREA AOMD		
Community Health Alr Pollution Info System:	Not reported		
Consolidated Emission Reporting Rule:	Not reported	· .	
Total Organic Hydrocarbon Gases Tons/Yr:	587		
Reactive Organic Gases Tons/Tr:	5636362		
Corbon Monovido Emissiono Tono/Vr:	0		
NOX Ovides of Nitragen Tone/Vr:	0		
NOA - Oxides of Nulloyer Tons/Tr.	0		
SOX - Oxides of Suprish Tons/ H.	0		
Particulate Matter 10 Micrometers & Smilr Tons/Yr	0		
	-	A second s	
Year:	2007		
County Code:	43		
Alr Basin:	SF		
Facility ID:	7276		
Alr District Name:	BA		
SIC Code:	4953		
Air District Name:	BAY AREA AQMD		
Community Health Alr Pollution Info System:	Not reported		
Consolidated Emission Reporting Rule:	Not reported	:	
Total Organic Hydrocarbon Gases Tons/Yr:	.581		
Reactive Organic Gases Tons/Yr:	.5578282		
Carbon Monoxide Emissions Tons/Yr:	0		
NOX - Oxides of Nilrogen Tons/Yr:	0		
SOX - Oxides of Sulphur Tons/Yr:	0		
Particulate Matter Tons/Yr:	0		
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0		
Year:	2007		
County Code:	43		
Air Basin:	SF		
Facility ID:	7276		
Air District Name	BA		
SIC Code:	4953		
Air District Name:			
Community Health Air Pollution Info System:	Not reported		
Consolidated Emission Reporting Rule:	Not reported		

	M	IAP FINDINGS				
Site					Database(s)	EDR ID Numb EPA ID Numb
					<u> </u>	
PALO ALTO SANITATION (CO (Continued)			· * .		1000324047
Total Organic Hydrocar	hon Gases Tons Mr.	581			1. A.	
Reactive Omanic Gase	s Tons/Yr	5578282		1.		
Carbon Monoxide Emis	sions Tons/Yr:	0			and the state	
NOX - Oxides of Nitrog	en Tons/Yr:	0			· · ·	
SOX - Oxides of Sulphi	ır Tons/Yr:	0			$(1,1,\dots,1,n) \in \mathbb{R}^{n}$	
Particulate Matter Tons	/Yr:	0		· · · ·		
Part. Matter 10 Microme	eters & Smilr Tons/Yr:	0			1.3.5	
					14.1 C 1	
CA WDS. Ecoliby ID:	Con Francisco Bou A	21008854		· · · · · · · · · · · · · · · · · · ·		
Facility ID.	Joductricity Ecolities the	-31000034	dianaaaa of liquid o			
Facility Type.	moustnar - raciity the	at treats and/or	disposes or inquia o			
	semisolid wastes from	n any servicing,	producing, manufa	acturing or		
	processing operation	or whatever ha	ture, including minit	ng, gravei		
	washing, geothermal	operations, air	conditioning, ship b	uilding an	d .	
	repairing, oil production	on, storage and	disposal operation	s, water		
	pumping.					
Facility Status:	Active - Any facility w	ith a continuous	or seasonal discha	arge that is	B .	
NEEDNAN	under Waste Dischar	ge Requiremen	ts.			
NPDES Number:	CASU00001 The 1st	2 characters de	signate the state. I	he remain	ing 7	
	are assigned by the F	kegional Board			and the second	
Subregion:	2			. · · .	the second	
Facility Telephone:	4154934894				1. A.	
Facility Contact:	JIM MOORE				and the second	
Agency Name:	PALO ALTO SANITA	HON CO		1		
Agency Address:	2000 Geng Rd			6 II.	e a statue	
Agency City,St,Zip:	Paio Alto 943033325			:	1. 1. 2.	
Agency Contact:	JIM MOORE		· .		1997 - A. A.	
Аделсу Тејерпопе:	4154934894 D-tuoto					
Agency Type:	Phyate					
	U National anti-					
SIC Code 2:	Not reported					
Phmary Waste:	Not reported					
Primary waste Type:	Not reported					
Secondary Waste	Not reported				1	
Decign Flows						
Design Flow: Receives Flow:	0					
Basemie Fjow.	U Not reported					
	Not reported					
FOTW. Troot To Motor:	Minor Threat to Mater	- Ouolity A vial	tion of a material h	oord ordo	-	
fieat to water:	wind assess a relation	r Quality. A viol	attori of a regional b		l Andread	
	should cause a relativ	rely minor impa	rment of beneficial	uses com	pared	
	to a major or minor un	reat to water of	ids without a TTW	ot o bicho		
	Considered a minor an	he used to see	ality unless could	at a nighe	l Alto	
	Level. A Zero (U) may	be used to coo	e those NURDS th	at are tour		
Correlation	represent no threat to	water quality.			_	
Complexity:	Category C - Facilities	s naving no was	ne treatment syster	ns, such a	S .	
	cooling water discharg	gers or thosewi	io must comply thro	ougn best		
	management practice	s, facilities with	passive waste trea	ument and		
	dia analar d	· · · · · ·	· · · · · · · · · · · · · · · · · · ·		1	
	disposal systems, suc	ch as septic sys	tems with subsurfa	ce disposa	ıl, or	

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

,

E16	OLD POST OFFICE PALO ALTO		LUST	S103472945
WNW	2197 E BAYSHORE RD		HIST LUST	N/A
1/4-1/2 0.282 mi	PALO ALTO, CA 94303			
1489 ft.	Site 1 of 3 in cluster E			
Bolotivo	LUST:			
Lower	Region:	STATE		
	Global Id:	T0608500996		
Actual:	Latitude:	37.450331		
6 ft.	Longitude:	-122.12171		
	Case Type:	LUST Cleanup Site		
	Status: Status Data:	Completed - Case Glosed		
	lead Agency:	SANTA CLARA COUNTY LOP		
	Case Worker:	UST		
	Local Agency:	SANTA CLARA COUNTY LOP		
	RB Case Number:	Not reported		
	LOC Case Number:	Not reported		
	File Location:	Stored electronically as an E-file		
	Potential Media Affect:	Other Groundwater (uses other than drinking water)		
	Potential Contaminants of Concern:	Gasoline		
	Site History:		. *	
	Click here to access the California G	eoTracker records for this facility:		
	Contact:			
	Global Id:	T0608500996	2012	
	Contact Type:	Regional Board Caseworker		
	Contact Name:	ZSC		
	Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)	1 - A	
	Address:	1515 CLAY STREET, SUITE 1400		
	Email:	Not reported	· . · ·	
	Phone Number:	Not reported	÷	
		T0000500006	•	
	Global Id: Content Tuno:	Loogl Ageney Caseworker		
	Contact Name:	LIST CASE WORKER		
	Organization Name:	SANTA CLARA COUNTY LOP		
	Address:	1555 Berger Drive, Suite 300		
	City:	SAN JOSE		
	Email:	Not reported		
	Phone Number:	4089183400		
	Regulatory Activities:			
	Global Id:	T0608500996		
	Action Type:	Other		
	Date:	01/01/1950		1
	Action:	Leak Reported		
	Global Id:	T0608500996		
	Action Type:	RESPONSE		
	Date:	12/09/1999		
	Action:	Soil and Water Investigation Report		
	Global Id:	T0608500996		
	Action Type:	RESPONSE		
	Date:	09/07/1999		

Database(s)

EDR ID Number EPA ID Number

OLD POST OFFICE PALO A		ALTO (Continued)	ΓΟ (Continued)		S103472945		
Action:		Soil a	nd Water Investigation Workplar	י אי אי ר			
Global Id	1:	T0608	3500996		in an		
Action T	ype:	ENFC	RCEMENT				
Date:		05/03	/1984	· * .	·		
Action:		Notice	e of Responsibility - #39182	· · · ·			
Global (i:	T0608	3500996	· · · · ·			
Action T	ype:	ENFC	RCEMENT	1 - 17 - 17 - 17 -			
Date:		10/14	/1999				
Action:		Starri	_etter - #18257	· · · · · ·			
Global Ic	ŀ	T0608	3500996				
Action T	уре:	ENFC	RCEMENT				
Date:	-	07/24/	/1999	a the state			
Action:		Staff I	_etter - #18255				
				Taga and an an			
	_						
LUS REG	2:	2		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -			
Facility I	4.	Z Not reported					
Facility S	tatus:	Case Closed					
Case Nu	mber:	05S2W31K01f					
How Dis-	covered:	Not reported		. · · ·			
Leak Ca	lse:	Not reported					
Leak Sol	JICO:	Not reported					
Date Lea	t Program:						
Prelim, S	ite Assesmen	t Wokolan Submittee	: Not reported				
Prelimina	ary Site Asses	ment Began:	5/3/1984				
Pollution	Characterizat	ion Began:	8/13/1999				
Pollution	Remediation	Plan Submitted:	Not reported				
Date Rei	nediation Acti	on Underway:	Not reported				
Date Po:	a Remedial A	ction monitoring bega	an, Not reporteu				
HISTIUST	SANTA CLAR	20.					
Region:	SAN	ITA CLARA					
Region (Code: 2						
SCVWD	ID: 05S	2W31K01					
Oversite	Agency: SCV	WD					
Date List	ed: 198	5-01-01 00:00:00					
Closed L	ate: 2000	0-02-29 00:00:00					
OLD POST O	FICE PALO	ALTO		LUST	S108223766		
2197 E BAYS	HORE RD				N/A		
PALO ALTO,	CA						
Site 2 of 2 in	dustor E						
LUST SAN	IA CLARA:						
Region:		2W31K01E					
00000		0/0000					

Actual: 6 ft.

TC3611943.2s Page 48

Map ID Direction	MAP FINDINGS						EDR ID Number	
Elevation	Site						Database(s)	EPA ID Number
E18 WNW	OLD POST OFFICE PALO ALTO 2197 BAYSHORE				·	HIST	CORTESE	Ş101309065 N/A
1/4-1/2 0.284 mi.	PALO ALTO, CA						· · ·	
1455 11.								
Relative: Lower	Region: Facility County Code:	CORTE	SE					
Actual: 6 ft.	Reg By: Reg Id:	LTNKA 43-099	ł					
F19 NE	PALO ALTO GOLF COURSE 1875 EMBARCADERO RD					HIST	CORTESE LUST	S102799516 N/A
0.323 ml. 1708 ft.	Site 1 of 2 in cluster F					00.	ENF	
Polativo	CORTESE:							
Lower	Region:	CORTE	SE					
Actual:	Facility County Code: Reg By:	43 LTNKA		:				
7 ft.	Reg Id:	43-231						
	I UST:			· ·				
	Region:	S	TATE					
	Global Id:	T	06085021 7 457405	123 327 71 20				
	Ladiude: Longitude:		22.11493	30 7 4894				
	Case Type:	L	JST Clea	inup Site				
	Status:	0	ompleted	I - Case Closed				
	Status Date: Lead Agency:	S	ANTA CL	∠ ARA COUNTY L	OP			
	Case Worker:	i i	ST					
	Local Agency:	9	ANTA CL	ARA COUNTY L	.OP			
	RB Case Number:	יז א	ot reporte ot reporte	ad				
	File Location:	S	tored elec	ctronically as an I	E-file			
	Potential Media Affect:	0	ther Grou	undwater (uses o	ther than drin	king water)		
	Site History:	NGEM. C	ot reporte	ed				
	Click here to access the Calif	ornia Ge	Tracker r	records for this fa	cility:			
	Contact:							
	Global Id:	Т	06085021	123				
	Contact Type:	L	ocal Ager	ncy Caseworker				
	Organization Name:	5	ANTA CL	ARA COUNTY L	.OP			
	Address:	1	555 Berg	er Drive, Suite 30)0			
	City:	5	AN JOSE	E				
	Phone Number:	4	08918340	00				
	Global Id:	T	06085021	123				
	Contact Type:	F	egional B	Board Caseworke	r			
	Contact Name: Organization Name:	4	SC AN FRAN	NCISCO BAY RM	QCB (REG)	ON 2)		
	Address:	1	515 CLA	Y STREET, SUIT	E 1400			
	City:	C	AKLAND)				

Database(s)

Email:	Not reported	
Phone Number:	Not reported	
Regulatory Activities:		· · · · · · · · · · · · · · · · · · ·
Global Id:	T0608502123	
Action Type:	ENFORCEMENT	
Date:	09/19/1998	
Action:	Notice of Responsibility - #39180	
Global Id:	T0608502123	
Action Type:	ENFORCEMENT	
Date	10/10/2002	
Action:	Staff Letter - #38704	
Global Id:	T0608502123	
Action Type:	ENFORCEMENT	
Date:	06/05/2002	
Action:	Staff Letter - #38016	
Global Id:	T0608502123	
Action Type:	Other	
Date:	01/01/1950	
Action:	Leak Reported	
<u> </u>	T 0000500400	
Global Id:	10608502123	
Action Type:	RESPONSE	
Date:	12/16/2002	
Action:	Soil and Water Investigation Report	
Global Id:	T0608502123	
Action Type:	RESPONSE	
Date:	01/15/1999	
Action:	Soil and Water Investigation Workplan	
	5 I	
Global Id:	T0608502123	
Action Type:	ENFORCEMENT	
Date:	11/12/1998	
Action:	Staff Letter - #18246	
Global id:	T0608502123	
Action Type:	RESPONSE	
Date:	07/30/3003	
Action:	Soil and Water Investigation Workplan	
7,00017		
LUST SANTA CLARA:		
5CVWD ID: 0552W3		
Date Closed: 12/19/200	32	
CUPA SANTA CLARA		
Region:	SANTA CLARA	
Program Description:	GENERATES < 100 KG/YR	

MAP FINDINGS

EDR ID Number Database(s) EPA ID Number

Site		Database(s)	EPA ID Num
			8400700E44
PALO ALTO GOLF COURSE (Conti	nued)		5102/99510
Region: S Program Description: F	ANTA CLARA ALO ALTO FIRE-PETROLEUM ABOVEC	GROUND STOR TAN	
ENF:			
Region:	2		
Facility Id:	229020		
Agency Name:	Palo Alto City	:	
Place Type:	Facility		
Place Subtype:	Not reported		
Facility Type:	Municipal/Domestic		
Agency Type:	City Agency		
# Of Agencies:	1		
Place Latitude:	Not reported	· .	
Place Longitude:	Not reported		
SIC Code 1:	Not reported		
SIC Desc 1:	Not reported		
SIC Code 2:	Not reported		
SIC Desc 2:	Not reported		
SIC Code 3:	Not reported		
SIC Desc 3:	Not reported		
NAICS Code 1:	Not reported		
NAICS Desc 1:	Not reported		
NAICS Code 2:	Not reported		
NAICS Desc 2:	Not reported		
NAICS Code 3:	Not reported		
NAICS Desc 3:	Not reported		
# Of Places:	1		
Source Of Facility:	Reg Meas		
Design Flow:	Not reported		
Threat To Water Quality:	Not reported		
Complexity:	Not reported		
Pretreatment:	Not reported		
Facility Waste Type:	Not reported		
Facility Waste Type 2:	Not reported		
Facility Waste Type 3:	Not reported		
Facility Waste Type 4:	Not reported		
Program:	AGT		
# Of Programs:	1		
WDID:	2 43AGT244U		
Reg Measure Id:	169945		
Reg Measure Type:	Unregulated		
Region:	2		
Order #:	Not reported		
Npdes# CA#:	Not reported		
Major-Minor:	Not reported		
Npdes Type:	Not reported		
Reclamation:	Not reported		
Dredge Fill Fee:	Not reported		
301H:			
Application Fee Amt Received:	Not reported		
Status:	Never Active		
Status Date:	02/20/2013		
Effective Date:	Not reported		
Expiration/Review Date:	Not reported		
Termination Date:	Not reported		
WDR Review - Amend:			
UDD Devidence Devide a (Development	Not reported		

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MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

PALO ALTO GOLF COURSE (Continued)

WDR Review - Rescind: WDR Review - No Action Required: WDR Review - Pending: WDR Review - Planned: Status Enrollee: Individual/General: Fee Code: Direction/Voice: Enforcement Id(EID): Region: Order / Resolution Number: Enforcement Action Type: Effective Date: Adoption/Issuance Date: Achieve Date: Termination Date: ACL Issuance Date: EPL Issuance Date: Status: Title: Description: Program: Latest Milestone Completion Date: # Of Programs1: **Total Assessment Amount:** Initial Assessed Amount: Liability \$ Amount: Project \$ Amount: Liability \$ Paid: Project \$ Completed: Total \$ Paid/Completed Amount: Region: Facility Id: Agency Name: Place Type: Place Subtype: Facility Type: Agency Type: # Of Agencies: Placa Latitude: Place Longitude: SIC Code 1: SIC Desc 1: SIC Code 2: SIC Desc 2; SIC Code 3: SIC Desc 3: NAICS Code 1: NAICS Desc 1: NAICS Code 2: NAICS Desc 2: NAICS Code 3: NAICS Desc 3: # Of Places:

Source Of Facility:

Design Flow:

Not reported Not reported Not reported Not reported Ν Not reported Passive 239273 2 UNKNOWN Oral Communication 10/01/2001 Not reported Not reported Not reported Not reported Not reported Historical Enforcement - 2 43AGT244U Not reported AGT Not reported 1 0 Û 0 0 0 0 0 2 229020 Palo Alto City Facility Not reported Municipal/Domestic City Agency 1 Not reported 1 Reg Meas Not reported

S102799516

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

PALO ALTO GOLF COURSE (Continued)		S102799516
Threat To Water Quality:	Not reported	
Complexity:	Not reported	
Pretreatment:	Not reported	
Facility Waste Type:	Not reported	
Facility Waste Type 2:	Not reported	
Facility Waste Type 3:	Not reported	
Facility Waste Type 4:	Not reported	
Program:	AGT	and the second
# Of Programs:	1	·
WDID:	2 43AGT244U	
Reg Measure Id:	169945	
Reg Measure Type:	Unregulated	
Region:	2	
Order #:	Not reported	
Npdes# CA#:	Not reported	:
Major-Minor:	Not reported	
Nodes Type:	Not reported	
Reclamation:	Not reported	
Dredge Fill Fee:	Not reported	
301H:	Not reported	
Application Fee Amt Received:	Not reported	
Status:	Never Active	
Status Date:	02/20/2013	
Effective Date:	Not reported	· · ·
Expiration/Review Date:	Not reported	
Termination Date:	Not reported	
WDR Review - Amend:	Not reported	
WDR Review - Revise/Renew:	Not reported	
WDR Review - Rescind:	Not reported	
WDR Review - No Action Required:	Not reported	
WDR Review - Pending:	Not reported	
WDR Review - Planned:	Not reported	
Status Enrollee:	N	
Individual/General:	I	
Fee Code:	Not reported	
Direction/Voice:	Passive	
Enforcement Id(EID):	239308	
Region:	2	
Order / Resolution Number:	UNKNOWN	
Enforcement Action Type:	Staff Enforcement Letter	
Effective Date:	08/18/2000	
Adoption/issuance Date:	Not reported	
Achieve Date:	Not reported	
Termination Date:	Not reported	
ACL Issuance Date:	Not reported	
EPL Issuanca Date:	Not reported	
Status:	Active	
Title:	Enforcement - 2 43AGT244U	
Description:	Not reported	
Program:	AGT	
Latest Milestone Completion Date:	Not reported	
# Of Programs1:	1	
Total Assessment Amount:	0	
Initial Assessed Amount:	0	
Liability \$ Amount:	0	
Project \$ Amount:	0	
Liability \$ Paid:	0	

-
MAP FINDINGS

Database(s)

Project \$ Completed:	0	
Total \$ Paid/Completed Amount:	0	· .
·····	-	
Region:	2	
Facility Id:	229020	
Agency Name:	Palo Alto City	
Place Type	Facility	
Place Subtype:	Not reported	
Facility Type:	Musicipal/Domostic	
	City Assess	
Agency Type:	City Agency	
# Of Agencies:	1	
Place Letitude:	Not reported	
Place Longitude:	Not reported	
SIC Code 1:	Not reported	· .
SIC Desc 1:	Not reported	
SIC Code 2:	Not reported	
SIC Desc 2:	Not reported	
SIC Code 3:	Not reported	
SIC Desc 3	Not reported	
NAICS Code 1:	Not reported	
NAICS Done fr	Notreported	
NAIOS Desc 1.	Neterand	
NAIUS Code 2:	Not reported	
NAICS Desc 2:	Not reported	
NAICS Code 3:	Not reported	
NAICS Desc 3:	Not reported	
# Of Places:	1	tale in a
Source Of Facility:	Reg Meas	. · · · · · · · · · · · · · · · · · · ·
Design Flow:	Not reported	
Threat To Water Quality:	Not reported	
Complexity:	Not reported	
Pretreatment	Not reported	:
Facility Waste Type:	Not reported	
Facility Waste Type.	Netroported	
Facility Waste Type 2.	Netroported	
Facility waste Type 3:	Not reported	
Facility waste Type 4:		
Program:	AGT	
# Of Programs:	1	
WDID:	2 43AGT244U	
Reg Measure Id:	169945	
Reg Measure Type:	Unregulated	
Region:	2	
Order #:	Not reported	
Nndes# CA#:	Not reported	
Maior-Minor:	Not reported	
Nodes Type:	Not reported	
Redemetion	Noticeported	
Reciamation.	Not reported	
Dredge Fill Fee:	Not reported	
301H:	Not reported	
Application Fee Amt Received:	Not reported	
Status:	Never Active	
Status Date:	02/20/2013	
Effective Date:	Not reported	
Expiration/Review Date:	Not reported	
Termination Date:	Not reported	
WDR Review - Amend	Not reported	
WDR Raview - Rovieo/Ponow	Not reported	
	Not reported	
WUR REVIEW - Rescing.	INDI IEDOREO	

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S102799516

PALO ALTO GOLF COURSE (Continued)

WDR Review - No Action Required: Not reported WDR Review - Pending: Not reported WDR Review - Planned: Not reported Status Enrollea: Ν Individual/General: Not reported Fee Code: Passive Direction/Voice: 239309 Enforcement Id(EID): Region: 2 Order / Resolution Number: UNKNOWN Enforcement Action Typa: Notice of Violation 10/11/2001 Effective Date: Adoption/Issuance Date: Not reported Not reported Achieve Date: Termination Date: Not reported Not reported ACL Issuance Date: Not reported EPL Issuance Date: Status: Historical Enforcement - 2 43AGT244U Title: Description: Not reported AGT Program: Latest Milestone Completion Date: Not reported # Of Programs1: 1 Total Assessment Amount: 0 Initial Assessed Amount: 0 Liability \$ Amount: 0 Project \$ Amount: 0 Liability \$ Paid: 0 Project \$ Completed: 0 Total \$ Paid/Completed Amount: 0

F20PALO ALTO GOLF COURSENE1875 EMBARCADERO RD1/4-1/2PALO ALTO, CA 94301

0.323 mi. 1708 ft. Site 2 of 2 in cluster F LUST REG 2: Relative: Region: 2 Lower Not reported Facility Id: Case Closed Actual: Facility Status: 7 ft. Case Number: 05S2W31H01f How Discovered: Not reported Not reported Leak Cause: Leak Source: Not reported Not reported Date Leak Confirmed: Oversight Program: LUST Prelim. Site Assesment Wokplan Submitted: Not reported 8/14/1998 Preliminary Site Assesment Began: Pollution Characterization Began: 3/1/1999 Pollution Remediation Plan Submitted: Not reported Date Remediation Action Underway: Not reported Date Post Remedial Action Monitoring Began: Not reported

> HIST LUST SANTA CLARA: Region: SANTA CLARA Region Code: 2

LUST S103723198 HIST LUST N/A

MAP FINDINGS Map ID Direction Distance EDR ID Number Database(s) Elevation Site EPA ID Number PALO ALTO GOLF COURSE (Continued) S103723198 05S2W31H01 SCVWD ID: Oversite Agency: SCVWD 1998-09-09 00:00:00 Date Listed: 2002-12-19 00:00:00 Closed Date: HIST CORTESE \$101309081 21 GOPOWER 1890 EMBARCADERO RD NE LUST N/A 1/4-1/2 PALO ALTO, CA HIST LUST 0.357 mì. 1883 ft. CORTESE: Relative: Region: CORTESE Higher Facility County Code: 43 Actual: LTNKA Reg By: 8 ft. 43-0649 Reg Id: LUST: STATE Region: Global Id: T0608500683 Latitude: 37.452635 Longitude: -122.113658 Case Type: LUST Cleanup Site Status: Completed - Case Closed Status Date: 05/07/2008 SANTA CLARA COUNTY LOP Lead Agency: Case Worker: LL Local Agency: SANTA CLARA COUNTY LOP **RB** Case Number: Not reported LOC Case Number: 05S2W32M01f Stored electronically as an E-file File Location: 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: T0608500683 Global Id: Contact Type: Regional Board Caseworker Contact Name: ZSC Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2) Address: 1515 CLAY STREET, SUITE 1400 OAKLAND City: Email: Not reported Phone Number: Not reported T0608500683 Global Id: Contact Type: Local Agency Caseworker Contact Name: LANI LEE SANTA CLARA COUNTY LOP Organization Name: Address: 1555 BERGER DR, SUITE 300 City: SAN JOSE lani.lee@deh.sccgov.org Email: Phone Number: Not reported Regulatory Activilies:

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

GOPOWER (Continued)

Global Id: Action Type: Date: Action:

Global Id: Action Type: T0608500683 ENFORCEMENT 05/07/2008 Closure/No Further Action Letter

T0608500683 Other 01/01/1950 Leak Reported

T0608500683 ENFORCEMENT 05/25/2007 Staff Letter - #70525

T0608500683 ENFORCEMENT 06/12/2007 Staff Letter - #70216

T0608500683 ENFORCEMENT 10/10/2006 Staff Letter - #600101

T0608500683 RESPONSE 04/10/2006 Preliminary Site Assessment Workplan

T0608500683 RESPONSE 09/07/2007 Monitoring Report - Quarterly

T0608500683 RESPONSE 06/15/2007 Soil and Water Investigation Report

T0608500683 ENFORCEMENT 12/18/2006 Staff Letter - #608121

T0608500683 ENFORCEMENT 12/10/2007 Staff Letter - #700121

T0608500683 ENFORCEMENT 12/10/2007 Staff Letter - #70121

T0608500683 RESPONSE

S101309081

TC3611943.2s Page 57

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S101309081

GOPOWER (Continued)

Action: Global Id: Action Type: Date: Action:

Date:

Global Id: Action Type: Date: Action:

Global Id: Action Type: Date: Action: 12/10/2007 Monitoring Report - Quarterly

T0608500683 RESPONSE 10/13/2006 Preliminary Site Assessment Report

T0608500683 ENFORCEMENT 11/19/1996 Notice of Responsibility - #39188

T0608500683 ENFORCEMENT 12/08/1998 Staff Letter

T0608500683 ENFORCEMENT 03/21/2001 Staff Letter

T0608500683 ENFORCEMENT 09/30/2005 Warning Letter

T0608500683 ENFORCEMENT 04/12/2006 Staff Letter - #06124

T0608500683 RESPONSE 12/15/2006 Soil and Water Investigation Workplan

T0608500683 REMEDIATION 01/01/1950 Monitored Natural Attenuation

LUST REG 2:

Region: 2 Facility Id: Not reported Facility Status: Preliminary site assessment underway Case Number: 05S2W32M01f How Discovered: Not reported Leak Cause: Not reported Leak Source: Not reported Date Leak Confirmed: Not reported LUST Oversight Program: Prelim. Site Assesment Wokplan Submitted: Not reported Preliminary Site Assesment Began: 10/7/1987 Pollution Characterization Began: Not reported

Map ID Direction Distance	MAP FINDINGS		EDR ID Number
Elevation	Site Datab	base(s)	EPA ID Number
	GOPOWER (Continued) Pollution Remediation Plan Submitted: Not reported Date Remediation Action Underway: Not reported Date Post Remedial Action Monitoring Began: Not reported		S101309081
	LUST SANTA CLARA: Region: SANTA CLARA SCVWD ID: 05S2W32M01F Date Closed: 05/07/2008		
	HIST LUST SANTA CLARA: Region: SANTA CLARA Region Code: 2 SCVWD ID: 05S2W32M01 Oversite Agency: SCCDEH Date Listed: 1988-08-23 00:00:00 Closed Date: Not reported		
G22 NE 1/4-1/2 0.371 mi. 1961 ft.	PALO ALTO AIRPORT HIST COP 1901 EMBARCADERO RD PALO ALTO, CA HIST CUPA Li Site 1 of 3 in cluster G	RTESE LUST LUST I LUST istings	S101303784 N/A
Relative: Higher Actual: 8 ft.	CORTESE:Region:CORTESEFacility County Code:43Reg By:LTNKAReg Id:43-1027		
	LUST:Region:STATERobal Id:T0608599114Latitude:37.4551526501631Longitude:-122.11531162262Case Type:LUST Cleanup SiteStatus:Completed - Case ClosedStatus Date:03/12/2013Lead Agency:SANTA CLARA COUNTY LOPCase Worker:MJLocal Agency:SANTA CLARA COUNTY LOPRB Case Number:08-099LOC Case Number:05S2W32E01fFile Location:Stored electronically as an E-filePotential Media Affect:Other Groundwater (uses other than drinking water)Potential Contaminants of Concern:Aviation, Waste Oil / Motor / Hydraulic / LubricatingSite History:1988 In August, 3 underground storage tanks (USTs) were the site. The USTs had been used to store gasoline and the oil. 2 soil samples (MA1 and MA2) were collected from the the excavations at 4 feet below the ground surface (ft bgs). samples were reported to have maximum concentrations of million (ppm) Total Petroleum Hydrocarbons (TPH) as Gast 4,300 ppm TPH as Oil (TPHo), 5,700 ppm Total Oil and Gr 400 ppm Stoddard Solvent (does not match chromatograp 0.9 ppm Benzene, 3.4 ppm Toluene, 1.7 ppm Ethylbenzene Xylenes, and 0.035 ppm Acetone. The third tank (2,000-gal removed right away due to elevated fiammable vapors. The	removec en waste sidewali These f 990 par oline (TP ease (TC hic patter e, 11 ppr llon) was e tank wa	I from of ts per Hg), JG), n), n not is not

1

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

PALO ALTO AIRPORT (Continued)

S101303784

removed until February 1989. Floating product was noted to be present on the groundwater in the excavation. The excavation was pumped out and stored in a tank onsite. Groundwater was encountered during tank removal at 5 ft bgs. A grab groundwater sample was collected and reported to contain 380,000 parts per billion (ppb) TPHg, 260,000 ppb TPHd, 410,000 ppb TPHo, 520,000 ppb TOG, 350 ppb Benzene, 240 ppb Toluene, 230 ppb Ethylbenzene, and 440 ppb Xylenes. 10 soil borings (B1 through B10) were advanced to 3.5 ft bgs. Soil samples were screened using a Photo-ionization detector (PID). It was not reported that soil samples collected during this investigation were submitted for laboratory analysis. 8 soil borings (B11 through B18) were advanced to 5-7 ft bgs. Grab groundwater samples were collected from borings B11 through B14; groundwater was not encountered in the other borings. The samples were noted to have a petroleum hydrocarbon odor and sheen. It was not reported that soll or groundwater samples collected during this investigation were submitted for laboratory analysis. 3 monitoring wells (MW1 through MW3) were installed to 13.5-13.75 ft bgs. Grab groundwater samples were collected from these new wells and reported to contain maximum concentrations of 630 ppb TPHg, 270 ppb TPHd, 4,200 ppb TOG, 13 ppb Benzene, 18 ppb Toluene, 2 ppb Ethylbenzene, and 7 ppb Xylenes. 1989 In February, the third tank was removed. 1990 in January, 3 soil borings (SB1 through SB3) were advanced to 3 ft bos. 3 soil samples were collected and reported to contain maximum concentrations of 590 ppm TPHg, 61 ppm TPH as Mineral Spirits (TPHms), 9.6 ppm Benzene, 0.9 ppm Ethylbenzene, 3.5 ppm Xylenes, and 6.8 ppm Lead, 15 CPT borings were advanced to 12 ft bas for the collection of groundwater samples. The site is underlain by Bay Mud, which has very low permeability. Sufficient groundwater for sampling was only present in borings CPT1, CPT4, CPT5, CPT11, CPT14 and CPT15. Grab groundwater samples were reported to contain maximum concentrations of 1,700 ppb TPHg, 1,400 ppb TOG, 270 ppb TPHms, 110 ppb TPHd, 8 ppb Ethylbenzene, and 0.039 ppb Lead. Benzene was not reported to be present in any of the samples analyzed. Also around this time, depth to water readings were taken in the monitoring wells at different times relative to the preceding low tides and it was concluded that the effect of tidal fluctuations on groundwater elevations and flow direction at the site is negligible. In July, 4 monitoring wells (MW4 through MW7) were installed on and offsite to 14.5 ft bgs. It was not reported that soil samples were submitted for laboratory analysis. The new wells were incorporated into the groundwater monitoring program. In November, 3 monitoring wells (MW8 through MW10) were installed offsite to 14.5 ft bgs. It was not reported that soil samples were submitted for laboratory analysis. The new wells were incorporated into the groundwater monitoring program. 1991 In October, 2 monitoring wells (MW11 and MW12) were installed adjacent to the former UST excavation. MW12 was installed as a deeper well to approximately 35 ft bgs. The initial sampling of well MW12 reported I

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id: Contact Type: Contact Name: Organization Name: Address: City:

T0608599114 Regional Board Caseworker NATHAN KING SAN FRANCISCO BAY RWQCB (REGION 2) 1515 CLAY ST., SUITE 1400 OAKLAND

EDR ID Number Database(s) EPA ID Number

PALO ALTO AIRPORT (Continued)	
Email: Phone Number:	nking@waterboards.ca.gov Not reported
Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:	T0608599114 Local Agency Caseworker LANI LEE SANTA CLARA COUNTY LOP 1555 BERGER DR, SUITE 300 SAN JOSE Iani.lee@deh.sccgov.org Not reported
Regulatory Activities:	
Global Id:	T0608599114
Action Type:	ENFORCEMENT
Date:	12/20/2012
Action:	Staff Letter
Global Id:	T0608599114
Action Type:	RESPONSE
Date:	04/30/2009
Action:	Monitoring Report - Quarterly
Global Id:	T0608599114
Action Type:	ENFORCEMENT
Date:	03/27/2009
Action:	Staff Letter
Global Id:	T0608599114
Action Type:	
Date: Action:	Notice of Responsibility - #39187
Clabal Id:	70608599114
Action Type:	ENEORGEMENT
Date:	04/14/1992
Action:	Staff Letter - #17976
Global id:	T0608599114
Action Type:	ENFORCEMENT
Date:	03/13/2001
Action:	Staff Letter - #17979
Global Id:	T0608599114
Action Type:	RESPONSE
Date:	10/31/2009
Action:	Monitoring Report - Semi-Annually
Global Id:	T0608599114
Action Type:	
	V4/30/2010 Manifesting Deport - Cami Appually
Action:	wontioning Report - Semi-Annually
Global Id:	T0608599114
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported

S101303784

MAP FINDINGS

Database(s)

PALO ALTO AIRPORT (Cont	inued)		1	S101303784
Global Id:	T0608599114			
Action Type:	ENFORCEMENT			
Date:	07/26/2012			
Action	Staff Letter			
, (0.01.)				
Global Id:	T0608599114		- 	
Action Type:	ENFORCEMENT			
Date:	03/12/2013			
Action:	Closure/No Eurther Ac	tion Letter		
10001				
Global Id:	T0608599114			
Action Type:	ENFORCEMENT			
Date	08/07/2009			
Action:	Staff Letter			
1100011	Otan Lottor			
Global Id:	T0608599114			
Action Type:	RESPONSE			
Date:	06/30/1992			
Action	Monitoring Report - OL	larterly		
7 totom.	Monitoring (topolt - Qu	lancerty		
Global id:	T0608599114			
Action Type:				
Date:	08/20/2012			
Action:	Staff Lattor			
Action.	Stall Letter			
Global Id:	T0608599114			
Action Type:	RESPONSE			
Dater	03/16/2001			
Action	Monitoring Report - Ou	arterly		
/ todoff.	Monitoring Report - Qu	anony	100 C	
Global Id:	T0608599114			
Action Type:	Other			
Date:	01/01/1950			
Action:	Leak Discovery			
Action.	Leak Discovery			
Giobal id:	T0608599114			
Action Type:	RESPONSE			
Date:	02/28/2013			
Action:	Well Destruction Report	+		
Aston	Heir Desirection (topol			
Global Id:	T0608599114			
Action Type:	REMEDIATION			
Date:	01/01/1950			
Action:	Excavation			
Global Id:	T0608599114			
Action Type:	ENFORCEMENT			
Date:	03/25/2011			
Action:	Site Visit / Inspection /	Sampling		
	•			
LUST REG 2:				
Region: 2				
Facility Id: N	lot reported			
Facility Status: P	ollution Characterization			
Case Number: 0	5S2W32E01f			
How Discovered: N	lot reported			

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S101303784

PALO ALTO AIRPORT (Continued)

Leak Cause:	Not reported	
Leak Source:	Not reported	
Date Leak Confirmed:	Not reported	
Oversight Program:	LUST	
Prelim. Site Assesment	Wokplan Submitted:	Not reported
Preliminary Site Assesm	nent Began:	8/4/1988
Pollution Characterizatio	on Began:	6/7/1990
Pollution Remediation P	lan Submitted:	Not reported
Date Remediation Action	n Underway:	Not reported
Date Post Remedial Act	ion Monitoring Began:	Not reported

LUST SANTA CLARA:

Region:	SANTA CLARA
SCVWD ID:	05S2W32E01F
Date Closed:	Not reported

HIST LUST SANTA CLARA: Region: SANTA CLARA Region Code: 2 SCVWD ID: 05S2W32E01 Oversite Agency: SCCDEH 1990-01-01 00:00:00 Date Listed: Closed Date: Not reported

CUPA SANTA CLARA: Region: Program Description:

SANTA CLARA PALO ALTO FIRE-BUSINESS PLAN (HMBP)

PALO ALTO FIRE-PETROLEUM ABOVEGROUND STOR TAN

SANTA CLARA

STATE

Region: Program Description:

23 WNW 1/4-1/2 0.374 ml.

1974 ft.

Relative:	CORTESE:	
Higher	Region:	CORTESE
	Facility County Code:	43
Actual:	Reg By:	LTNKA
8 ft.	Reg Id:	4 3 -0488

LUST:

DYNA BELL

151 LAURA LN

PALO ALTO, CA

Region: Global Id: Latitude: Longitude: Case Type: Status: Status Date: Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: T0608500534 37.4523760997927 -122.125160694122 LUST Cleanup Site Completed - Case Closed 08/16/1991 SANTA CLARA COUNTY LOP

UST SANTA CLARA COUNTY LOP Not reported

Not reported

LUST HIST LUST **CUPA Listings**

HIST CORTESE 1001610539 N/A

MAP FINDINGS

EDR ID Number Database(s) EPA ID Number

1001610539

,

File Location:		Stored electronically as an E-file
Potential Media Affect	t:	Other Groundwater (uses other than drinking water)
Potential Contaminar	its of Concern:	Gasoline
Site History:		Not reported
Click here to access i	he California G	eoTracker records for this facility:
intact:		
Global Id:		T0608500534
Contact Type:		Regional Board Caseworker
Contact Name:		
Address		SAN FRANCISCO BAY RWQCB (REGION 2)
Address. City		OAKLAND
Email [.]		Not reported
Phone Number:		Not reported
Global Id:		T0608500534
Contact Type		Local Agency Caseworker
Contact Name:		UST CASE WORKER
Organization Name:		SANTA CLARA COUNTY LOP
Address:		1555 Berger Drive, Suite 300
City:		SAN JOSE
Email;		Not reported
Phone Number:		4089183400
gulatory Astivition:		
Global Id:		T0608500534
Action Type:		Other
Date:		01/01/1950
Action:		Leak Reported
Global Id:		T0608500534
Action Type:		RESPONSE
Date:		03/29/1990
Action:		Other Report / Document
Global Id:		T0608500534
Action Type:		ENFORCEMENT
Date:		03/13/1991
Action:		Notice of Responsibility - #39183
Global Id:		T0608500534
Action Type:		REMEDIATION
Date:		01/01/1950
Action:		Excavation
Global Id:		T0608500534
Action Type:		ENFORCEMENT
Date:		08/16/1991
Action:		Closure/No Further Action Letter
ST REG 2:		
Region:	2	
III 1 1		

Site

MAP FINDINGS

Database(s)

1001610539

CERC-NFRAP 1002851015

CAD980637029

EDR ID Number EPA ID Number

	UJJZYYJILUII	
How Discovered:	Not reported	
Leak Cause:	Not reported	
Leak Source:	Not reported	
Date Leak Confirmed:	Not reported	
Oversight Program:	LUST	
Prelim. Site Assesment	Wokplan Submitted:	Not reported
Preliminary Site Assesn	nent Began:	3/28/1990
Pollution Characterization Began:		3/28/1990
Pollution Remediation Plan Submitted:		Not reported
Date Remediation Action Underway:		Not reported
Date Post Remedial Action Monitoring Began: Not reported		

LUST SANTA CLARA:

ANTA CLARA
5S2W31L01F
8/16/19 9 1

HIST LUST SANTA CLARA: Region: SANTA CLARA

Region:	SANTA CLARA
Region Code:	2
SCVWD ID:	05S2W31L01
Oversite Agency:	SCVWD
Date Listed:	1991-01-01 00:00:00
Closed Date:	1991-08-16 00:00:00

CUPA SANTA CLARA:

Region: Program Description: SANTA CLARA GENERATES < 100 KG/YR

G24PALO ALTO MUNI REFUSE DSPL AREANE2380 EMBARCADERO RD1/4-1/2PALO ALTO, CA 94303

0.388 mi. 2051 ft. Site 2 of 3 in cluster G

200110		
Relative:	CERC-NFRAP:	
	Olta ID.	0001965

Higher	Site ID:	0901865
	Federal Facility:	Not a Federal Facility
Actual:	NPL Status:	Not on the NPL
8 ft.	Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:

Contact Sequence ID:	13053533.00000
Person ID:	9271184.00000
Contact Sequence ID:	1328 77 37.00000
Person ID:	13003854.00000
Contact Sequence ID:	13293332.00000
Person ID:	13003858.00000

MAP FINDINGS

Database(s)

				N	
CERCLIS-NFRAP SI	te Alias Name(s):				
Alias Name:	PALO ALTO	MUNI SAN LDFL			
Alias Address:	Not reported				
	CA		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		
Alias Namo:				· ·· ·	
Alias Addrosay	PALO ALTO I	REFUSE DSFL AREA		$c = (1 - 2 e^{i t})^{-1}$	
Allas Auuress.			1. State 1.		
	0A				
CERCUS-NERAR A	seesment History		•		
Action:	DISCOVERY				
Date Started	//				
Date Starled.	1 1				
Date Completeu:	Net con ente d				
Phonity Level;	Not reported				
Action:	ARCHIVE SIT	E			
Date Started:	11	-			
Date Completed	09/01/87				
Printify Level	Not reported		۰.		
Thomy Lovel.	Not reported				
Action:	PRELIMINAR	Y ASSESSMENT			
Date Started:	08/01/86				
Date Completed:	09/01/87				
Priority Level	NERAP-Site d	oes not qualify for the NPI	based on evicting infor	mation	
2380 EMBARCADERO	RD	-		NPDES	S103980
2380 EMBARCADERO PALO ALTO, CA 9430	RD	-		NPDES LDS ENF	S1039808 N/A
2380 EMBARCADERO PALO ALTO, CA 9430	RD 3	-	ENVI	NPDES LDS ENF ROSTOR	S1039808 N/A
2380 EMBARCADERO PALO ALTO, CA 9430 Site 3 of 3 in cluster G	RD 3	-	ENVI	NPDES LDS ENF ROSTOR	S1039808 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES:	RD 3	-	ENVI	NPDES LDS ENF ROSTOR	S1039800 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number:	RD	- CAS000001	ENVI	NPDES LDS ENF ROSTOR	S103980(N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status:	RD 3	- CAS000001 Active	ENVI	NPDES LDS ENF ROSTOR	S1039801 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id:	RD	- CAS000001 Active 0	ENVI	NPDES LDS ENF ROSTOR	S1039801 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region:	RD 3	- CAS000001 Active 0 2	ENVI	NPDES LDS ENF ROSTOR	S1039801 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measure	RD	- CAS000001 Active 0 2 183969	ENVI	NPDES LDS ENF ROSTOR	S103980
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measur Order No:	RD	- CAS000001 Active 0 2 183969 97-03-DWO	ENVI	NPDES LDS ENF ROSTOR	S103980
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur	RD	- CAS000001 Active 0 2 183969 97-03-DWQ Errollee	ENVI	NPDES LDS ENF ROSTOR	S103980
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id:	re ld: re Type:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measur Order No: Regulatory Measur Place Id: WDD.	RD RD 3 re ld: re Type:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 43007022	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: December 2 Times	RD RD 3 re ld: re Type:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type:	RD RD 3 re ld: re Type:	CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F	RD RD 3 re Id: re Type: Regulatory Measure:	CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date Of	RD RD 3 re ld: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID; Program Type: Adoption Date Of F Effective Date Of F Expiration Date Of Termination Date Of	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Df Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported Not reported Not reported	ENVI	NPDES LDS ENF ROSTOR	S103980
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date Of Termination Date Of Discharge Name:	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Df Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industnal Not reported 05/27/1992 Not reported Not reported Palo Alto City Dept PW	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date Of Termination Date Of Discharge Name: Discharge Address	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Df Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported Not reported Not reported Palo Alto City Dept PW PO Box 10250	ENVI	NPDES LDS ENF ROSTOR	S103980
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date O Discharge Name: Discharge Address Discharge City:	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Df Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported Not reported Not reported Palo Alto City Dept PW PO Box 10250 Palo Alto	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date Of Termination Date Of Discharge Name: Discharge City: Discharge State:	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Df Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported 05/27/1992 Not reported Not reported Palo Alto City Dept PW PO Box 10250 Palo Alto California	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date O Discharge Name: Discharge Address Discharge City: Discharge Zip;	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Df Regulatory Measure:	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported 05/27/1992 Not reported Not reported Palo Alto City Dept PW PO Box 10250 Palo Alto California 94303	ENVI	NPDES LDS ENF ROSTOR	S103980
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date Of Discharge Name: Discharge City: Discharge Zip:	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Df Regulatory Measure:	CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported 05/27/1992 Not reported Not reported Palo Alto City Dept PW PO Box 10250 Palo Alto California 94303	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 9430: Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Region: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Expiration Date Of Termination Date Of Termination Date Of Discharge Name: Discharge City: Discharge Zip; LDS:	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Regulatory Measure: Of Regulatory Measure:	CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported 05/27/1992 Not reported Palo Alto City Dept PW PO Box 10250 Pato Alto California 94303	ENVI	NPDES LDS ENF ROSTOR	S103980 N/A
2380 EMBARCADERO PALO ALTO, CA 94303 Site 3 of 3 in cluster G NPDES: Npdes Number: Facility Status: Agency Id: Regulatory Measur Order No: Regulatory Measur Place Id: WDID: Program Type: Adoption Date Of F Effective Date Of F Effective Date Of F Expiration Date Of Termination Date Of Discharge Name: Discharge Address Discharge City: Discharge State: Discharge Zip: LDS: Global Id:	RD RD 3 re Id: re Type: Regulatory Measure: Regulatory Measure: Of Regulatory Measure: ::	- CAS000001 Active 0 2 183969 97-03-DWQ Enrollee Not reported 2 431007026 Industrial Not reported 05/27/1992 Not reported 05/27/1992 Not reported Palo Alto City Dept PW PO Box 10250 Pato Alto California 94303	ENVI	NPDES LDS ENF ROSTOR	S103980

Site

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

-122.1301 Longitude: Case Type: Land Disposal Site Status: Open Status Date: 01/01/2001 SAN FRANCISCO BAY RWQCB (REGION 2) Lead Agency: KER Caseworker: Not reported Local Agency: 2 438070260 RB Case Number: Not reported LOC Case Number: File Location: Not reported Potential Media Affect: Not reported Potential Contaminants of Concern: Not reported Site History: Not reported

Click here to access the California GeoTracker records for this facility:

ENF:

Region: Facility Id: Agency Name: Place Type: Place Subtype: Facility Type: Agency Type: # Of Agencies: Place Latitude: Place Longitude: SIC Code 1: SIC Desc 1: SIC Code 2: SIC Desc 2: SIC Code 3: SIC Desc 3: NAICS Code 1: NAICS Desc 1: NAICS Code 2: NAICS Desc 2: NAICS Code 3: NAICS Desc 3: # Of Places: Source Of Facility: Design Flow: Threat To Water Quality: Complexity: Pretreatment: Facility Waste Type: Facility Waste Type 2: Facility Waste Type 3: Facility Waste Type 4: Program: # Of Programs: WDID: Reg Measure Id: Reg Measure Type: Region: Order #:

2 257681 Palo Aito City Waste Management Unit Land fill Solid Waste Class III - nonhazardous solid wastes City Agency 1 Not reported Not reported 112 Rice 495**3 Refuse Systems** Not reported 1 Reg Meas 0.0001 2 в N - POTW does not have EPA approved pretreatment prog. Inert solid wastes Solid wastes, NEC Not reported Not reported LNDISP 1 2 438070001 142512 WDR 2 99-026

TC3611943.2s Page 67

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

Npdes# CA#:		Not reported		
Major-Minor:		Not reported		
Npdes Type:		Not reported		
Reclamation:		N - No		
Dredge Fill Fee:		Not reported		
301H:		Not reported		
Application Fee Amt Re	ceived:	Not reported	·.	
Status:		Active	N	
Status Date:		09/30/2009	· .	
Effective Date:		05/25/1999	and the second second	
Expiration/Review Date	•	05/22/2014		
Termination Date:	•	Not reported		
WDR Review - Amend:		Not reported		
WDR Review - Revise/	Renew:	Not reported		
WDR Review - Rescind	:	Not reported		
WDR Review - No Actio	n Required:	Not reported		
WDR Review - Pending	:	Not reported		
WDR Review - Planned	:	Not reported		
Status Enrollee:		N		
Individual/General:		1		
Fee Code:		- 50 - Land Disposal Site naving tinning fee		
Direction/Voice:		Passive		
Enforcement Id(EID):		222806		
Region:		2		
Order / Resolution Num	ber:	95-215		
Enforcement Action Tvr) 0 :	Admin Civil Liability		
Effective Date:		02/21/1996		
Adoption/Issuance Date	c.	Not reported		
Achieve Date:		Not reported		
Termination Date:		Not reported		
ACL Issuance Date:		Not reported		
EPL Issuance Date:		Not reported		
Status:		Withdrawn		
Title:		Enforcement - 2 438070001		
Description:		ACL-	× .	
Program:		LNDISP		
Latest Milestone Compl	etion Date:	3/4/1996		
# Of Programs1:		1		
Total Assessment Amou	unt:	0		
Initial Assessed Amount		0		
Liability \$ Amount:		Ō		
Project \$ Amount:		0		
Liability \$ Paid:		Ō		
Project \$ Completed:		õ		
Total \$ Paid/Completed	Amount:	Ō		
		-		
ENVIRUSTUR:	1 19 - 4> 4			
Site Type:	Historical			
Site Type Detailed:	* Historicel			
Acres:	Not reported			
NPL:	NO			
Regulatory Agencies:	NONE SPECI	FIED		
Lead Agency:	NONE SPECI	FIED		
Program Manager:	Not reported			
Supervisor:	Referred - Not	Assigned		
Division Branch:	Cleanup Berke	eley		
Facility ID:	43490053			

Site

MAP FINDINGS

Database(s)

Sile Code: Not reported Assembly: 21 Snate: 11 Special Program: * Sile Char & Assess Grant (CERCLA 104) Status: Refer: RWQCB Status: NO Completed Not reported Latitude: 0 Longitude: 0 An: NONE SPECIFIED Pat Use: NONE SPECIFIED Patential Description: NONE SPECIFIED Patential Description: NONE SPECIFIED Alias Name: PAL dentification Number Alias Name: CAD0094/4781 Alias Name: CAD094/4781 Alias Name: CAD094/4781 Alias Name: CAD094/4781 Alias Name: PROJECT WIDE Completed Info: Completed Area Name: Completed Area Name: Not reported Completed Area Name: Not reported Completed	PALO ALTO MUNICIPAL SA	NITA	RY LANDFILL (Continued) S	103980888
Assembly: 21 Senate: 11 Special Program: * Sile Char & Assess Grant (CERCLA 104) Status: Refer, RWCGB Status Date: 06/02/1994 Restricted Use: NO Sile Mgmt, Req.: NONE SPECIFIED Funding: Not reported Latitude: 0 APN: NONE SPECIFIED Pate Use: CAD000447871 Alias Type: EPA Identification Number Alias Name: CAD094047871 Alias Type: EPA Identification Number Alias Name: CAD094047871 Alias Type: EPA Identification Number Alias Name: Adventification Number Alias Name: Adventification Number Alias Name: Not reported Completed Area Name: Not reported Completed Dacument Type: Discovery Completed Dacument Type: Notecot WIDE Completed Date: Not reported Completed Date	Site Code:	Not	reported	
Senate: 11 Special Program: *Site Char & Assess Grant (CERCLA 104) Status: Refer: RWQCB Status: NOE Complute: NOE O Latituda: O O Confirmed COC: NONE SPECIFIED Potential Description: NONE SPECIFIED Potential Description: NONE SPECIFIED Alias Name: PALO ALTO REFUSE DISPOSAL AREA Alias Name: CAD009447871 Alias Name: CAD009447871 Alias Name: CAD080637029 Alias Name: CAD080637029 Alias Name: CAD980637029 Alias Name: CAD980637029 Alias Name: CAD980637029 Completed Area Name: Not reported Completed Area Name: Not reported Completed Area Name:	Assembly:	21		
Special Program: * Site Char & Assess Grant (CERCLA 104) Status: Refer: RWQCB Status: Date: 00/03/1994 Resticted Use: NO Status: Date: 00/03/1994 Resticted Use: NO Status: Date: 0 Funding: NO reported Latitude: 0 ArN: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Potential COC: 10/119, 10120, 10176, 10180, 10194, 10198, 20001, 20009, 20017, 30013, 30103, 30103, 30103, 30307, 30108, 30103, 30307, 30108, 30103, 30108, 30107, 30108, 30108, 30107, 30108, 30108, 30107,	Senate:	11		
Status Refer: RWQCB Status Dele: 00/03/194 Restricted Use: NO Sile Mgmt, Req.: NOME SPECIFIED Funding: Not reported Ladjtude: 0 O APN: NOME SPECIFIED Past Use: NOME SPECIFIED Past Use: NOME SPECIFIED Potential COC: 10119, 10120, 10176, 10180, 10194, 10198, 20001, 20009, 20017, 30013, 30108, 30153, 30357, 30407 Confirmed COC: NOME SPECIFIED Pate Use: PALO ALTO REFUSE DISPOSAL AREA Alias Name: PALO ALTO REFUSE DISPOSAL AREA Alias Name: CAD009447871 Alias Name: CAD009447871 Alias Name: CAD080637029 Alias Type: EPA Identification Number Alias Type: CAD080605 Alias Type: PACUECT WIDE Completed Area Name: Not reported Completed Document Type: * 0 Iscovery Completed Document Type: * 0 Not reported Completed Document Type: * 0 Not reported Completed Document Type: * 0 Not reported Completed Document	Special Program:	* Sil	e Char & Assess Grant (CERCLA 104)	
Status Date: 00/00/1994 Resticted Use: NO Ste Mgmt, Req.: NOME SPECIFIED Funding: NOT reported Latitude: 0 APN: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Potential Description: NONE SPECIFIED Potential Description: NONE SPECIFIED Pater Past Specified Pater Past Specified Past Specified Past Specified C	Status:	Refe	er: RWQCB	
Resificited Use: NO Site Mgm. Req.: NOHE SPECIFIED Funding: Not reported Latitude: 0 Longitude: 0 APN: NONE SPECIFIED Past Use: NONE SPECIFIED Alias Type: Alfenale Name Alias Name: PALO ALTO REFUSE DISPOSAL AREA Alias Name: CAD009447871 Alias Name: CAD009447871 Alias Name: CAD0906037029 Alias Type: EPA Identification Number Alias Type: EPA Identification Number Alias Type: POUECT WIDE Completed Area Name: PROJECT WIDE Completed Info: POUECT WIDE Completed Area Name: Not reported Completed Document Type: * Discovery Completed	Status Date:	06/0	18/1994	
Site Mgmt, Req: NONE SPECIFIED Funding: Not reported Latitude: 0 APN: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Potential COC: 10118, 10120, 10176, 10180, 10194, 10198, 20001, 20009, 20017, 30013, 30109, 30103, 30109, 30103, 30109, 30107 Confirmed COC: NONE SPECIFIED Potential Description: NONE SPECIFIED Alias Name: PALO ALTO REFUSE DISPOSAL AREA Alias Type: EPA Identification Number Alias Name: CAD980637029 Alias Name: CAD980637029 Alias Name: CAD980637029 Alias Name: CAD980637029 Alias Name: PROJECT WIDE Completed Info: Proproted Completed Sub Area Name: PROLECT WIDE Completed Date: 10/12/1983 Completed Date: 0/2/1987 Completed Date: 0/2/2/1987 Completed Area Name: PROLECT WIDE Completed Area Name: Not reported	Restricted Use:	NO		
Funding: Not reported Latitude: 0 Longitude: 0 APN: NONE SPECIFIED Past Use: NONE SPECIFIED Potential COC: 10118, 10120, 10176, 10180, 10184, 10188, 20001, 20009, 20017, 30013, 30180, 301	Site Mgmt, Req.:	NO	NE SPECIFIED	
Latitude: 0 Longitude: 0 APN: NONE SPECIFIED Past Use: NONE SPECIFIED Past Use: NONE SPECIFIED Potential COC: 10118, 10120, 10176, 10180, 10194, 10198, 20001, 20009, 20017, 30013, 30169, 30153, 30367, 30407 Confirmed COC: NONE SPECIFIED Patential Description: NONE SPECIFIED Alias Name: PALO ALTO REFUSE DISPOSAL AREA Alias Type: Altemate Name Alias Name: CAD0094478711 Alias Name: CAD080637029 Alias Name: CAD080637029 Alias Type: EPA Identification Number Alias Type: Envirostor ID Number Completed Area Name: PROJECT WIDE Completed Document Type: Discovery Completed Document Type: Discovery Completed Document Type: Discovery Completed Document Type: Discovery Completed Dacument Type: Discovery Completed Dacument Type: Discovery Completed Dacument Type: Discovery Completed Dacument Type: Discovery Odorited Trea Name: <td< td=""><td>Funding:</td><td>Not</td><td>reported</td><td></td></td<>	Funding:	Not	reported	
Longlitude: 0 AFN: NONE SPECIFIED Past Usa: NONE SPECIFIED Potential COC: 10119, 10120, 10176, 10180, 10184, 10188, 20001, 20009, 20017, 30013, 30183, 30367, 30407 Confirmed COC: NONE SPECIFIED Potential Description: NONE SPECIFIED Alias Type: PALO ALTO REFUSE DISPOSAL AREA Alias Type: EPA Identification Number Completed Area Name: PROJECT WIDE Completed Document Type: * Discovery Completed Area Name: FACILITY IDENTIFIED ID FROM ERRIS - 3280 EMBARCADERO RD, Completed Date: FACILITY IDENTIFIED SUPERFUND NOTIFICATION (REFUSE DISP)- 3280 EMBARCADERO RD. Ompleted Date: Completed Date: PROJECT WIDE Completed Date: Not reported Completed Date: PROJECT WI	Latitude:	0		
APx: NONE SPECIFIED Past Use: NONE SPECIFIED Potential COC: 10118, 10120, 10176, 10180, 10194, 10198, 20001, 20009, 20017, 30013, 30108, 30153, 30367, 30407 Confirmed COC: NONE SPECIFIED Potential Description: NONE SPECIFIED Alias Name: PALO ALTO REFUSE DISPOSAL AREA Alias Type: Allemate Name Alias Type: EPA Identification Number Alias Name: CAD090037029 Alias Name: CAD390037029 Alias Type: EPA Identification Number Alias Type: EPA Identification Number Alias Type: EPA Identification Number Alias Type: PROJECT WIDE Completed Sub Area Name: PROJECT WIDE Completed Sub Area Name: Not reported Completed Date: 10/12/1983 Comments: FACILITY IDENTIFIED UD FROM ERRIS - 3280 EMBARCADERO RD, Completed Date: 08/20/1981 Comments: FACILITY IDENTIFIED SUPERFUND NOTIFICATION (REFUSE DISP)- 3280 EMBARCADERO RD, EMBARCADERO RD, Completed Date: 08/20/1981 Comments: SITE SCREENING DONE Complete	Longitude:	0		
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LUST SANTA CLA Region: SCVWD ID:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F	is that generate, to bus waste. RCRAI permit, compliand der RCRA.	ransport, nfo allows æ, and	RCRA		
LUST SANTA CLA Region: SCVWD ID: Date Closed:	events and and treat, s program st corrective a ARA: SANTA CL 05S2W31F 12/21/2004	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F	is that generate, to sus waste. RCRAI permit, compliand der RCRA.	ransport, nfo allows e, and	RCRA		
LUST SANTA CLA Region: SCVWD ID: Date Closed:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F	s that generate, t us waste. RCRA permit, compliand der RCRA.	nfo allows e, and	RCRA		
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LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F	s that generate, t ous waste. RCRA permit, compliand der RCRA.	nfo allows ne, and	RCRA HIST C	ORTESE	S10396296 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER PALO ALTO, CA 94	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 1	is that generate, to sus waste. RCRAI permit, compliand der RCRA.	nfo allows	RCRA HIST C	ORTESE LUST ST LUST	S10396296 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER PALO ALTO, CA 94 Site 2 of 2 in cluster	events and and treat, s program st corrective a ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4	is that generate, to sus waste. RCRAI permit, compliand der RCRA.	nfo allows	RCRA HIST C HI	ORTESE LUST ST LUST	S10396296 N/A
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LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 6	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4	is that generate, to sus waste. RCRAI permit, compliand der RCRA.	nfo allows	RCRA HIST C HI	ORTESE LUST ST LUST	S10396296 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 4 Reg By:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303 H	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4 CORTESE 43 LTNKA	s that generate, t ous waste. RCRA permit, compliand der RCRA.	nfo allows	RCRA HIST C HI	ORTESE LUST ST LUST	S10396296 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 4 Reg By: Reg Id:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303 H	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4 CORTESE 43 LTNKA 43-1270	s that generate, to sus waste. RCRAI permit, compliant der RCRA.	ansport, nfo allows e, and	RCRA HIST C HI	ORTESE LUST ST LUST	S10396296 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADEF PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 4 Reg By: Reg Id: LUST:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303 H	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4 CORTESE 43 LTNKA 43-1270	s that generate, t s that generate, t pus waste. RCRA permit, compliand der RCRA.	ansport, nfo allows æ, and	RCRA HIST C HI	ORTESE LUST ST LUST	S10396296 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 4 Reg By: Reg Id: LUST: Region:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303	A activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4 CORTESE 43 LTNKA 43-1270 STATE	s that generate, t sus waste. RCRA permit, compliand der RCRA.	ansport, nfo allows e, and	RCRA HIST C HI	ORTESE LUST ST LUST	S10396290 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADER PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 4 Reg By: Reg Id: LUST: Region: Global Id: Latitude:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303 H Code:	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4 201F 4 LTNKA 43-1270 STATE T0608501248 37.4473167215427	, is that generate, to sus waste. RCRAI permit, compliant der RCRA.	ansport, nfo allows æ, and	RCRA HIST C HI	ORTESE LUST ST LUST	S10396290 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADEF PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 4 Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303 * H Code:	d activities related to facilitie store, or dispose of hazardo aff to track the notification, action activities required un ARA 201F 4 CORTESE 43 LTNKA 43-1270 STATE T0608501248 37.4473167215427 -122.12595462799	, not the second	ansport, nfo allows æ, and	RCRA HIST C HI	ORTESE LUST ST LUST	S10396290 N/A
LUST SANTA CLA Region: SCVWD ID: Date Closed: SHELL 1161 EMBARCADEF PALO ALTO, CA 94 Site 2 of 2 in cluster CORTESE: Region: Facility County 4 Reg By: Reg Id: LUST: Region: Global Id: Latitude: Longitude: Case Type: Status:	events and and treat, s program st corrective s ARA: SANTA CL 05S2W31F 12/21/2004 RO RD 303	ARA CORTESE 43 LTNKA 43-1270 STATE T0608501248 37.4473167215427 -122.12595462799 LUST Cleanup Site Completed - Cased	n program direct s that generate, t us waste. RCRA permit, compliance der RCRA.	ansport, nfo allows e, and	RCRA HIST C HI	ORTESE LUST ST LUST	S10396296 N/A
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Site

SHELL (Continued)

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S103962967

Local Agency:SANTA CLARA COUNTY LOPRB Case Number:Not reportedLOC Case Number:Not reportedFile Location:Stored electronically as an E-filePotential Media Affect:Other Groundwater (uses other than drinking water)Potential Contaminants of Concern:GasolineSite History:Not reported

Click here to access the California GeoTracker records for this facility:

Contact: Global Id: T0608501248 Local Agency Caseworker Contact Type: UST CASE WORKER Contact Name: SANTA CLARA COUNTY LOP Organization Name: 1555 Berger Drive, Suite 300 Address: SAN JOSE City: Email: Not reported 4089183400 Phone Number: Global Id: T0608501248 Regional Board Caseworker Contact Type: Contact Name: ZSC SAN FRANCISCO BAY RWQCB (REGION 2) Organization Name: 1515 CLAY STREET, SUITE 1400 Address: OAKLAND City: Email: Not reported Phone Number: Not reported **Regulatory Activities:** Giobal Id: T0608501248 Action Type: Other 01/01/1950 Date: Leak Reported Action: Global Id: T0608501248 RESPONSE Action Type: Date: 08/31/1996 Monitoring Report - Quarterly Action: T0608501248 Global Id: Action Type: RESPONSE Date: 04/28/1997 Monitoring Report - Quarterly Action: Global Id: T0608501248 ENFORCEMENT Action Type: 06/19/1991 Date: Action: Notice of Responsibility - #39185 T0608501248 Global Id: Action Type: ENFORCEMENT 08/23/1999 Date: Staff Letter - #17959 Action: T0608501248 Global Id: ENFORCEMENT Action Type:

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S103962967

SHELL (Continued)

Date: Action:

Global Id: Action Type: Date: Action:

LUST REG 2:

T0608501248

08/28/1996

ENFORCEMENT 04/25/1997 Staff Letter - #18265

Staff Letter - #18262

T0608501248 REMEDIATION 01/01/1950 Pump & Treat (P&T) Groundwater

T0608501248 REMEDIATION 01/01/1950 Pump & Treat (P&T) Groundwater

T0608501248 RESPONSE 08/26/1999 Monitoring Report - Quarterly

Region: 2 Facility Id: Not reported Facility Status: Pollution Characterization Case Number: 05S2W31P01f How Discovered: Not reported Leak Cause: Not reported Leak Source: Not reported Date Leak Confirmed: Not reported Oversight Program: LUST Prelim. Site Assesment Wokplan Submitted: Not reported Preliminary Site Assesment Began: 2/20/1987 Pollution Characterization Began: 9/29/1987 Pollution Remediation Plan Submitted: Not reported Date Remediation Action Underway: Not reported Date Post Remedial Action Monitoring Began: Not reported

HIST LUST SANTA CLARA:

Region:	SANTA CLARA
Region Code:	2
SCVWD ID:	05S2W31P01
Oversite Agency:	SCVWD
Date Listed:	1988-01-01 00:00:00
Closed Date:	2004-12-21 00:00:00

MAP FINDINGS

Database(s)

28 ENE 1/4-1/2 0.420 mi. 2216 ft.	GEMFIRE CORPORATION 2440 EMBARCADERO WAY PALO ALTO, CA 94303			ENVIROS	FOR \$108751571 N/A
Relative: Higher	ENVIROSTOR: Site Type:	Tiered Permit			· · · · ·
-	Site Type Detailed:	Tiered Permit			
Actual:	Acres:	Not reported	÷		N 15
8 TL.	NPL:				
	Regulatory Agencies:	NONE SPECIFIED			and the second sec
	Lead Agency: Program Manager:	NONE SPECIFIED	· · ·		
	Supervisor:	Not reported			
	Division Branch	Cleanun Berkeley	• •		
	Facility ID:	71003672			
	Site Code:	Not reported			
	Assembly:	24			1
	Senate:	13		· · · ·	
	Special Program:	Not reported		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
	Status:	Inactive - Needs Evaluation		and the second second second	
	Status Date:	Not reported		1.5	
	Restricted Use:	NO			
	Site Mgmt. Req.:	NONE SPECIFIED		,	
	Funding:				
	Longitude:	-122 1118			N
		NONE SPECIFIED		· .	
	Past Use:	NONE SPECIFIED		н. -	
	Potential COC:	NONE SPECIFIED			1
	Confirmed COC:	NONE SPECIFIED			
	Potential Description:	NONE SPECIFIED	× ·		
	Alias Name:	CAL000078053			5
	Alias Type:	EPA Identification Number			
	Alias Name:	71003672			
	Alias Type:	Envirostor ID Number			
	Completed Info:				
	Completed Area Name:	Not reported			
	Completed Sub Area Nar	ne: Not reported			
	Completed Document Ty	pe: Not reported			
	Completed Date:	Not reported			
	Comments.	NotTebolied			
	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 Nam	e: Not reported			
	Schedule Document Type	e: Not reported			
	Schedule Due Date:	Not reported			
	Guleune Reviseu Dale.	notrepotteu			

MAP FINDINGS

Database(s)

129 WNW 1/4-1/2	PALO ALTO MAIN POST OFFICE 2085 E BAYSHORE PALO ALTO, CA 94303		LUST CA FID UST	S101623412 N/A
0.421 m). 2223 ft.	Site 1 of 3 in cluster I			· · ·
Relative: Higher Actual: 12 ft.	LUST: Region: Giobal Id: Latitude: Longitude: Case Type: Status:	STATE T0608501852 37.450499 -122.122886 LUST Cleanup Site Completed - Case Closed		:
	Lead Agency: Case Worker: Local Agency: RB Case Number: LOC Case Number: File Location: Potential Madia Affect: Potential Contaminants of Concern: Site History:	SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP Not reported Not reported Stored electronically as an E-file Other Groundwater (uses other than drinking water) Gasoline Not reported		
	Click here to access the California G Contact: Global Id: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number: Global Id: Contact Type: Contact Type: Contact Name: Organization Name: Address: City: Email: Phone Number:	eoTracker records for this facility: T0608501852 Regional Board Caseworker ZSC SAN FRANCISCO BAY RWQCB (REGION 2) 1515 CLAY STREET, SUITE 1400 OAKLAND Not reported Not reported T0608501852 Local Agency Caseworker UST CASE WORKER SANTA CLARA COUNTY LOP 1555 Berger Drive, Suite 300 SAN JOSE Not reported 4089183400		
	Regulatory Activities: Global Id: Action Type: Date: Action: Global Id: Action Type: Date: Action: LUST SANTA CLARA: Region: SANTA CLARA	T0608501852 Other 01/01/1950 Leak Reported T0608501852 ENFORCEMENT 11/16/1995 Notice of Responsibility - #39184		

MAP FINDINGS

EDR ID Number Database(s)

EPA ID Number

S101623412

Date Closed:	05/29/1996
Region:	SANTA CLARA
SCVWD ID:	05S2W31L03F

05S2W31L03F Date Closed: 07/14/2005

43005651

00065899

Not reported

Not reported

4153214310

Not reported

Not reported

Not reported

Not reported

Not reported

Not reported Not reported

Not reported

Active

2085 E BAYSHORE

PALO ALTO 943039998

UTNKA

CA FID UST:

Facility ID: Regulated By: Regulated ID: Cortese Code: SIC Code: Facility Phone: Mail To: Mailing Address: Mailing Address 2: Mailing City, St, Zip: Contact: Contact Phone: DUNs Number: NPDES Number: EPA ID: Comments: Status:

UNITED STATES POSTAL SERVICE (USPS) 130 2085 EAST BAYSHORE ROAD WNW 1/4-1/2 PALO ALTO, CA 94301 0.421 mi.

2223 ft. Site 2 of 3 in cluster I

Region:

Global Id:

Latitude:

Status: Status Date:

Longitude: Case Type:

Lead Agency: Case Worker:

Local Agency:

File Location:

Site History:

LUST:

Relative: Higher

Actual:

12 ft.

STATE T0608547252 37.451955 -122.12596 LUST Cleanup Site Completed - Case Closed 07/14/2005 SANTA CLARA COUNTY LOP UST SANTA CLARA COUNTY LOP **RB Case Number:** Not reported LOC Case Number: Not reported Not reported Potential Media Affect: Other Groundwater (uses other than drinking water) Potential Contaminants of Concern: Gasoline Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0608547252
Contact Type:	Local Agency Caseworker
Contact Name:	UST CASE WORKER
Organization Name:	SANTA CLARA COUNTY LOP
Address:	1555 Berger Drive, Suite 300

LUST S107138466 N/A

MAP FINDINGS

Database(s)

	UNITED STATES POSTAL SER	VICE (USPS) (Continued)	. *	S107138466
	City:	SAN JOSE		
	Email:	Not reported	•	
	Phone Number:	4089183400		
	Global Id:	T0608547252		
	Contact Type:	Regional Board Caseworker	1 S	
	Contact Name:	BARBARA SIEMINSKI		
	Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)		
	Address:	1515 CLAY STREET, SUITE 1400		
	City:	OAKLAND		
	Email:	bsieminski@waterboards.ca.gov		
	Phone Number:	Not reported		
	Regulatory Activities:		ν.	
	Global Id:	T0608547252	. · · ·	
	Action Type:	Olher		
	Date:	01/01/1950		
	Action:	Leak Reported		
	Global Id:	T0608547252		
	Action Type:	Other		
	Date:	01/01/1950	1. Sec. 1.	
	Action:	Leak Discovery		
		,	· · · ·	
	Global id:	T0608547252	12	
	Action Type:	REMEDIATION		
	Date:	01/01/1950		
	Action:	Not reported		
			:	
	•			
131	PALO ALTO POST OFFICE		LUST	S103880592
VVINVV			HISTLUST	N/A
1/4-1/2	PALU ALTU, CA 94303		WD5	
0.421 ml.	Rite 2 of 2 in alustant			
2223 11.	Site 3 of 3 in cluster i			· .
Relative:	LUST REG 2:			
Higner	Region: 2	i recorded		
Actual	Facility Id: No	reported		
12 ft.	Case Numbers OF			
1-10	Case Multiper. 033			
	Hour Discovered Mei	recorded		
	How Discovered: Not	reported		
	How Discovered: Not Leak Cause: Not	reported reported		
	How Discovered: Not Leak Cause: Not Leak Source: Not	reported reported reported		
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LLI	reported reported reported i reported ST	1.	
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prolim Site Assessment Wol	reported reported reported ST ST	:.	
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Prelimingny Site Assessment	reported reported reported sreported ST cplan Submitted: Not reported Benan: 3/17/1994		
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B	reported reported reported ST splan Submitted: Not reported Began: 3/17/1994 erapor 4/6/1994	3.	
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Bollution Remediation Plan	reported reported reported streported ST splan Submitted: Not reported Began: 3/17/1994 egan: 4/6/1994 Submitted: Not reported	1.	
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Pollution Remediation Plan Date Remediation Action Li	reported reported reported sreported ST splan Submitted: Not reported Began: 3/17/1994 egan: 4/6/1994 Submitted: Not reported Not reported		
×	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Pollution Remediation Plan Date Remediation Action Ur Date Remediation Action Ur	reported reported reported ST state of the state of t		
×	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Pollution Remediation Plan Date Remediation Action Up Date Post Remedial Action	reported reported reported streported ST splan Submitted: Not reported Began: 3/17/1994 egan: 4/6/1994 Submitted: Not reported nderway: Not reported Monitoring Began: Not reported		
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Pollution Remediation Plan Date Remediation Action Ur Date Post Remedial Action	reported reported reported sreported ST kplan Submitted: Not reported Began: 3/17/1994 egan: 4/6/1994 Submitted: Not reported nderway: Not reported Monitoring Began: Not reported		
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Pollution Remediation Plan Date Remediation Action Ur Date Post Remedial Action HIST LUST SANTA CLARA: Region: SANTA C	reported reported reported seported ST splan Submitted: Not reported Began: 3/17/1994 egan: 4/6/1994 Submitted: Not reported nderway: Not reported Monitoring Began: Not reported		
	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Pollution Characterization B Pollution Remediation Plan Date Remediation Action U Date Post Remedial Action HIST LUST SANTA CLARA: Region: SANTA C Region Code: 2	reported reported reported sreported ST splan Submitted: Not reported Began: 3/17/1994 egan: 4/6/1994 Submitted: Not reported nderway: Not reported Monitoring Began: Not reported		
·	How Discovered: Not Leak Cause: Not Leak Source: Not Date Leak Confirmed: Not Oversight Program: LU: Prelim. Site Assesment Wol Preliminary Site Assesment Pollution Characterization B Pollution Remediation Plan Date Remediation Action Ur Date Post Remedial Action HIST LUST SANTA CLARA: Region: SANTA C Region Code: 2 SCVWD ID: 0552W31	reported reported reported reported ST splan Submitted: Not reported Began: 3/17/1994 egan: 4/6/1994 Submitted: Not reported iderway: Not reported Monitoring Began: Not reported Monitoring Began: Not reported		

MAP FINDINGS

Database(s)

EDR ID Number EPA ID Number

S103880592 PALO ALTO POST OFFICE (Continued) Oversite Agency: SCVWD 1994-08-29 00:00:00 Date Listed: Closed Date: 1996-05-29 00:00:00 CA WDS: San Francisco Bay 431013018 Facility ID: Industrial - Facility that treats and/or disposes of liquid or Facility Type: semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping. Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements. CAS000001 The 1st 2 characters designate the state. The remaining 7 NPDES Number: are assigned by the Regional Board Subregion: 2 Facility Telephone: 6503273856 Facility Contact: POSTMASTER US POSTAL SER Agency Name: Agency Address: 2085 E Bayshore Rd Agency City, St, Zip: Palo Alto 943033218 Agency Contact: POSTMASTER Agency Telephone: 6503211423 Agency Type: ? SIC Code: 0 SIC Code 2: Not reported Primary Waste: Not reported Not reported Primary Waste Type: Secondary Waste: Not reported Secondary Waste Type: Not reported Design Flow: 0 **Baseline Flow:** 0 Reclamation: Not reported POTW: Not reported Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality. Category C - Facilities having no waste treatment systems, such as Complexity: cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

MAP FINDINGS

Database(s)

32 WSW 1/4-1/2 0.425 mi. 2243 ft.	MOON DRY CLEANERS 2125 SAINT FRANCIS DRIVE PALO ALTO, CA 94303	SLIC S112142832 N/A
Relative: Higher Actual: 13 ft.	SLIC: Region: Facility Status: Status Date: Global Id: Lead Agency: Lead Agency Case Number: Latitude: Longitude: Case Type: Case Worker: Local Agency: RB Case Number: File Location: Potential Media Affected: Potential Contaminants of Concern: Site History:	STATE Open - Remediation 11/05/2012 T10000004214 SANTA CLARA COUNTY LOP 05S2W31P02s 37.4480492453022 -122.126383781433 Cleanup Program Site LL SANTA CLARA COUNTY LOP Not reported Stored electronically as an E-file Other Groundwater (uses other than drinking water), Soil Tetrachloroethylene (PCE) Dry cleaners have operated on this site from at least 1965 to late 2011. The last dry cleaner did not perform dry cleaning onsite from aroun 1998. The sile has been vacant since January 2012. Redevelopment plans have been filed with the City for commercial development onsite. Phase II investigations have found soil and groundwater impacted with PCE at the site. Excaveted PCE impacted soil above the groundwater.
	Click here to access the California G	eoTracker records for this facility:

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ORPHAN SUMMARY

TC3611943.2s Page 79

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: 02/01/2013 Date Data Arrived et EDR: 03/01/2013 Date Made Active in Reports: 03/13/2013 Number of Days to Update: 12

Source: EPA Telephone: N/A Last EDR Contact: 05/09/2013 Next Scheduled EDR Contact: 07/22/2013 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 Telephone: 214-655-6659 EPA Region 7

EPA Region 6

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: 02/01/2013 Date Data Arrived at EDR: 03/01/2013 Date Made Active in Reports: 03/13/2013 Number of Days to Update: 12

Source: EPA Telaphone: N/A Last EDR Contact: 05/09/2013 Next Scheduled EDR Contact: 07/22/2013 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

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: 02/01/2013	Source: EPA
Date Data Arrived at EDR: 03/01/2013	Telephone: N/A
Date Made Active in Reports: 03/13/2013	Last EDR Contact: 05/09/2013
Number of Days to Update: 12	Next Scheduled EDR Contact: 07/22/2013
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System CERCLIS 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). CERCLIS contains sites which are either proposed to or on the National Priorities

List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/04/2013 Date Data Arrived at EDR: 03/01/2013 Date Made Active in Reports: 03/13/2013 Number of Days to Update: 12 Source: EPA Telephone: 703-412-9810 Last EDR Contact: 04/05/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Quarterly

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: 07/31/2012 Date Data Arrived at EDR: 10/09/2012 Date Made Active in Reports: 12/20/2012 Number of Days to Update: 72 Source: Environmental Protection Agency Telephone: 703-603-8704 Last EDR Contact: 04/10/2013 Next Scheduled EDR Contact: 07/22/2013 Data Release Frequency: Varles

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS 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 this 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. This 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 a potential NPL site.

Date of Government Version: 02/05/2013 Date Data Arrived at EDR: 03/01/2013 Date Made Active in Reports: 03/13/2013 Number of Days to Update: 12 Source: EPA Telephone: 703-412-9810 Last EDR Contact: 04/05/2013 Next Scheduled EDR Contact: 03/11/2013 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: 02/12/2013 Date Data Arrived at EDR: 02/21/2013 Date Made Active in Reports: 02/27/2013 Number of Days to Update: 6 Source: EPA Telephone: 800-424-9346 Last EDR Contact: 05/02/2013 Next Scheduled EDR Contact: 07/15/2013 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 wasta from the generator offsite to a facility that cen recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Varsion: 02/12/2013 Date Data Arrived at EDR: 02/15/2013 Date Made Active in Reports: 02/27/2013 Number of Days to Update: 12 Source: Environmental Protection Agency Talaphona: (415) 495-8895 Last EDR Contact: 05/02/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Ganarators

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 acutaly hazardous waste per month.

Date of Government Varsion: 02/12/2013 Date Data Arrived at EDR: 02/15/2013 Date Made Active in Raports: 02/27/2013 Numbar of Days to Update: 12 Source: Environmental Protection Agancy Telaphone: (415) 495-8895 Last EDR Contact: 05/02/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Fraquency: 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 Wasta Amandments (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 Varsion: 02/12/2013 Date Data Arrived at EDR: 02/15/2013 Date Made Activa in Raports: 02/27/2013 Number of Days to Update: 12 Source: Environmantal Protection Agency Telephona: (415) 495-8895 Last EDR Contact: 05/02/2013 Next Schedulad EDR Contact: 07/15/2013 Data Relaasa Fraquency: 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 Recovary 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 lass than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste par month.

Date of Government Version: 02/12/2013 Date Data Arrived at EDR: 02/15/2013 Date Made Active in Reports: 02/27/2013 Number of Days to Update: 12 Sourca: Environmental Protection Agency Telephone: (415) 495-8895 Last EDR Contact: 05/02/2013 Naxt Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Varies

Federal Institutional controls / engineering controls registries

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: 03/14/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/29/2013	Telephone: 703-603-0695
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 06/24/2013
	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: 03/14/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/29/2013	Telephone: 703-603-0695
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 03/11/2013
Number of Days to Update: 42	Next Scheduled EDR Contact: 06/24/2013
•	Data Release Frequency: Varies

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: 12/09/2005 Date Data Arrived at EDR: 12/11/2006 Date Made Active in Reports: 01/11/2007 Number of Days to Update: 31 Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 05/20/2013 Next Scheduled EDR Contact: 09/02/2013 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: 12/31/2012	
Date Data Arrived at EDR: 01/17/2013	
Date Made Active in Reports: 02/15/2013	
Number of Days to Update: 29	

Source: National Response Center, United States Coast Guard Telephone: 202-267-2180 Last EDR Contact: 04/02/2013 Next Scheduled EDR Contact: 07/15/2013 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: 03/13/2013	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 03/14/2013	Telaphone: 916-323-3400
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/07/2013
Number of Days to Update: 13	Next Scheduled EDR Contact: 08/19/2013
	Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Dapartment of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies 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: 03/13/2013 Date Data Arrived at EDR: 03/14/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 13 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 05/07/2013 Next Scheduled EDR Contact: 08/19/2013 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 inventory 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: 02/18/2013 Date Data Arrived at EDR: 02/18/2013 Date Made Active in Reports: 03/20/2013 Number of Days to Update: 30 Source: Department of Resources Recycling and Recovery Telephone: 916-341-6320 Last EDR Contact: 02/18/2013 Next Scheduled EDR Contact: 06/03/2013 Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	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	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
Number of Days to Opdate. 27	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	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	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 REG 5: Leaking Underground Storage Tank Leaking Underground Storage Tank locations. Dorado, Fresno, Glenn, Kern, Kings, Lake, La Sacramento, San Joaquin, Shasta, Solano, St	Database Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El ssen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, anislaus, 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 4: Underground Storage Tank Leak Lis Los Angeles, Ventura counties. For more curre Board's LUST database.	t ent information, please refer to the State Water Resources Control	
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 Leaking Underground Storage Tank locations.	Database 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. Clara, Solano, Sonoma counties.	Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa	
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, Modo please refer to the State Water Resources Cor	c, Slskiyou, Sonoma, Trinity counties. For more current information, ntrol Board's LUST database.	
Date of Government Version: 02/01/2001 Date Data Arrived et EDR: 02/28/2001 Date Made Active in Reports: 03/29/2001 Number of Days to Update: 29	Source: Califomia 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

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: 03/18/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 8	Source: State Water Resources Control Board Telephone: see region list Last EDR Contact: 05/02/2013 Next Scheduled EDR Contact: 07/01/2013 Data Ralease Frequency: Quarterty	
LUST REG 9: Leaking Underground Storage Tank Orange, Riverside, San Diego counties. For m Control Board's LUST database.	Report ore current information, please refer to the State Water Resources	
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	
SLIC: Statewide SLIC Ceses The SLIC (Spills, Leaks, Investigations and Cle from spills, leaks, and similar discharges.	eanup) program is designed to protect and restore water quality	
Date of Government Version: 03/18/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 8	Source: State Water Resources Control Board Telephone: 866-480-1028 Last EDR Contact: 05/02/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Varies	
SLIC REG 1: Active Toxic Site Investigations The SLIC (Spills, Leaks, Investigations and Cle from spills, leaks, and similar discharges.	eanup) program is designed to protect and restore water quality	
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 The SLIC (Spills, Leaks, Investigations and Cle from spills, leaks, and similar discharges.	Cost Recovery Listing eanup) program is designed to protect and restore water quality	
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 Lest EDR Contact: 09/19/2011 Next Scheduled EDR Contact: 01/02/2012 Data Release Frequency: Quarterly	
SLIC REG 3: Spills, Leaks, Investigation & Cleanup The SLIC (Spills, Leaks, Investigations and Cle from spills, leaks, and similar discharges.	Cost Recovery Listing eanup) program is designed to protect and restore water quality	
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	Source: Region Water Quality Control Board Los Angeles Region (4) Telephone: 213-576-6600 Last EDR Contact: 07/01/2011				
Number of Days to Update: 47	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	Source: Regional Water Quality Control Board Central Valley Region (5) Telephone: 916-464-3291				
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 09/12/2011				
Number of Days to Update: 16	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	Source: Regional Water Quality Control Board, Victorville Branch Telephone: 619-241-6583				
Date Made Active in Reports: 06/16/2005	Last EDR Contact: 08/15/2011				
Number of Days to Update: 22	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	Source: California Regional Water Quality Control Board, Lahontan Region Telephone: 530-542-5574				
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 08/15/2011 Next Scheduled EDR Contact: 11/28/2011				
Number of Days to Opdate: 35	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	Source: California Regional Quality Control Board, Colorado River Basin Region Telephone: 760-346-7491				
Date Made Active in Reports: 01/04/2005	Last EDR Contact: 08/01/2011 Next Scheduled EDR Contact: 11/14/2011				
Number of Days to Opticale, 50	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	Source: California Region Water Quality Control Board Santa Ana Region (8) Telephone: 951-782-3298				
Date Made Active in Reports: 04/14/2008	Last EDR Contact: 09/12/2011				
Number of Days to Update: 11	Next Scheduled EDR Contact: 12/26/2011 Data Release Frequency: Semi-Annually				

SLIC REG 9: Spills, Leaks, Investigation & Cleanu The SLIC (Spills, Leaks, Investigations and C from spills, leaks, and similar discharges	ιρ Cost Recovery Listing Cleanup) program is designed to protect and restore water quality				
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 Re Telephone: 858-467-2980 Last EDR Contact: 08/08/2011 Next Scheduled EDR Contact: 11/21/2011 Data Release Frequency: Annually	∍gion (9)			
INDIAN LUST R10: Leaking Underground Storage LUSTs on Indian land in Alaska, Idaho, Orego	N LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.				
Date of Government Version: 02/05/2013 Date Data Arrived at EDR: 02/06/2013 Date Made Active in Reports: 04/12/2013 Number of Days to Update: 65	Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Quarterly	•			
INDIAN LUST R1: Leaking Underground Storage T A listing of leaking underground storage tank	AN LUST R1: Leaking Underground Storage Tanks on Indian Land A listing of leaking underground storage tank locations on Indian Land.				
Date of Government Version: 09/28/2012 Date Data Arrived at EDR: 11/01/2012 Date Made Active in Reports: 04/12/2013 Number of Days to Update: 162	Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 05/01/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Varies				
INDIAN LUST R8: Leaking Underground Storage T LUSTs on Indian land in Colorado, Montana, I	T R8: Leaking Underground Storage Tanks on Indian Land on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.				
Date of Government Version: 08/27/2012 Date Data Arrived at EDR: 08/28/2012 Date Made Active in Reports: 10/16/2012 Number of Days to Update: 49	Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Quarterly				
INDIAN LUST R6: Leaking Underground Storage T LUSTs on Indian land in New Mexico and Okl	Tanks on Indian Land lahoma.				
Date of Government Version: 09/12/2011 Date Data Arrived at EDR: 09/13/2011 Date Made Active in Reports: 11/11/2011 Number of Days to Update: 59	Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Varies				
INDIAN LUST R4: Leaking Underground Storage T LUSTs on Indian land in Florida, Mississippi a	Tanks on Indian Land and North Carolina.				
Date of Government Version: 02/06/2013 Date Data Arrived at EDR: 02/08/2013 Date Made Active in Reports: 04/12/2013 Number of Days to Update: 63	Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Semi-Annually				
INDIAN LUST R7: Leaking Underground Storage T LUSTs on Indian land in lowa, Kansas, and N	AN LUST R7: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Iowa, Kansas, and Nebraska				
Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 02/28/2013 Date Made Active in Reports: 04/12/2013 Number of Days to Update: 43	Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013				

Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada			11 - 11 - 11 - 11 - 11 - 11 - 11 - 11	×	
	Date of Government Version: 03/01/2013 Date Data Arrived at EDR: 03/01/2013 Date Made Active in Reports: 04/12/2013 Number of Days to Update: 42	Source: Environmental Protection Agency Telephone: 415-972-3372 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Quarterly			
s	tate and tribal registered storage tank lists				
Ļ	ST: Active UST Facilities Active UST facilities gathered from the local re	egulatory agencies		· ·	
	Date of Government Version: 03/18/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 04/18/2013 Number of Days to Update: 30	Source: SWRCB Telephone: 916-341-5851 Last EDR Contact: 05/02/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Semi-Annually	·		
AST: Aboveground Petroleum Storage Tank Facilities Registered Aboveground Storage Tanks.					
	Date of Government Version: 08/01/2009 Date Data Arrived at EDR: 09/10/2009 Date Made Active in Reports: 10/01/2009 Number of Days to Update: 21	Source: State Water Resources Control Boar Telephone: 916-327-5092 Last EDR Contact: 04/08/2013 Next Scheduled EDR Contact: 07/22/2013 Data Release Frequency: Quarterly	rd ·		
INDIAN UST R10: Underground Storage Tanks on Indian Land The Indian Underground Storege Tank (UST) database provides information about underground storage tanks on Indian Iand In EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).					
	Date of Government Version: 02/05/2013 Date Data Arrived at EDR: 02/06/2013 Date Made Active in Reports: 04/12/2013 Number of Days to Update: 65	Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 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 Iand in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).					
	Date of Government Version: 02/21/2013 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 04/12/2013 Number of Days to Update: 45	Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 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 Iand in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).					

Date of Government Version: 08/27/2012 Date Data Arrived at EDR: 08/28/2012 Date Made Active in Reports: 10/16/2012 Number of Days to Update: 49 Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Quarterly
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). Source: EPA Region 7 Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 02/28/2013 Telephone: 913-551-7003 Last EDR Contact: 04/29/2013 Date Made Active in Reports: 04/12/2013 Next Scheduled EDR Contact: 08/12/2013 Number of Days to Update: 43 Data Release Frequency: Varies 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). Source: EPA Region 6 Date of Government Version: 05/10/2011 Date Data Arrived at EDR: 05/11/2011 Telephone: 214-665-7591 Date Made Active in Reports: 06/14/2011 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Number of Days to Update: 34 Data Release Frequency: Semi-Annually 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: 08/02/2012 Source: EPA Region 5 Date Data Arrived at EDR: 08/03/2012 Telephone: 312-886-6136 Date Made Active in Reports: 11/05/2012 Last EDR Contact: 04/29/2013 Number of Days to Update: 94 Next Scheduled EDR Contact: 08/12/2013 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: 02/06/2013 Source: EPA Region 4 Telephone: 404-562-9424 Date Data Arrived at EDR: 02/08/2013 Date Made Active in Reports: 04/12/2013 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Number of Days to Update: 63 Data Release Frequency: Semi-Annually 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: 09/28/2012 Source: EPA, Region 1 Date Data Arrived at EDR: 11/07/2012 Telephone: 617-918-1313 Last EDR Contact: 04/29/2013 Date Made Active in Reports: 04/12/2013 Next Scheduled EDR Contact: 08/12/2013 Number of Days to Update: 156 Data Release Frequency: Varies FEMA UST: Underground Storage Tank Listing A listing of all FEMA owned underground storage tanks. Date of Government Version: 01/01/2010 Source: FEMA Date Data Arrived at EDR: 02/16/2010 Telephone: 202-646-5797 Date Made Active in Reports: 04/12/2010 Last EDR Contact: 04/18/2013 Number of Days to Update: 55 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

ource: EPA, Region 7
elephone: 913-551-7365
ast EDR Contact: 04/20/2009
ext Scheduled EDR Contact: 07/20/2009
ata 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: 03/13/2013 Date Data Arrived at EDR: 03/14/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 13 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 05/07/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Quarterly

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: 09/28/2012	Source: EPA, Region 1
Date Data Arrived at EDR: 10/02/2012	Telephone: 617-918-1102
Date Made Active in Reports: 10/16/2012	Last EDR Contact: 04/05/2013
Number of Days to Update: 14	Next Scheduled EDR Contact: 07/15/2013
	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: 12/10/2012 Date Data Arrived at EDR: 12/11/2012 Date Made Active in Reports: 12/20/2012 Number of Days to Update: 9 Source: Environmental Protection Agency Telephone: 202-566-2777 Last EDR Contact: 03/26/2013 Next Scheduled EDR Contact: 07/08/2013 Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

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: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: No Update Planned

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: 05/10/2013 Next Scheduled EDR Contact: 08/26/2013 Data Release Frequency: No Update Planned	
SWF	RCY: Recycler Database A listing of recycling facilities in California.		
	Date of Government Version: 03/18/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 8	Source: Department of Conservation Telephone: 916-323-3836 Last EDR Contact: 03/19/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Quarterly	
HAU	ILERS: Registered Waste Tire Haulers Listing A listing of registered waste tire haulers.		
	Date of Government Version: 04/26/2013 Date Data Arrived at EDR: 04/26/2013 Date Made Active in Reports: 05/16/2013 Number of Days to Update: 20	Source: Integrated Waste Management Board Telephone: 916-341-6422 Last EDR Contact: 05/20/2013 Next Scheduled EDR Contact: 09/02/2013 Data Release Frequency: Varies	
INDI	AN ODI: Report on the Status of Open Dumps of Location of open dumps on Indian land.	on Indian Lands	
	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: 05/03/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Varies	

Local Lists of Hazardous waste / Contaminated Sites

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 soma locations where law enforcemant agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or durnpsites. 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: 03/04/2013 Date Data Arrived at EDR: 03/12/2013 Date Made Active in Reports: 05/10/2013 Number of Days to Update: 59 Source: Drug Enforcement Administration Telephone: 202-307-1000 Last EDR Contact: 03/04/2013 Next Scheduled EDR Contact: 06/17/2013 Data Release Frequency: Quarterly

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: 03/13/2013 Date Data Arrived at EDR: 03/14/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 13 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 05/07/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Quarterly

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

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: 12/31/2012	Source: Department of Toxic Substances Control
Date Data Arrived et EDR: 04/03/2013	Telephone: 916-255-6504
Date Made Active in Reports: 05/14/2013	Lest EDR Contact: 04/01/2013
Number of Days to Update: 41	Next Scheduled EDR Contact: 07/15/2013
, i	Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

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: 09/01/2007 Date Data Arrived at EDR: 11/19/2008 Date Made Active in Reports: 03/30/2009 Number of Days to Update: 131 Source: Drug Enforcement Administration Telephone: 202-307-1000 Last EDR Contact: 03/23/2009 Next Scheduled EDR Contact: 06/22/2009 Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database The Facility Inventory Database (FID) contain tank locations from the State Water Resource	s a historical listing of active and inactive underground s Control Board. Refer to local/county source for current o	torage lata.
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	
UST MENDOCINO: Mendocino County UST Datat A listing of underground storage tank location:	pase s in Mendocino County.	
Date of Government Version: 09/23/2009 Date Data Arrived at EDR: 09/23/2009 Date Made Active in Reports: 10/01/2009 Number of Days to Update: 8	Source: Department of Public Health Telephone: 707-463-4466 Last EDR Contact: 03/04/2013 Next Scheduled EDR Contact: 06/17/2013 Data Release Frequency: Annually	
HIST UST: Hazardous Substance Storage Contain The Hazardous Substance Storage Container source for current data.	er Database Database is a historical listing of UST sites. Refer to loc	al/county
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	
SWEEPS UST: SWEEPS UST Listing Statewide Environmental Evaluation and Plan maintained by a company contacted by the SV The local agency is the contact for more inform	ning System. This underground storage tank listing was VRCB in the early 1990's. The listing is no longer update nation on a site on the SWEEPS list.	updated and d or maintained,
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	
Local Land Records		· ·
LIENS 2: CERCLA Lien Information A Federal CERCLA ('Superfund') lien can exis Superfund monies. These monies are spent to CERCLIS provides information as to the identi	It by operation of law at any site or property at which EP/ investigate and address releases and threatened releasity of these sites and properties.	A has spent ses of contamination.

Date of Government Version: 02/06/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/25/2013	Telephone: 202-564-6023
Date Made Active in Reports: 05/10/2013	Last EDR Contact: 04/29/2013
Number of Days to Update: 15	Next Scheduled EDR Contact: 08/12/2013
	Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/15/2013 Date Data Arrived at EDR: 03/15/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 12 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 06/24/2013 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: 03/11/2013 Date Data Arrived at EDR: 03/12/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 13 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 03/12/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 01/03/2013	Telephone: 202-366-4555
Date Made Active in Reports: 02/27/2013	Last EDR Contact: 04/02/2013
Number of Days to Update: 55	Next Scheduled EDR Contact: 07/15/2013
	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: 12/06/2012 Date Data Arrived at EDR: 01/29/2013 Date Made Active in Reports: 03/19/2013 Number of Days to Update: 49 Source: Office of Emergency Services Telephone: 916-845-8400 Last EDR Contact: 05/01/2013 Next Scheduled EDR Contact: 08/12/2013 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: 03/18/2013 Date Data Arrived at EDR: 03/19/2013	Source: State Water Quality Control Board Telephone: 866-480-1028
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/02/2013
Number of Days to Update: 8	Next Scheduled EDR Contact: 07/01/2013 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: 03/18/2013	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/19/2013	Telephone: 866-480-1028
Date Made Active in Reports: 03/27/2013	Last EDR Contact: 05/02/2013
Number of Days to Update: 8	Next Scheduled EDR Contact: 07/01/2013
	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

RCRA NonGen / NLR: RCRA - Non Generators

Other Ascertainable Records

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: 02/12/2013 Date Data Arrived at EDR: 02/15/2013 Date Made Active in Reports: 02/27/2013 Number of Days to Update: 12 Source: Environmental Protection Agency Telephone: (415) 495-8895 Last EDR Contact: 05/02/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Varies

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: 05/07/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Varies

DOD: Dapartment 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: 04/19/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Semi-Annually

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: 12/31/2011 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 03/13/2013 Number of Days to Update: 15 Source: U.S. Army Corps of Engineers Telephone: 202-528-4285 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 06/24/2013 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 Date D Date M	Government Version: 12/31/2011 ata Arrived at EDR: 01/15/2013 ade Active in Reports: 03/13/2013	Source: Department of Justice, Consent Decree Library Telephone: Varies Last EDR Contact: 04/01/2013
Numbe	r of Days to Opdate: 57	Data Release Frequency: Varies
ROD: Recor Record and he	ds Of Decision of Decision. ROD documents mandate alth information to aid in the cleanup.	a permanent remedy at an NPL (Superfund) site containing technical
Date of	Government Version: 12/18/2012	Source: EPA
Date D Date M	ata Arrived at EDR: 03/13/2013 ade Active in Reports: 04/12/2013	Telephone: 703-416-0223 Last EDR Contact: 03/13/2013
Numbe	r of Days to Update: 30	Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Annually
UMTRA: Ura	antum Mill Tailings Sites	
Uraniur shut do the ore were us	n ore was mined by private companies wn, large piles of the sand-like material . Levels of human exposure to radioact sed as construction materials before the	for federal government use in national defense programs. When the mills (mill tailings) remain after uranium has been extracted from ive materials from the piles are low; however, in some cases tailings potential health hazards of the tailings were recognized.
Date of	Government Version: 09/14/2010	Source: Department of Energy
Date M	ade Active in Reports: 03/01/2012	Last EDR Contact: 02/25/2013
Numbe	r of Days to Update: 146	Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Varies
US MINES: Contair violatio	Mines Master Index File Is all mine identification numbers issued n information.	l for mines active or opened since 1971. The data also includes
Date of	Government Version: 02/05/2013	Source: Department of Labor, Mine Safety and Health Administration
Date M	ade Active in Reports: 05/10/2013	Last EDR Contact: 03/06/2013
Numbe	r of Days to Update: 22	Next Scheduled EDR Contact: 06/17/2013 Data Release Frequency: Semi-Annually
TRIS: Toxic Toxic R land in	Chemical Release Inventory System Release Inventory System, TRIS identifie reportable quantities under SARA Title	es facilities which release toxic chemicals to the air, water and III Section 313.
Date of	Government Version: 12/31/2009	Source: EPA
Date D Date M	ata Arrived at EDR: 09/01/2011 ade Active in Reports: 01/10/2012	Last EDR Contact: 02/26/2013
Numbe	r of Days to Update: 131	Next Scheduled EDR Contact: 06/10/2013
		Data Release Frequency: Annually
TSCA: Toxic Toxic S TSCA (site.	: Substances Control Act Substances Control Act. TSCA identifies Chemical Substance Inventory list. It inc	manufacturers and importers of chemical substances included on the cludes data on the production volume of these substances by plant
Date of	Government Version: 12/31/2006	Source: EPA
Date D Date M	ate Active in Reports: 12/02/2010	Last EDR Contact: 03/28/2013
Numbe	r of Days to Update: 64	Next Scheduled EDR Contact: 07/08/2013
		Data Release Frequency; Every 4 Years

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: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 Data Balazso Erecuspey: Quartedy
	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	Source: EPA	
Date Data Arrived at EDR: 04/16/2009	Telaphone: 202-566-1667	
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/25/2013	
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/10/2013	
	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

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 Lest EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement end compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/20/2011 Date Data Arrived at EDR: 11/10/2011 Date Made Active in Reports: 01/10/2012 Number of Days to Update: 61

Source: Environmental Protection Agency Telephone: 202-564-5088 Last EDR Contact: 04/15/2013 Next Scheduled EDR Contact: 07/29/2013 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: 11/01/2012	Source: EPA
Date Data Arrived at EDR: 01/16/2013	Telephone: 202-566-0500
Date Mada Active in Reports: 05/10/2013	Last EDR Contact: 04/19/2013
Number of Days to Update: 114	Next Scheduled EDR Contact: 07/29/2013
	Data Release Frequency: Annually

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 quarterily basis.

Date of Government Version: 06/21/2011 Date Data Arrived at EDR: 07/15/2011 Date Made Active in Reports: 09/13/2011 Number of Days to Update: 60 Source: Nuclear Regulatory Commission Telephone: 301-415-7169 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Quarterly

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: 04/09/2013 Date Data Arrived at EDR: 04/11/2013 Date Made Active in Reports: 05/10/2013 Number of Days to Update: 29 Source: Environmental Protection Agency Telephone: 202-343-9775 Last EDR Contact: 04/11/2013 Next Scheduled EDR Contact: 07/22/2013 Data Release Frequency: Quarterty

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: 10/23/2011 Date Data Arrived at EDR: 12/13/2011 Date Made Active in Reports: 03/01/2012 Number of Days to Update: 79 Source: EPA Telephone: (415) 947-8000 Last EDR Contact: 03/12/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Quarterly

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

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: 05/08/2012 Date Data Arrived at EDR: 05/25/2012 Date Made Active in Reports: 07/10/2012 Number of Days to Update: 46 Source: Environmental Protection Agency Telephone: 202-564-8600 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 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) end Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 04/19/2013 Number of Days to Update: 52 Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contect: 02/26/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Biennially

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 Substence 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

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/18/2013 Date Data Arrived at EDR: 02/18/2013 Date Made Active in Reports: 03/20/2013 Number of Days to Update: 30 Source: State Water Resources Control Board Telephone: 916-445-9379 Last EDR Contact: 02/18/2013 Next Scheduled EDR Contact: 06/03/2013 Data Release Frequency: Quarterly

UIC: UIC Listing

A listing of underground control injection wells.

Date of Government Version: 03/05/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 8 Source: Deaprtment of Conservation Telephone: 916-445-2408 Last EDR Contact: 03/19/2013 Next Scheduled EDR Contact: 12/31/2012 Data Release Frequency: Varies

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: 04/01/2013 Date Data Arrived at EDR: 04/02/2013 Date Made Active in Reports: 05/14/2013 Number of Days to Update: 42 Source: CAL EPA/Office of Emergency Information Tetephone: 916-323-3400 Last EDR Contact: 04/02/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Quarterly

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

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: 10/21/1993SoDate Data Arrived at EDR: 11/01/1993TeDate Made Active in Reports: 11/19/1993LaNumber of Days to Update: 18No

Source: State Water Resources Control Board Telephone: 916-445-3846 Last EDR Contact: 03/25/2013 Next Scheduled EDR Contact: 07/08/2013 Data Release Frequency: No Update Planned

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: 12/11/2012 Date Data Arrived at EDR: 12/12/2012 Date Made Active in Reports: 01/04/2013 Number of Days to Update: 23 Source: Department of Toxic Substance Control Telephone: 916-327-4498 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 12/24/2012 Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Femando 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: 04/01/2013 Next Scheduled EDR Contact: 07/15/2013 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: 04/26/2013SourceDate Data Arrived at EDR: 04/29/2013TelepDate Made Active in Reports: 05/16/2013LastNumber of Days to Update: 17Next

Source: State Water Resonaces Control Board Telephone: 916-445-9379 Last EDR Contact: 04/26/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Varles

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.

Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 06/22/2012 Date Made Active in Reports: 07/06/2012 Number of Days to Update: 14 Source: California Environmental Protection Agency Telephone: 916-255-1136 Last EDR Contact: 04/19/2013 Next Scheduled EDR Contact: 07/29/2013 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: 12/31/2008 Date Data Arrived at EDR: 09/29/2010 Date Made Active in Reports: 10/18/2010 Number of Days to Update: 19 Source: California Air Resources Board Telephone: 916-322-2990 Last EDR Contact: 03/29/2013 Next Scheduled EDR Contact: 07/08/2013 Data Release Frequency: Varies

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: 04/19/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Semi-Annually

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: 05/06/2013 Next Scheduled EDR Contact: 08/05/2013 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: 03/04/2013Source: Environmental Protection AgencyDate Data Arrived at EDR: 03/15/2013Telephone: 202-566-1917Date Made Active in Reports: 05/10/2013Last EDR Contact: 05/20/2013Number of Days to Update: 56Next Scheduled EDR Contact: 09/02/2013Data Release Frequency: Quarterly

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: 05/03/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Varies

PROC: Certified Processors Database A listing of certified processors.	
Date of Government Version: 03/18/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 8	Source: Department of Conservation Telephone: 916-323-3836 Last EDR Contact: 03/19/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Quarterly
MWMP: Medical Waste Management Program Listi The Medical Waste Management Program (MV and inspecting medical waste Offsite Treatmer state. MWMP also oversees all Medical Waste	ng NMP) ensures the proper handling and disposal of medical waste by permitting nt Facilities (PDF) and Transfer Stations (PDF) throughout the Transporters.
Date of Government Version: 03/06/2013 Date Data Arrived at EDR: 03/12/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 13	Source: Department of Public Health Telephone: 916-558-1784 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Varies
COAL ASH DOE: Sleam-Electric Plan Operation Da A listing of power plants that store ash in surface	ata ce 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: 04/18/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Varies
COAL ASH EPA: Coal Combustion Residues Surfa A listing of coal combustion residues surface in	ce Impoundments List npoundments with high hazard potential ratings.
Date of Government Version: 08/17/2010 Date Data Arrived at EDR: 01/03/2011 Date Made Active in Reports: 03/21/2011 Number of Days to Update: 77	Source: Environmental Protection Agency Telephone: N/A Last EDR Contact: 03/15/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Varies
HWT: Registered Hazardous Waste Transporter Da A listing of hazardous waste transporters. In C person to transport hazardous wastes unless t waste transporter registration is valid for one y	itabase alifornia, unless specifically exempted, it is unlawful for any he person holds a valld registration issued by DTSC. A hazardous ear and is assigned a unique registration number.
Date of Government Version: 04/15/2013 Date Data Arrived at EDR: 04/16/2013 Date Made Active in Reports: 05/17/2013 Number of Days to Update: 31	Source: Department of Toxic Substances Control Telephone: 916-440-7145 Last EDR Contact: 04/16/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Quarterly
HWP: EnviroStor Permitted Facilities Listing Detailed information on permitted hazardous w	aste facilities and corrective action ("cleanups") tracked in EnviroStor.
Date of Government Version: 02/25/2013 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 27	Source: Department of Toxic Substances Control Telephone: 916-323-3400 Last EDR Contact: 02/26/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Quarterly

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: 02/19/2013 Date Data Arrived at EDR: 02/20/2013 Date Made Active In Reports: 03/20/2013 Number of Days to Update: 28	Source: California Integrated Waste Management Board Telephone: 916-341-6066 Last EDR Contact: 05/20/2013 Next Scheduled EDR Contact: 09/02/2013 Data Release Frequency: Varies
Financial Assurance 1: Financial Assurance Inform Financial Assurance information	ation Listing
Date of Government Version: 03/01/2007 Date Data Arrived at EDR: 06/01/2007 Date Made Active in Reports: 06/29/2007 Number of Days to Update: 28	Source: Department of Toxic Substances Control Telephone: 916-255-3628 Last EDR Contact: 05/03/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Varies
LEAD SMELTER 1: Lead Smelter Sites A listing of former lead smelter site locations.	
Date of Government Version: 01/29/2013 Date Data Arrived at EDR: 02/14/2013 Date Made Active in Reports: 02/27/2013 Number of Days to Update: 13	Source: Environmental Protection Agency Telephone: 703-603-8787 Last EDR Contact: 04/08/2013 Next Scheduled EDR Contact: 07/22/2013 Data Release Frequency: Varies
LEAD SMELTER 2: Lead Smelter Sites A list of several hundred sites in the U.S. when may pose a threat to public health through ing	re secondary lead smelting was done from 1931and 1964. These sites estion 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
2020 COR ACTION: 2020 Corrective Action Progra The EPA has set ambitious goals for the RCR Universe. This RCRA cleanup baseline include contains a wide variety of sites. Some properti have since been cleaned up. Still others have Inclusion in the 2020 Universe does not neces	A Corrective Action program by creating the 2020 Corrective Action es facilities expected to need corrective action. The 2020 universe es are heavily contaminated while others were contaminated but not been fully investigated yet, and may require little or no remediation. sarily imply failure on the part of a facility to meet its RCRA obligations.
Date of Government Version: 11/11/2011 Date Data Arrived at EDR: 05/18/2012 Date Made Active in Reports: 05/25/2012 Number of Days to Update: 7	Source: Environmental Protection Agency Telephone: 703-308-4044 Last EDR Contact: 05/17/2013 Next Scheduled EDR Contact: 08/26/2013 Data Release Frequency: Varies
FEDLAND: Federal and Indian Lands Federally and Indian administrated lands of the of Engineers, Bureau of Reclamation, Nationa Wilderness, Wilderness Study Area, Wildlife M Department of Justice, Forest Service, Fish an	e United States. Lands Included are administrated by: Army Corps I Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Ianagement Area, Bureau of Indian Affairs, Bureau of Land Management, Id 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: 04/19/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: N/A

Parties
Source: EPA Telephone: 202-564-6023 Last EDR Contact: 04/04/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Quarterly
narge requirements.
Source: State Water Resources Control Board Telephone: 916-341-5227 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Quarterly
val System Facility Subsystem (AFS) ric Information Retrieval System (AIRS). AFS contains compliance data the U.S. EPA and/or state and local air regulatory agencies. This various stationary sources of air pollution, such es electric power plants, provides information about the air pollutants they produce. Action, neral level plant data. It is used to track emissions and compliance
Source: EPA Telephone: 202-564-5962 Last EDR Contact: 04/01/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Annually
Source: EPA Telephone: 202-564-5962 Last EDR Contact: 04/01/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Annually
dialogue between EPA, state and local environmental agencies on enforcement iolations identified as either significant or high priority. Being facility has actually violated the law only that an investigation by incy has led those organizations to allege that an unproven violation List does not rapresent e higher level of concern regarding the alleged indicates cases requiring additional dialogue batween EPA, state and ength of time the elleged violation has gone unaddressed or unresolvad.
Source: Environmental Protection Agency Telephone: 617-520-3000 Last EDR Contact: 05/10/2013

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, end 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 US Hist Auto Stat: 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 US Hist Cleaners: 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 fails 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 US Hist Cleaners: EDR Proprietary Historic Dry Cleaners - Cole

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: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR US Hist Auto Stat: EDR Proprietary Historic Gas Stations - Cole

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: N/A Telephone: N/A Last EDR Contact: N/A 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: 04/15/2013 Date Data Arrived at EDR: 04/16/2013 Date Made Active in Reports: 05/16/2013 Number of Days to Update: 30 Source: Alameda County Environmental Health Services Telephone: 510-567-6700 Last EDR Contact: 04/01/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/15/2013 Date Data Arrived at EDR: 04/16/2013 Date Made Active in Reports: 05/16/2013 Number of Days to Update: 30 Source: Alameda County Environmental Health Services Telephone: 510-567-6700 Last EDR Contact: 04/01/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 03/13/2013 Date Data Arrived at EDR: 03/14/2013 Date Made Active in Reports: 04/04/2013 Number of Days to Update: 21 Source: Amador County Environmental Health Telephone: 209-223-6439 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing Cupa facility list.

> Date of Government Version: 10/16/2012 Date Data Arrived at EDR: 10/17/2012 Date Made Active in Reports: 11/13/2012 Number of Days to Update: 27

Source: Public Health Department Telephone: 530-538-7149 Last EDR Contact: 04/26/2013 Next Scheduled EDR Contact: 04/29/2013 Data Release Frequency: Varies

CALVERAS COUNTY:

CUPA Facility Listing Cupa Facility Listing

> Date of Government Version: 04/16/2013 Date Data Arrived at EDR: 04/17/2013 Date Made Active in Reports: 05/16/2013 Number of Days to Update: 29

Source: Calveras County Environmental Health Telephone: 209-754-6399 Last EDR Contact: 04/15/2013 Next Schedulad EDR Contact: 07/15/2013 Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 01/04/2013 Date Data Arrived at EDR: 01/14/2013 Date Made Active in Reports: 03/01/2013 Number of Days to Update: 46 Source: Health & Human Services Telephone: 530-458-0396 Last EDR Contact: 05/13/2013 Next Scheduled EDR Contact: 08/26/2013 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: 04/09/2013 Date Data Arrived at EDR: 04/10/2013 Date Made Active in Reports: 05/14/2013 Number of Days to Update: 34 Source: Contra Costa Health Services Department Telephone: 925-846-2286 Last EDR Contact: 05/06/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List

Cupa Facility list

Date of Government Version: 01/09/2013 Date Data Arrived at EDR: 01/10/2013 Date Made Active in Reports: 02/25/2013 Number of Days to Update: 46 Source: Del Norte County Environmental Health Division Telephone: 707-465-0426 Last EDR Contact: 05/06/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List CUPA facility list.

> Date of Government Version: 02/27/2013 Date Data Arrived at EDR: 02/28/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 25

Source: El Dorado County Environmental Management Department Telephone: 530-621-6623 Last EDR Contact: 05/06/2013 Next Scheduled EDR Contact: 08/19/2013 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: 03/31/2013 Date Data Arrived at EDR: 04/16/2013 Date Made Active in Reports: 05/16/2013 Number of Days to Update: 30 Source: Dept. of Community Health Telephone: 559-445-3271 Last EDR Contact: 04/15/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 03/15/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 8

IMPERIAL COUNTY:

CUPA Facility List Cupa facility list.

> Date of Government Version: 05/01/2012 Date Data Arrived at EDR: 05/02/2012 Date Made Active in Reports: 06/11/2012 Number of Days to Update: 40

Source: Humboldt County Environmental Health Telephone: N/A Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Varies

Source: San Diego Border Field Office Telephone: 760-339-2777 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List Cupa facility list.

> Date of Government Version: 06/26/2012 Date Data Arrived at EDR: 06/27/2012 Date Made Active in Reports: 08/17/2012 Number of Days to Update: 51

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

> Date of Government Version: 08/31/2010 Date Data Arrived at EDR: 09/01/2010 Date Made Active in Reports: 09/30/2010 Number of Days to Update: 29

Source: Inyo County Environmental Health Services Telephone: 760-878-0238 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Varies

Source: Kern County Environment Health Services Department Telephone: 661-862-8700 Last EDR Contact: 05/10/2013 Next Scheduled EDR Contact: 08/26/2013 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: 02/12/2013 Date Data Arrived at EDR: 02/13/2013 Date Made Active in Reports: 03/21/2013 Number of Days to Update: 36 Source: Kings County Department of Public Health Telephone: 559-584-1411 Last EDR Contact: 02/12/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List Cupa facility list	
Date of Government Version: 01/23/2013 Date Data Arrived at EDR: 01/25/2013 Date Made Active in Reports: 02/27/2013 Number of Days to Update: 33	Source: Lake County Environmental Health Telephone: 707-263-1164 Last EDR Contect: 04/19/2013 Next Scheduled EDR Contact: 08/05/2013 Data Release Frequency: Varies
LOS ANGELES COUNTY:	
San Gabriel Valley Areas of Concern San Gabriel Valley areas where VOC contam	ination is et or ebove 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 Lest EDR Contact: 05/10/2013 Next Scheduled EDR Contect: 07/01/2013 Data Release Frequency: No Update Planned
HMS: Street Number List Industrial Waste and Underground Storage Ta	ank Sites.
Date of Government Version: 10/31/2012 Date Data Arrived at EDR: 12/28/2012 Date Made Active in Reports: 01/25/2013 Number of Days to Update: 28	Source: Department of Public Works Telephone: 626-458-3517 Last EDR Contact: 04/15/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Semi-Annually
List of Solid Waste Facilities Solid Waste Facilities in Los Angeles County.	· · · · · · · · · · · · · · · · · · ·
Date of Government Version: 04/24/2013 Date Data Arrived at EDR: 04/24/2013 Date Made Active in Reports: 05/17/2013 Number of Days to Update: 23	Source: La County Department of Public Works Telephone: 818-458-5185 Last EDR Contact: 04/24/2013 Next Scheduled EDR Contact: 08/05/2013 Data Release Frequency: Varies
City of Los Angeles Landfills Landfills owned and maintained by the City of	Los Angeles.
Date of Government Version: 03/05/2009 Date Data Arrived at EDR: 03/10/2009 Date Made Active in Reports: 04/08/2009 Number of Days to Update: 29	Source: Engineering & Construction Division Telephone: 213-473-7869 Last EDR Contact: 05/20/2013 Next Scheduled EDR Contact: 09/02/2013 Data Release Frequency: Varies
Site Mitigation List Industrial sites that have had some sort of spi	ll or complaint.
Date of Government Version: 01/30/2013 Date Data Arrived at EDR: 02/21/2013 Date Made Active in Reports: 03/25/2013	Source: Community Health Services Telephone: 323-890-7806 Last EDR Contact: 04/19/2013

Next Scheduled EDR Contact: 08/05/2013

Data Release Frequency; Annually

City of El Segundo Underground Storage Tank

Number of Days to Update: 32

Underground storage tank sites located in El Segundo city.

Date of Government Version: 04/22/2013 Date Data Arrived at EDR: 04/29/2013 Date Made Active in Reports: 05/17/2013 Number of Days to Update: 18 Source: City of El Segundo Fire Department Telephone: 310-524-2236 Last EDR Contact: 04/19/2013 Next Scheduled EDR Contact: 08/05/2013 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: 03/28/2003 Date Data Arrived at EDR: 10/23/2003 Date Made Active in Reports: 11/26/2003 Number of Days to Update: 34 Source: City of Long Beach Fire Department Telephone: 562-570-2563 Last EDR Contact: 04/26/2013 Next Scheduled EDR Contact: 08/12/2013 Data Release Frequency: Annually

City of Torrance Underground Storage Tank Underground storage tank sites loceted in the city of Torrance.

Date of Government Version: 04/15/2013 Date Data Arrived at EDR: 04/16/2013 Date Made Active in Reports: 05/17/2013 Number of Days to Update: 31

Source: City of Torrance Fire Department Telephone: 310-618-2973 Last EDR Contact: 04/15/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Semi-Annually

MADERA 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: 04/15/2013 Date Data Arrived at EDR: 04/16/2013 Date Made Active in Reports: 05/17/2013 Number of Days to Update: 31 Source: Madera County Environmental Health Telephone: 559-675-7823 Last EDR Contact: 04/01/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites Currently permitted USTs in Marin County.

> Date of Government Version: 11/26/2012 Date Data Arrived at EDR: 11/28/2012 Date Made Active in Reports: 01/21/2013 Number of Days to Update: 54

Source: Public Works Department Waste Management Telephone: 415-499-6647 Last EDR Contact: 04/08/2013 Next Scheduled EDR Contact: 07/22/2013 Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List CUPA facility list.

Date of Government Version: 02/25/2013 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 27 Source: Merced County Environmental Health Telephone: 209-381-1094 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 03/04/2013 Date Data Arrived at EDR: 03/08/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 17 Source: Mono County Health Department Telephone: 760-932-5580 Last EDR Contact: 03/04/2013 Next Scheduled EDR Contact: 06/17/2013 Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/14/2013 Date Data Arrived at EDR: 03/15/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 12 Source: Monterey County Health Department Telephone: 831-796-1297 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 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: 03/04/2013 Next Scheduled EDR Contact: 06/17/2013 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: 03/04/2013 Next Scheduled EDR Contact: 06/17/2013 Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List CUPA facility list.

> Date of Government Version: 03/08/2013 Date Data Arrived at EDR: 03/08/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 17

Source: Community Development Agency Telephone: 530-265-1467 Last EDR Contact: 05/17/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups Petroleum and non-petroleum spills.

Date of Government Version: 02/04/2013 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 03/20/2013 Number of Days to Update: 22 Source: Health Care Agency Telephone: 714-834-3446 Last EDR Contact: 05/10/2013 Next Scheduled EDR Contact: 08/26/2013 Data Release Frequency: Annually

List of Underground Storage Tank Cleanups Orange County Underground Storage Tank Cleanups (LÜST).

Date of Government Version: 02/04/2013 Date Data Arrived at EDR: 02/19/2013 Date Made Active in Reports: 03/20/2013 Number of Days to Update: 29 Source: Health Care Agency Telephone: 714-834-3446 Last EDR Contact: 05/10/2013 Next Scheduled EDR Contact: 08/26/2013 Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/04/2013 Date Data Arrived at EDR: 02/18/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 37

Source: Health Care Agency Telephone: 714-834-3446 Last EDR Contact: 05/10/2013 Next Scheduled EDR Contact: 08/26/2013 Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/12/2013 Date Data Arrived at EDR: 03/13/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 14 Source: Placer County Health and Human Services Telephone: 530-745-2363 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 06/24/2013 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: 04/23/2013 Date Data Arrived at EDR: 04/24/2013 Date Made Active in Reports: 05/17/2013 Number of Days to Update: 23 Source: Department of Environmental Health Telephone: 951-358-5055 Last EDR Contact: 03/25/2013 Next Scheduled EDR Contact: 07/08/2013 Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 04/23/2013 Date Data Arrived at EDR: 04/24/2013 Date Made Active in Reports: 05/16/2013 Number of Days to Update: 22 Source: Department of Environmental Health Telephone: 951-358-5055 Last EDR Contact: 03/25/2013 Next Scheduled EDR Contact: 07/08/2013 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: 02/04/2013 Date Data Arrived at EDR: 04/11/2013 Date Made Active in Reports: 05/14/2013 Number of Days to Update: 33

Source: Sacramento County Environmental Management Telephone: 916-875-8406 Last EDR Contact: 04/08/2013 Next Scheduled EDR Contact: 07/22/2013 Data Release Frequency: Quarterly

Master Hazerdous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/04/2013 Date Data Arrived at EDR: 04/12/2013 Date Made Active in Reports: 05/16/2013 Number of Days to Update: 34

Source: Sacramento County Environmental Management Telephone: 916-875-8406 Last EDR Contact: 04/08/2013 Next Scheduled EDR Contact: 07/22/2013 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: 03/04/2013 Date Data Arrived at EDR: 03/05/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 20 Source: San Bernardino County Fire Department Hazardous Materials Division Telephone: 909-387-3041 Last EDR Contact: 05/13/2013 Next Scheduled EDR Contact: 08/26/2013 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: 08/17/2012 Date Data Arrived at EDR: 08/20/2012 Date Made Active in Reports: 10/03/2012 Number of Days to Update: 44

Source: Hazardous Materials Management Division Telephone: 619-338-2268 Last EDR Contact: 04/29/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2012 Date Data Arrived at EDR: 11/06/2012 Date Made Active in Reports: 11/30/2012 Number of Days to Update: 24

Source: Department of Health Services Telephone: 619-338-2209 Last EDR Contact: 04/26/2013 Next Scheduled EDR Contact: 08/12/2013 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 Lest EDR Contact: 03/12/2013 Next Scheduled EDR Contact: 06/24/2013 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: 05/10/2013 Next Scheduled EDR Contact: 08/26/2013 Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010	Source: Department of Public Health
Date Data Arrived at EDR: 03/10/2011	Telephone: 415-252-3920
Date Made Active in Reports: 03/15/2011	Last EDR Contact: 05/10/2013
Number of Days to Update: 5	Next Scheduled EDR Contact: 08/26/2013
	Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locetions in San Joaquin county.

Date of Government Version: 03/25/2013 Date Data Arrived at EDR: 03/25/2013 Date Made Active in Reports: 04/18/2013 Number of Days to Update: 24 Source: Environmental Health Department Telephone: N/A Last EDR Contact: 03/25/2013 Next Scheduled EDR Contact: 07/08/2013 Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List Cupa Facility List.

Date of Government Version: 02/26/2013 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 27

Source: San Luis Obispo County Public Health Department Telephone: 805-781-5596 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 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: 04/09/2013 Date Data Arrived at EDR: 04/10/2013 Date Made Active in Reports: 05/14/2013 Number of Days to Update: 34 Source: San Mateo County Environmental Health Services Division Telephone: 650-363-1921 Last EDR Contact: 03/18/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites loceted in San Mateo county.

Date of Government Version: 03/18/2013 Date Data Arrived at EDR: 03/19/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 8 Source: San Mateo County Environmental Health Services Division Telephone: 650-363-1921 Last EDR Contact: 03/18/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011Source: Santa Barbara County Public Health DepartmentDate Data Arrived at EDR: 09/09/2011Telephone: 805-686-8167Date Made Active in Reports: 10/07/2011Last EDR Contact: 05/20/2013Number of Days to Update: 28Next Scheduled EDR Contact: 06/10/2013Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 03/04/2013 Date Data Arrived at EDR: 03/05/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 20

Source: Department of Environmental Health Telephone: 408-918-1973 Last EDR Contact: 03/04/2013 Next Scheduled EDR Contact: 06/17/2013 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: 03/04/2013 Date Data Arrived at EDR: 03/06/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 19 Source: Department of Environmental Health Telephone: 408-918-3417 Last EDR Contact: 03/04/2013 Next Scheduled EDR Contact: 06/17/2013 Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/12/2013 Date Data Arrived at EDR: 02/14/2013 Date Made Active in Reports: 03/20/2013 Number of Days to Update: 34 Source: City of San Jose Fire Department Telephone: 408-535-7694 Last EDR Contact: 05/13/2013 Next Scheduled EDR Contact: 08/26/2013 Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 02/26/2013 Date Data Arrived at EDR: 02/26/2013 Date Made Active in Reports: 03/20/2013 Number of Days to Update: 22 Source: Santa Cruz County Environmental Health Telephone: 831-464-2761 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List Cupa Facility List.

Date of Government Version: 03/15/2013 Date Data Arrived at EDR: 03/15/2013 Date Made Active In Reports: 03/27/2013 Number of Days to Update: 12 Source: Shasta County Department of Resource Management Telephone: 530-225-5789 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 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: 03/20/2013 Date Data Arrived at EDR: 03/28/2013 Date Made Active in Reports: 05/14/2013 Number of Days to Update: 47 Source: Solano County Department of Environmental Management Telephone: 707-784-6770 Last EDR Contact: 03/18/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 03/20/2013 Date Data Arrived at EDR: 03/28/2013 Date Made Active in Reports: 05/13/2013 Number of Days to Update: 46 Source: Solano County Department of Environmental Management Telephone: 707-784-6770 Last EDR Contact: 03/18/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List

Cupa Facility list

Date of Government Version: 04/01/2013 Date Data Arrived at EDR: 04/03/2013 Date Made Active in Reports: 05/14/2013 Number of Days to Update: 41 Source: County of Sonoma Fire & Emergency Services Department Telephone: 707-565-1174 Last EDR Contact: 04/01/2013 Next Scheduled EDR Contact: 07/15/2013 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: 04/02/2013 Date Data Arrived at EDR: 04/03/2013 Date Made Active in Reports: 05/14/2013 Number of Days to Update: 41 Source: Department of Health Services Telephone: 707-565-6565 Last EDR Contact: 04/01/2013 Next Scheduled EDR Contact: 07/15/2013 Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 03/13/2013 Date Data Arrived at EDR: 03/14/2013 Date Made Active in Reports: 03/27/2013 Number of Days to Update: 13 Source: Sutter County Department of Agriculture Telephone: 530-822-7500 Last EDR Contact: 03/11/2013 Next Scheduled EDR Contact: 06/24/2013 Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List Cupa facility list

Date of Government Version: 01/14/2013

Date Data Arrived at EDR: 01/16/2013 Date Made Active in Reports: 02/27/2013 Number of Days to Update: 42 Source: Divison of Environmental Health Telephone: 209-533-5633 Last EDR Contact: 05/15/2013 Next Scheduled EDR Contact: 07/29/2013 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 Producar (W), and/or Underground Tank (T) information.

Date of Government Version: 03/30/2012 Date Data Arrived at EDR: 05/25/2012 Date Made Active in Reports: 07/06/2012 Number of Days to Update: 42 Source: Ventura County Environmental Health Division Telephone: 805-654-2813 Last EDR Contact: 05/20/2013 Next Scheduled EDR Contact: 09/02/2013 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	
Number of Daya to opuate. 45	

Source: Environmental Health Division Telephone: 805-654-2813 Last EDR Contact: 04/08/2013 Next Scheduled EDR Contact: 07/22/2013 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: 02/18/2013 Next Scheduled EDR Contact: 06/03/2013 Data Release Frequency: Quarterly a de la serie

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: 01/28/2013 Date Data Arrived at EDR: 02/01/2013 Date Made Active in Reports: 03/20/2013 Number of Days to Update: 47 Source: Ventura County Resource Management Agency Telephone: 805-654-2813 Last EDR Contact: 01/29/2013 Next Scheduled EDR Contact: 05/13/2013 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: 03/01/2013 Date Data Arrived at EDR: 03/28/2013 Date Made Active in Reports: 05/13/2013 Number of Days to Update: 46 Source: Environmental Health Division Telephone: 805-654-2813 Last EDR Contact: 03/18/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report Underground storage tank sites located in Yolo county.

Date of Government Version: 03/25/2013 Date Data Arrived at EDR: 03/29/2013 Date Made Active in Reports: 05/13/2013 Number of Days to Update: 45 Source: Yolo County Department of Health Telephone: 530-666-8646 Last EDR Contact: 03/25/2013 Next Scheduled EDR Contact: 07/08/2013 Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List CUPA facility listing for Yuba County.

> Date of Government Version: 03/05/2013 Date Data Arrived et EDR: 03/06/2013 Date Made Active in Reports: 03/25/2013 Number of Days to Update: 19

Source: Yuba County Environmental Health Department Telephone: 530-749-7523 Last EDR Contact: 05/20/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specially 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: 02/18/2013 Date Data Arrived at EDR: 02/18/2013 Date Made Active in Reports: 03/21/2013 Number of Days to Update: 31 Source: Department of Energy & Environmental Protection Telephone: 860-424-3375 Last EDR Contact: 02/18/2013 Next Scheduled EDR Contact: 06/03/2013 Data Release Frequency: Annually

NJ MANIFEST: Manifest Information Hazardous waste manifest Information.		
Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 07/19/2012 Date Made Active in Reports: 08/28/2012 Number of Days to Update: 40	Source: Department of Environmental Protection Telephone: N/A Last EDR Contact: 04/19/2013 Next Scheduled EDR Contact: 07/29/2013 Data Release Frequency: Annually	· ·
NY MANIFEST: Facility and Manifest Data Manifest is a document that lists and tracks h facility.	azardous waste from the generator through transporters to a `	TSD
Date of Government Version: 02/01/2013 Date Data Arrived at EDR: 02/07/2013 Date Made Active in Reports: 03/15/2013 Number of Days to Update: 36	Source: Department of Environmental Conservation Telephone: 518-402-8651 Last EDR Contact: 05/09/2013 Next Scheduled EDR Contact: 08/19/2013 Data Release Frequency: Annually	
PA MANIFEST: Manifest Information Hazardous waste manifest information.		
Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 07/23/2012 Date Made Active in Reports: 09/18/2012 Number of Days to Update: 57	Source: Department of Environmental Protection Telephone: 717-783-8990 Last EDR Contact: 04/23/2013 Next Scheduled EDR Contact: 08/05/2013 Data Release Frequency: Annually	
RI MANIFEST: Manifest information Hazardous waste manifest information		
Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 06/22/2012 Date Made Active in Reports: 07/31/2012 Number of Days to Update: 39	Source: Department of Environmental Management Telephone: 401-222-2797 Last EDR Contact: 02/25/2013 Next Scheduled EDR Contact: 06/10/2013 Data Release Frequency: Annually	
WI MANIFEST: Manifest Information Hazardous waste manifest information.		
Date of Government Version: 12/31/2011 Date Data Arrived at EDR: 07/19/2012 Date Made Active in Reports: 09/27/2012 Number of Days to Update: 70	Source: Department of Natural Resources Telephone: N/A Last EDR Contact: 03/18/2013 Next Scheduled EDR Contact: 07/01/2013 Data Release Frequency: Annually	

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data Source: Rextag Strategies Corp. Telephone: (281) 769-2247 U.S. Electric Transmission and Power Plants Systems Digital GIS Data

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 e 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 Madicare 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. Davcare Centers: Licensed Facilities Source: Department of Social Services Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK[®]- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PROPERTY AT 1700 EMBARCADERO ROAD PALO ALTO, CA 94303

TARGET PROPERTY COORDINATES

 Latitude (North):
 37.4495

 Longitude (West):
 122.1191

 Universal Tranverse Mercator:
 Zone 10

 UTM X (Meters):
 577917.5

 UTM Y (Meters):
 4144898

 Elevation:
 8 ft. abov

37.4495 - 37° 26' 58.20" 122.1191 - 122° 7' 8.76" Zone 10 577917.9 4144898.8 8 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	37122-D1 MOUNTAIN VIEW, CA
Most Recent Revision:	1999
West Map:	37122-D2 PALO ALTO, CA
Most Recent Revision:	1999

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and

2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE



Source: Topography has been determined from the USGS 7.5' 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.

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES

GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County SANTA CLARA, CA	FEMA Flood <u>Electronic Data</u> YES - refer to the Overview Map and Detail Map
Flood Plain Panel at Target Property:	06085C - FEMA DFIRM Flood data
Additional Panels in search area:	0607080001A - FEMA Q3 Flood data
NATIONAL WETLAND INVENTORY	NW// Electronic
<u>NWI Quad at Target Property</u> MOUNTAIN VIEW	Data Coverage YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*: 1.25 miles Search Radius: Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	
2	

GENERAL DIRECTION GROUNDWATER FLOW 1/2 - 1 Mile NW NE

For additional site information, refer to Physical Setting Source Map Findings.

LOCATION

FROM TP

GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more guickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

 Era:
 Cenozoic
 Category:
 Stratifed Sequence

 System:
 Quaternary

 Series:
 Quaternary

 Code:
 Q
 (decoded above as Era, System & Series)

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	REYES
Soil Surface Texture:	clay
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Somewhat poorly. Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet.
Hydric Status: Soil does not meet the	requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min:	> 60 inches

Depth to Bedrock Max:	> 60 inches
GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

	Soil Layer Information						
	Bou	Indary		Classi	fication		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 0.20 Min: 0.06	Max: 6,50 Min: 3,60
2	14 Inches	63 Inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayøy Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 0.20 Min: 0.06	Max: 6.00 Min: 3.60

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures:	mucky - clay silty clay loam loam clay loam silt loam
Surficial Soil Types:	mucky - clay silty clay loam loam clay loam silt loam
Shallow Soil Types:	clay
Deeper Soil Types:	mucky - clay cobbly - clay loam clay loam stratified

LOCAL / REGIONAL WATER AGENCY RECORDS

silty clay loam

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000 Nearest PWS within 1 mile
State Database	1.000
· · · · · · · · · · ·	

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000183265	1/8 - 1/4 Mile NNW
A3	USGS40000183192	1/2 - 1 Mile SE
A4	USGS40000183182	1/2 - 1 Mile SE
A5	USGS40000183188	1/2 - 1 Mile SE
A6	USGS40000183181	1/2 - 1 Mile SE
87	USGS40000183191	1/2 - 1 Mile SE
A8	USGS40000183186	1/2 - 1 Mile SE
A9	USGS40000183187	1/2 - 1 Mile SE
B10	USGS40000183194	1/2 - 1 Mile SE
A11	USGS40000183180	1/2 - 1 Mile SE
A12	USGS40000183175	1/2 - 1 Mile SE
B13	USGS40000183185	1/2 - 1 Mile SE
A14	USGS40000183178	1/2 - 1 Mile SE
A15	USGS40000183179	1/2 - 1 Mile SE
B16	USGS40000183177	1/2 - 1 Mile SE
B20	USGS40000183174	1/2 - 1 Mile SE
B21	USGS40000183173	1/2 - 1 Mile SE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

		LOCATION
Map ID	WELL ID	FROM TP
		·

No PWS System Found

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
C17	CADW50000028901	1/2 - 1 Mile ESE
C18	CADW50000028900	1/2 - 1 Mile ESE
C19	CADW50000028899	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 3611943.2s



SITE NAME: Property At	CLIENT: Romig Consulting Engineers
ADDRESS: 1700 Embarcadero Road	CONTACT: Chris Palmer
Palo Alto CA 94303	INQUIRY #: 3611943.2s
LAT/LONG: 37.4495 / 122.1191	DATE: May 20, 2013 5:18 pm

Public Water Supply Wells

Cluster of Multiple Icons

®

Map ID Direction Distance

Distance Elevation					Database	EDR ID Number
1 NNW 1/8 - 1/4 Mile Higher					FED USGS	USGS40000183265
Org. Identifie	r:	USGS-CA		Orantea		· .
Formal name): 	USGS California	a Water Science	Center		:
Monioc Ident	11101:	0565-3727081	22070801			4
Monioc name	9;	00550027731KU				
Monioc type:	_	vveli Net December				1.4
Monioc desc		NOT Reported			Not Boooded	
Huc code;	- I luiter	Net Depended		Contrib drainagearea	Not Reported	
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Vert coord re	feve	NGVD29	in topographic me	Countrycode:	US	
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Formation for	• •	Not Reported				
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Ground-water	r levels, Numb Feet below Surface	er of Measureme Feet to Sealevel	ents: 1	· .		
1980-07-03 Note: Injec	10.75 tor site monito	r (a nearby site tl	hat taps the same	e aquifer was injecting rechar	ge water).	
2	Site ID:		890015			
NW	Groundwater	Flow:	NE		AQUIFLOW	50008
1/2 - 1 Mile Higher	Shallow Wate	er Depth:	8		1	
ruguer	Deep Water I	Depth:	12			
	Average Wate	er Depth:	Not Reported			
	Date:		11/1998			
A3 SE 1/2 - 1 Mile Lower					FED USGS	USGS40000183192
Org. Identifie Formal name Monloc Ident Monloc name Monloc type: Monloc desc: Huc code:	r: :: :: ::	USGS-CA USGS California USGS-3726291 006S002W05F0 Well Not Reported 18050003	a Water Science 22062301 001M	Center Drainagearea value:	Not Reported	
Drainagearea Contrib drain Longitude:	a Units: agearea units:	Not Reported Not Reported -122.1074631		Contrib drainagearea: Latitude: Sourcemap scale:	Not Reported 37.4413281 24000	

Horiz Acc measure:	1	Horiz Acc measure units:	seconds	
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Vert measure units:	Not Reported	Vertacc measure val:	Not Reported	1
Vert accmeasure units:	Not Reported			
Vertcollection method:	Not Reported		110	
Vert coord reisys:	Not Reported	Countrycode:	05	
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Ground-water levels, Numb	er of Measurements: 0		· · · · ·	
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A4 SE			FED USGS	USGS40000183182
1/2 - 1 Mile				
Lowel				
Org. Identifier:	USGS-CA			
Formal name:	USGS California Water Science (Center		
Monloc Identifier:	USGS-372627122062301			
Monloc name:	006S002W05F002M			
Monloc type:	Well			
Monloc desc:	Not Reported			
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Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drainagearea units:	Not Reported	Latitude:	37.4407726	
Longitude:	-122.1074631	Sourcemap scale:	24000	
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Vert coord refsys:	Not Reported	Countrycode:	US	
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Formation type:	Not Reported			
Aquifer type:	Not Reported			
Construction date:	19800424	Welldepth:	Not Reported	
Welldepth units:	Not Reported	Wellholedepth:	Not Reported	
Wellholedepth units:	Not Reported			
Ground-water levels, Numb	er of Measurements: 1			
Feet below	Feet to			

Date Surface Sealevel

1980-08-06 4.14

Note: Injector site monitor (a nearby site that taps the same aquifer was injecting recharge water).

FED USGS USGS40000183188

Org. Identifier: Formal name: Monloc Identifier: Monloc name: Monloc type:	USGS-CA USGS California Water Science (USGS-372628122062001 006S002W05F003M Well	Center		
Monloc desc: Huc code: Drainagearea Units: Contrib drainagearea units: Longitude: Horiz Acc measure:	Not Reported 18050003 Not Reported Not Reported -122.1066298 1	Drainagearea value: Contrib drainagearea: Latitude: Sourcemap scale: Horiz Acc measure units:	Not Reported Not Reported 37.4410504 24000 seconds	
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A6 SE 1/2 - 1 Mile			FED USGS	USGS40000183181
Org. Identifier: Formal name: Monloc Identifier: Monloc name: Monloc type: Monloc desc:	USGS-CA USGS California Water Science C USGS-372627122062101 006S002W05F008M Well Not Reported	Center		
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B7 SE				FED USGS	USGS40000183191
1/2 - 1 Mile			. · · .		
Lower					
Org. Identil	ler:	USGS-CA			·
Formal nar	ne:	USGS California Water Science	Center		
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Huc code:		18050003	Drainagearea value:	Not Reported	
Drainagear	ea Units:	Not Reported	Contrib drainagearea:	Not Reported	
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Date	Surface	Sealevel			
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Note: Inj	ector site monito	r (a nearby site that taps the same	e aquifer was injecting rechar	rge water).	
				t a change and a	
AB SE				FED USGS	USGS40000183186
1/2 - 1 Mile Lower				•	
Org. Identil	ier:	USGS-CA			
Formal nar	ne:	USGS California Water Science	Center		
Monloc Ide	ntifier:	USGS-372628122061901			
Monloc nar	ne:	006S002W05F011M			
Monloc typ	e:	Well Not Depoted			
Hue code:	5G.		Drainanearea value:	Not Reported	
Drainagear	ea Units:	Not Reported	Contrib drainagearea:	Not Reported	
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Latitude: Sourcemap scale:

Drainagearea Units: Not Reported Contrib drainagearea units: Not Reported Longitude: -122.106352

TC3611943.2s Page A-11

24000

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9				EED LISCS	1156540000183187
2 - 1 Mile					000040000100101
ower				·	
Org. Identifi	ier:	USGS-CA			
Formal nam	ie:	USGS California Water Science	e Center		1 1
Monloc Ider	ntifier:	USGS-372628122061902			· · · ·
Monloc nam	ne:	006S002W05F012M			
Monloc type	ə :	Well			
Monloc des	c:	Not Reported			
Huc code:		18050003	Drainagearea value:	Not Reported	
Drainageare	ea Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drai	inagearea units:	Not Reported	Latitude:	37. 4 410504	
Longitude:		-122.106352	Sourcemap scale:	24000	
Horiz Acc m	neasure:	1	Horiz Acc measure units:	seconds	
Horiz Collec	ction method:	Interpolated from map			
Horiz coord	refsys:	NAD83	Vert measure val:	Not Reported	
Vert measu	re units:	Not Reported	Vertacc measure val:	Not Reported	
Vert accmea	asure units:	Not Reported			
Vertcollectio	on method:	Not Reported			
Vert coord r	refsys:	Not Reported	Countrycode:	US	
Aquifemam	e:	California Coastal Basin aquifer	rs		
Formation ty	ype:	Not Reported			
Aquifer type	9:	Not Reported			
Construction	n date:	19800513	Welldepth:	Not Reported	
Welldepth u	inits:	Not Reported	Wellholedepth:	Not Reported	
Mallholadar	oth units:	Not Reported			

Ground-water levels, Number of Measurements: 1

Feet below Feet to Date Surface Sealevel

••••••

1980-07-22 2.53

Note: injector site monitor (a nearby site that taps the same aquifer was injecting recharge water).

Map ID Direction				
Distance Elevation			Database	EDR ID Number
B10		-		
SE di Mila			FED USGS	USGS40000183194
Lower				
Ora Identifier:	USGS-CA			
Formal name	USGS California Water Science	Center		
Monloc Identifier:	USGS-372630122061701			
Monloc name:	006S002W05F006M			
Monioc type:	Well			
Monloc desc:	Not Reported			
Huc code:	18050003	Drainagearea value:	Not Reported	
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drainagearea unit	s: Not Reported	Latitude:	37.4416059	
Longitude:	-122.1057964	Sourcemap scale:	24000	
Horiz Acc measure:	1	Horiz Acc measure units:	seconds	· · ·
Horiz Collection method:	Interpolated from map			
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported	· · · · ·
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported	
Vert accmeasure units:	Not Reported			
Vertcollection method:	Not Reported			
Vert coord refsys:	Not Reported	Countrycode:	US	· · · · · · · · · · · · · · · · · · ·
Aquifername:	California Coastal Basin aquifers	5		. t.
Formation type:	Not Reported			
Aquifer type:	Not Reported			
Construction date:	19800508	Welldepth:	Not Reported	
Welldepth units:	Not Reported	Wellholedepth:	Not Reported	
Wellholedepth units:	Not Reported			
Ground-water levels, Nun	ber of Measurements: 1			
Feet below	Feet to			
Date Surface	Sealevel			
4000 07 00 0 00	*****			
1980-07-30 2.96 Note: Injector site moni	tor (a nearby site that tans the sam	e aquifer was injecting rechar	me water)	
			go natoly.	
A11				
SE			FED USGS	USGS40000183180
1/2 - 1 Mile Lower				
Org. Identifier:	USGS-CA			
Formal name:	USGS California Water Science	Center		
Monloc Identifier:	USGS-372627122062001			
Monloc name:	006S002W05F009M			
Manloc type:	Well			
Monloc desc:	Not Reported			
Huc code:	18050003	Drainagearea value:	Not Reported	
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drainagearea unit	s: Not Reported	Latitude:	37. 44 07726	
Longitude:	-122.1066298	Sourcemap scale:	24000	
Horiz Acc measure:	1	Horiz Acc measure units:	seconds	
Horiz Collection method:	Interpolated from map			
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported	
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported	
Vert accmeasure units:	Not Reported			
vertcollection method:	Not Reported	Onumbers 1	110	
Vert coord reisys:	Not Reported	Countrycode:	05	
Aquirername:	Valionia Coastal Basin aquifers	i		
Formation type:	Not Reputed			

Aquifer type: Construction Welldepth un Wellholedept	date: its: h units:	Not Reported 19800505 Not Reported Not Reported	Welldepth: Wellholedepth:	Not Reported Not Reported	
Ground-wate	r levels, Numb	er of Measurements: 1			
Data	Feet below	Feet to			
	Sunace				
1980-07-31 Note: Injec	3.15 tor site mo⊓ito	r (a nearby site that taps the same	e aquifer was injecting recharge	e water).	
A12					1156540000183175
SE 1/2 - 1 Mile Lower				FED 0303	030340000103173
Org. Identifie	r:	USGS-CA			
Formal name	:	USGS California Water Science	Center		
Monioc Identi	ifier:	USGS-372626122062101			
Monioc name	r:	006S002W05F007M			
Monioc type: Monioc desc:		Not Reported			
Huc code:		18050003	Drainagearea value:	Not Reported	
Drainagearea	Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drain	agearea units:	Not Reported	Latitude:	37.4404948	
Longitude:	-	-122.1069076	Sourcemap scale:	24000	
Horiz Acc me	asure:	1	Horiz Acc measure units:	seconds	
Horiz Collecti	on method:	Interpolated from map		Net Deperted	
Honz coord re	etsys:	NAU83 Not Reported	Vertacc measure val:	Not Reported	
Vert accrease	unnis. sure units:	Not Reported	vertace measure val.	Notitepoiled	
Vertcollection	method:	Not Reported			
Vert coord re	isys:	Not Reported	Countrycode:	US	
Aquifername:		California Coastal Basin aquifers	1		
Formation typ) 0 :	Not Reported			
Aquifer type:		Not Reported			
Construction	date:	19800502	Welldepth:	Not Reported	
Welldepth un	IIS: h unite:	Not Reported	weimoledepin:	Not Reported	
Ground wate	r lovole. Numb	or of Maasurements: 1			
Ground-wate	Feet below	Feet to			
Date	Surface	Sealevel			
1980-07-29 Note: Injec	3.99 tor site monito	r (a nearby site that taps the same	e aquifer was injecting recharge	e water).	
B13					
SE 1/2 - 1 MBo				FED USGS	USGS40000183185
Lower					
Org. Identifie	r:	USGS-CA	Captor		
Formal name	ii Nor	USGS_372628122061801	Center		
Monioc ruent		006S002W05E004M			
Monloc type:	~	Well			
Monioc desc	:	Not Reported			
Huc code:		18050003	Drainagearea value:	Not Reported	
Dreinagearea	a Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drain	agearea units:	Not Reported	Latitude:	37.4410504	
Longitude:		-122.1060742	Sourcemap scale:	24000	

Horiz Accin	neasure:	1 International forms man	Horiz Acc measure units:	seconds	
Horiz Colle	cuon methoo:		Vert measure val	Not Reported	· · · · · · · · · · · · · · · · · · ·
Vert measu	reisys. Ire units:	Not Reported	Vertacc measure val.	Not Reported	
Vert accme	asure unite:	Not Reported	Voltaco monouro Val.	Not Reported	
Vertcollecti	on method:	Not Reported			
Vert coord i	rofeve:	Not Reported	Countrycode:	US	
Aquifernam	101393.	California Coastal Basin aquifers	Courta yeode.	00	
Formation f	ivne:	Not Reported			
Aquifer type	e.	Not Reported			
Constructio	n date:	19800512	Welldeoth [,]	Not Reported	5
Welldenth r	inits:	Not Reported	Wellholedepth:	Not Reported	
Wellholede	pth units:	Not Reported			
Ground-wa	ter levels, Numb	er of Measurements: 1			
	Feet below	Feet to			
Date	Surface	Sealevel			
1000 07 20					
Note: Inie	ector site monito	r (a nearby site that taps the same	e aquifer was injecting recharg	e water).	
				·	
A14					
SE				FED USGS	USGS40000183178
Lower					
Org. Identifi	ier:	USGS-CA			
Formal nam	ne:	USGS California Water Science (Center		
Monloc Ider	ntifier:	USGS-372627122061901			
Monloc nan	ne:	006S002W05F015M			
Montoc type	ə:	Well		:	
Monioc des	C:	Not Reported			
Huc code;		18050003	Drainagearea value:	Not Reported	
Drainagear	ea Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drai	inagearea units:	Not Reported	Latitude:	37.4407726	5
Longitude:		-122.106352	Sourcemap scale:	Not Reported	
Horiz Acc m	neasure:	Unknown	Horiz Acc measure units:	Unknown	
Horiz Collec	ction method:	Interpolated from map			
Horiz coord	refsys:	NAD83	Vert measure val:	Not Reported	
Vert measu	re units:	Not Reported	Vertacc measure val:	Not Reported	
Vert accme	asure units:	Not Reported			
Vertcollectio	on method:	Not Reported			
Vert coord r	refsys:	Not Reported	Countrycode:	US	
Aquifernam	e:	California Coastal Basin aquifers			
Formation t	урө:	Alluvial Fan Deposits			
Aquifer type	9:	Not Reported			
Constructio	n date:	Not Reported	Welldepth:	Not Reported	
Welldepth u	14	No.4 December J	القامالا المرامم أمرا المرابع	ALL TO CALLED	
	inits:	Not Reported	weinoledeptn:	Not Reported	
Wellholede	pth units:	Not Reported	weinoledeptn:	Not Reported	

Ground-water levels, Number of Measurements: 0



FED USGS USGS40000183179

Org. Identifier:	USGS-CA				
Formal name:	USGS California Water Science Center				
Monioc Identifier:	USGS-372627122061902				
Monioc name:	006S002W05F010M				
Monioc type:	Well				
Monloc desc:	Not Reported				
Huc code:	18050003	Drainagearea value:	Not Reported		
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported		
Contrib drainagearea units:	Not Reported	Latitude:	37.4407726		
Longitude:	-122.106352	Sourcemap scale:	24000		
Horiz Acc measure:	1	Horiz Acc measure units:	seconds		
Horiz Collection method:	Interpolated from map				
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported		
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported		
Vert accmeasure units:	Not Reported				
Vertcollection method:	Not Reported				
Vert coord refsys:	Not Reported	Countrycode:	US		
Aquifername:	California Coastal Basin aquifers		1. J.		
Formation type:	Not Reported				
Aquifer type:	Not Reported				
Construction date:	19800515	Welldepth:	Not Reported		
Walldepth units:	Not Reported	Wellholedepth:	Not Reported		
Wellholedepth units:	Not Reported				

Ground-water levels, Number of Measurements: 1

Feet below Feet to Date Surface

Sealavel -----

1980-07-21 3.77

Note: Injector site monitor (a nearby site that taps the same aquifer was injecting recharge water).

B16 SE 1/2 - 1 Mile Lower			FED USGS
Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science (Center	
Monloc Identifier:	USGS-372627122061701		
Monloc name:	006S002W05F013M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18050003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.4407 7 26
Longitude:	-122.1057964	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Honz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

TC3611943.2s Page A-16

USGS40000183177

Aquifer type Constructior Welldepth u Wellholedep	: n date: nits: th units:	Not Reported 19800520 Not Reported Not Reported	Welldepth: Wellholedepth:	•	Not Reported Not Reported	
Ground-wate	er levels, Num Feet below Surface	ber of Measurements: 1 Feet to Sealevel			·	
	3.28 ctor site monit	or (a nearby site that taps the sa	me aquifer was injecti	ng recharge	water).	
C17 ESE 1/2 - 1 Mile Lower					CA WELLS	CADW50000028901
Latitude : Longitude : Site code: Local well:		37.44288 122.10388 374429N1221039W003 06S02W05F003 42	Casgem sta: Casgem s 1:		06S02W05F003M Observation	
Basin cd: Org unit n:		43 2-9.02 North Central Region Office	Basin desc: Site id:		Santa Clara CADW50000028901	
C18 ESE 1/2 - 1 Mile Lower					CA WELLS	CADW50000028900
Latitude :		37 44288				
Longitude :		122.10388				
Site code:		374429N1221039W001	Casgem sta:		06S02W05F001M	
Local well:		06S02W05F001	Casgem s 1:		Observation	
County id:		43				
Basin cd: Org unit n:		2-9.02 North Central Region Office	Basin desc: Site ld:		Santa Clara CADW50000028900	
C19 ESE 1/2 - 1 Mile Lower					CAWELLS	CADW50000028899
Latituda		37 44287				
Longitude ·		122 10388				
Site code:		374429N1221039W002	Casoem sta:		06S02W05F002M	
Local well		06S02W05F002	Casoem s 1:		Observation	
County id:		43				
Basin cd:		2-9.02	Basin desc:		Santa Clara	
Org unit n:		North Central Region Office	Site id:		CADW50000028899	
Basin cd: Org unit n:		2-9.02 North Central Region Office	Basin desc: Site id:		Santa Clara CADW50000028899	

B20 SE 1/2 - 1 Mile Lower

FED USGS USGS40000183174

Formal name: USGS California Water Science Center	
Monloc Identifier: USGS-372626122061701	
Monloc name: 006S002W05F014M	
Monfoc type: Well	
Monioc desc: Not Reported	
Huc code: 18050003 Drainagearea va	lue: Not Reported
Drainagearea Units: Not Reported Contrib drainage	area: Not Reported
Contrib drainagearea units: Not Reported Latitude:	37.4404948
Longitude: -122.1057964 Sourcemap scale	e: 24000
Horiz Acc measure: 1 Horiz Acc measu	ure units: seconds
Horiz Collection method: Interpolated from map	
Horiz coord refsys: NAD83 Vert measure val	I: Not Reported
Vert measure units: Not Reported Vertacc measure	e val: Not Reported
Vert accrneasure units: Not Reported	
Vertcollection method: Not Reported	
Vert coord refsys: Not Reported Countrycode:	US
Aquifername: California Coastal Basin aquifers	
Formation type: Not Reported	
Aquifer type: Not Reported	
Construction date: 19800521 Welldepth:	Not Reported
Welldepth units: Not Reported Wellholedepth:	Not Reported
Wellholedepth units: Not Reported	

Ground-water levels, Number of Measurements: 1 Feet below Feet to Date Surface Sealevel

••••••

1980-07-23 3.14

Note: Injector site monitor (a nearby site that taps the same aquifer was injecting recharge water).

B21 SE 1/2 - 1 Mile Lower			FED USGS	US GS 40000183173
Org. Identifier:	USGS-CA			
Formal name:	USGS California Water Science C	Center		
Monloc Identifier:	USGS-372626122061601			
Monloc name:	006S002W05G001M			
Monloc type:	Well			
Monloc desc:	Not Reported			
Huc code:	18050003	Drainagearea value:	Not Reported	
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported	
Contrib drainagearea units:	Not Reported	Latitude:	37.4404948	
Longitude:	-122.1055186	Sourcemap scale:	24000	
Horiz Acc measure:	1	Horiz Acc measure units:	seconds	
Honz Collection method:	Interpolated from map			
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported	
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported	
Vert accmeasure units:	Not Reported			
Vertcollection method:	Not Reported			
Vert coord refsys:	Not Reported	Countrycode:	ŲS	
Aquifername:	California Coastal Basin aquifers			
Formation type:	Not Reported			

TC3611943.2s Page A-18

Aquifer type: Construction date: Welldepth units: Wellholedepth units: Not Reported 19800523 Not Reported Not Reported

Welldepth: Wellholedepth: Not Reported Not Reported

Ground-water levels, Number of Measurements: 1 Feet below Feet to Date Surface Sealevel

1980-07-17 2.76

Note: Injector site monitor (a nearby site that taps the same aquifer was injecting recharge water).

AREA RADO	INFORMATION					e statu e	n de la della d Nel della d	an an taon Na san ang sa
st	tate Database: CA R	tadon						
	Radon Test Results	S		·····	. : .			1995 - 1997 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -
Zij	pcode	Num Tests	> 4 pCi/L			• 1 •		• . •
94	1303	20	0					
Federal EPA	Radon Zone for SA	NTA CLARA County:	2					
Note: Zone : Zone	e 1 indoor average i e 2 indoor average i	evei > 4 pCi/L. evel >= 2 pCi/L and <	≍=4 pCi/L.			· .	·	

: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 94303

Number of sites tested: 1

Area	Average Activity	% <4 pCi/l.	% 4-20 pCi/L	% >20 pCi/L	
Living Area - 1st Floor Living Area - 2nd Floor Basement	0.300 pCi/L Not Reported Not Reported	100% Not Reported Not Reported	0% Not Reported Not Reported	0% Not Reported Not Reported	

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal. Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOWR Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Belkman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Datebase

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS) Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS) This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database Source: Department of Water Resources Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Health Services

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984, It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations Source: Department of Conservation Telephone: 916-323-1779 Oil and Gas well locations in the state.

RADON

State Database: CA Radon Source: Department of Health Services Telephone: 916-324-2208 Radon Databasa for California

Area Radon Information

Source: USGS Telephone: 703-356-4020 The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected et private sources such as universities and research Institutions.

EPA Radon Zones Source: EPA Telephone: 703-356-4020 Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for alevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX F

EDR CITY DIRECTORY ABSTRACT REPORT

(Provided on attached CD)

Property At

1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.6 May 21, 2013

The EDR-City Directory Abstract

الأجامع والمراجع والمراجع والمتعاد والمعاد والمعادي والمعادي والمعادي والمعادي والمعادي والمعاد والمعادي والمعا

Environmental Data Resources Inc

440 Wheelers Farms Road Milford, CT 06461 800.352.0050 www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

a se tra e

Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract 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 Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2012. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2012	Cole Information Services	-	х	Х	-
	Cole Information Services	Х	х	Х	-
2007	Cole Information Services	-	х	Х	-
	Cole Information Services	Х	х	Х	-
2006	Haines Company, Inc.	-	-	-	-
2001	Haines & Company, Inc.	Х	х	Х	-
2000	Haines & Company	-	-	-	-
1996	Pacific Bell	-	-	-	-
1991	PACIFIC BELL WHITE PAGES	х	х	Х	-
1986	Pacific Bell	Х	х	Х	-
	Pacific Telephone	Х	х	Х	-
1985	Pacific Bell	-	х	Х	-
1982	Pacific Telephone	-	х	х	-
1980	Pacific Telephone	-	х	Х	-
1978	R. L. Polk & Co.	Х	х	Х	-
1975	Pacific Telephone	-	Х	Х	-
1974	R. L. Polk & Co.	-	-	-	-
1970	R. L. Polk & Co.	Х	х	Х	-
1968	R. L. Polk & Co.	-	-	-	-
1966	R. L. Polk & Co.	-	-	-	-
1965	R. L. Polk & Co.	-	х	Х	-
1964	R. L. Polk & Co.	-	-	-	-
1963	Pacific Telephone	-	-	-	-
1962	R. L. Polk & Co.	-	х	х	-
1960	R. L. Polk & Co.	-	х	х	-

EXECUTIVE SUMMARY

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adioining</u>	<u>Text Abstract</u>	<u>Source Image</u>
1957	Pacific Telephone	-	х	х	•
1955	R.L. Polk and Co Publishers	<u>.</u>	- <u>-</u> 1	<u> </u>	•
1950	R. L. Polk Co.	-		· · · · · · · · · · · · · · · · · · ·	
1946	R.L. Polk		-		
1945	R. L. Polk & Co.	-	-	4 7	-
1942	R.L. Polk	- 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945 - 1945	-	-	-
1940	R. L. Polk & Co.	·	-	- 19 19 19 19 19 19 19 19 19 19 19 19 19	-
1936	R. L. Polk & Co.	-	-	.= :	- 12
1935	R. L. Polk & Co. of California	-	-		-
1931	R. L. Polk & Co.	-	-	•	-
1930	R. L. Polk & Co. of California	-	-	-	-
1926	R. L. Poik Co.	-	-	-	-
1925	R. L. Polk & Co.	-	-		-
1922	R. L. Polk Co.	-	-	-	-

TARGET PROPERTY INFORMATION

ADDRESS

1700 Embarcadero Road Palo Alto, CA 94303

FINDINGS DETAIL

Target Property research detail.

EMBARCADERO RD

1700 EMBARCADERO RD

<u>Year</u>	<u>Uses</u>
2012	MINGS CHINESE CUISINE & BAR
2007	MING S CHINESE CUISINE & BAR
	MINGS VILLA INC
2001	OCHINGVIcky MINGS OF PALO ALTO
1991	MINGS VILLA OF PALO ALTO
1986	Mings Of Palo Alto
	MING S OF PALO ALTO
1978	Mings Restr
19 7 0	Mings Restr

Source

Cole Information Services Cole Information Services Cole Information Services Haines & Company, Inc. PACIFIC BELL WHITE PAGES Pacific Bell Pacific Telephone R. L. Polk & Co. R. L. Polk & Co.

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ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

BAYSHORE RD E

2275 BAYSHORE RD E

<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1991	BENEFIT DESIGNS INC	PACIFIC BELL WHITE PAGES	
2300 BA	YSHORE RD E		
<u>Year</u>	<u>Uses</u>	<u>Source</u>	
1991	SCOTTS SEAFOOD GRILL & BAR INC	PACIFIC BELL WHITE PAGES	
1978	Tomfoolerys Bayshore Hall restr	R. L. Polk & Co.	
<u>E BAYSI</u>	HORE BLVD		
2351 E B	AYSHORE BLVD		. •
<u>Year</u>	<u>Uses</u>	Source	
1962	HANEY RICK L (GAYLE) EMP UNIVERSAL TITLE INS	R. L. Polk & Co.	

2353 E BAYSHORE BLVD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	COOPER CELESTE	R. L. Polk & Co.

E BAYSHORE HWY

2352 E BAYSHORE HWY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	VANCE LAVEETA OFC SEC	R. L. Polk & Co.
	DERISLO DIANE	R. L. Polk & Co.
	DERISIO LORRAINE MRS EMP MACY S	R. L. Polk & Co.
	DERISIO MARY STUDT	R. L. Polk & Co.

2353 E BAYSHORE HWY

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1962	SMITH JAS A (KAREN) WRITER	R. L. Polk & Co.

2354 E BAYSHORE HWY

<u>Year</u>	<u>Uses</u>	<u>Source</u>	the second state	1
1962	MCCRACKEN KENNETH M	R. L. Polk & Co.	. ¹ : .	
	WRIGHT ALF W	R. L. Poik & Co.		
2355 E B	AYSHORE HWY	. "		
<u>Year</u>	<u>Uses</u>	Source		
196 2	VIEGAS JOHN (CELESTE)	R. L. Polk & Co.		
2356 E B	AYSHORE HWY			
<u>Year</u>	<u>Uses</u>	<u>Source</u>		
1962	HEFNER JAS (DORIS)	R. L. Polk & Co.		
2357 E B	AYSHORE HWY			
<u>Year</u>	<u>Uses</u>	<u>Source</u>		
1962	ROSANIS MICHI (IVA)	R. L. Polk & Co.		
2358 E B	AYSHORE HWY			
<u>Year</u>	<u>Uses</u>	<u>Source</u>		
1962	BRUTON DALE (CAROLYN)	R. L. Polk & Co.	:	
2359 E B	AYSHORE HWY			
<u>Year</u>	<u>Uses</u>	<u>Source</u>		
1962	SHRADER ROBT (HARRIET) USN	R. L. Polk & Co.	a 11	

E BAYSHORE RD

2275 E BAYSHORE RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2012	INTELLECT PARTNERS	Cole Information Services
	KELLY FOR ATTORNEY GENERAL TWO ZERO	Cole Information Services
	MAYFIELD INVESTMENT COMPANY INC	Cole Information Services
	STANZLER LAW GROUP	Cole Information Services
	MICRO MOBIO	Cole Information Services
	OROPRO INC	Cole Information Services
2007	INTELLECTUAL PARTNERS	Cole Information Services
	THE BELLA MONTE	Cole Information Services
	SEANCE SOFTWARE	Cole Information Services
	TECHFARM INC	Cole Information Services
	MICRO MOBIO	Cole Information Services

<u>Year</u>	<u>Uses</u>	Source
2007	OROPRO INC	Cole Information Services
	ALLIANCE VENTURE	Cole Information Services
	MADISON PLACE ASSOCIATES LLC	Cole Information Services
	ORCAL MANAGEMENT INC	Cole Information Services
	CURATIVE LLC	Cole Information Services
	MAYFIELD INVESTMENT CO INC	Cole Information Services
2001	ASSET MANAGEMENT	Haines & Company, Inc.
	CO CBYONINC	Haines & Company, Inc.
	EARTHSYSTEMSINC	Haines & Company, Inc.
	INTELLECT PARTNERS	Haines & Company, Inc.
	SLEEBSluard	Haines & Company, Inc.
1986	Alchemia	Pacific Bell
	Interlife	Pacific Bell
	Alexander Paul Heller Ehrman White & Mc Auliffe attys	Pacific Bell
	Arevalo Alberto Heller Ehrman White & Me Auliffe attys	Pacific Bell
	Everett Michael T Heller Ehrman White & Me Auliffe attys	Pacific Bell
	Knee Martina W Heller Ehrman White & Mc Auliffe attys	Pacific Bell
	attys	Pacific Bell
	Moralti August J Hel er Ehrman White & Mc Auliffe	Pacific Bell
	ODowd Sarah A Heller Ehrman White & Me Auliffe attys	Pacific Bell
	Petree Daniel H Heler Ehrman White & Mc Altte attys	Pacific Bell
	Smith Glenn A Heller Ehrman White & Me Auliffe attys	Pacific Bell
	Stein Isaac Heller Ehrman White & Me Auliffe attys	Pacific Bell
	Witte Derek P Heller Ehrman White & Me Auliffe attys	Pacific Bell
	Witte Derek P Heller Ehrman White & Me Auliffe attys	Pacific Beli
	Armstrong Don & Associates	Pacific Bell
	Heller Ehrman White & Me Auliffe attys	Pacific Bell
	Marken Communications	Pacific Bell
	Watt Peterson Inc	Pacific Bell
	ALEXANDER PAUL HELLER EHRMAN WHITE & MC AULIFFE ATTYS	Pacific Telephone

<u>Year</u>	<u>Uses</u>	<u>Source</u>	:
1986	AREVALO ALBERTO HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Telephone	
	HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Telephone	
	KAUFMAN CHRISTOPHER L HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Telephone	
	KNEE MARTINA W HELLER EHRMAN WHITE & MC AULIFFE ATTYS	Pacific Telephone	
	ODOM WM G MD INC	Pacific Telephone	
	SMITH GLENN A HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Telephone	
	STEIN ISAAC HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Telephone	
	WITTE DEREK P HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Telephone	4 ¹
	WITTE DEREK P HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Telephone	
	ALCHEMIA	Pacific Telephone	
	INTERLIFE	Pacific Telephone	
1985	MORETTI AUGUST J HELLER EHRMAN WHITE & MC AULIFFE ATTYS	Pacific Bell	
	DOWD SARAH A HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Bell	
	STEIN ISAAC HELLER EHRMAN WHITE & ME AULIFFE ATTYS	Pacific Bell	
1982	ADDS APPLIED DIGITAL DATA SYSTEMS INC	Pacific Telephone	
	Applied Digital Data Systems Inc	Pacific Telephone	to the second
	Electrontics Div N Cau Field Sales	Pacific Telephone	
	RAYCHEM CORPORATION Corporation Haearquarters	Pacific Telephone	
2300 E B	AYSHORE RD		
<u>Year</u>	<u>Uses</u>	Source	
20 0 1	SCOTTSSEAFOOD	Haines & Company, Inc.	
1986	SCOTTS SEAFOOD GRILL & BAR INC	Pacific Bell	
1982	SCOTr S SEAFOOD GRILL & BAR INC	Pacific Telephone	
2413 E B	AYSHORE RD		
<u>Year</u>	<u>Uses</u>	Source	

1982 Center For Planning & Research Inc Pacific Telephone

2450 E BAYSHORE RD

<u>Year</u> <u>Uses</u> 2001 XXXX

EMBARCADERO RD

1703 EMBARCADERO RD

<u>Year</u>	<u>Uses</u>
2001	XXXX
1982	Altruk Freight Systems
	Rocor International
1978	Vacant
1975	Cal Ag Farms
	interlog Corp

1717 EMBARCADERO RD

<u>Year</u>	<u>Uses</u>	<u>Sourc</u>
2012	SIGNOSTICS MEDICAL	Cole Ir
	ACSTEENS COUNSELING	Cole Ir
	ROYSE LAW FIRM	Cole Ir
	DORSEY	Cole Ir
2007	RITCHEY FISHER WHITMAN & KLEIN	Cole Ir
2001	BLASE GUY ATTY	Haines
	CROW PAULAS	Haines
	DEWJENNIFER	Haines
	EMBARCADERORD 94303 CONT FISHER GEORGEC	Haines
	HAYSGILLIANG	Haines
	HURSHJOHNG	Haines
	KAYSDAVID	Haines
	KELLYTERENCEM	Haines
	KLEINLAWRENCEA	Haines
	KOEGLER KEITHS	Haines
	LAUHERPAULK	Haines
	LEEAYLEENITO	Haines
	LIDAKENJI	Haines
	LUEMERSMARTHAC	Haines
	MCCOWNJEAN	Haines
	MELLBERG BYRON	Haines
	R 1 B 6 WEBBER CO	Haines

<u>Source</u>

Haines & Company, Inc.

<u>Source</u>

Haines & Company, Inc. Pacific Telephone Pacific Telephone R. L. Polk & Co. Pacific Telephone Pacific Telephone

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<u>Year</u>	<u>Uses</u>	<u>Source</u>		
2001	RITCHESONSTEVEM	Haines & Company, Inc.		s. f
	RITCHEYCRAIGS	Haines & Company, Inc.		
	R 8 TCHEY FISHER	Haines & Company, Inc.		
	WHITMAN 8 KLEI N SINCLAIR BRYAN	Haines & Company, Inc.		
	SPAETH C GRANT ATTY	Haines & Company, Inc.		
	VALENTINEPAULC	Haines & Company, Inc.	an an Angelo Angelo Angelo Angelo	
	An TY WELCH PATRICIA A	Haines & Company, Inc.		
	WENTZEL KAREN	Haines & Company, Inc.		
	WHITMAN PETER	Haines & Company, Inc.	· · · · · · · · · · · · · · · · · · ·	
1991	REAM CHRISTOPHER LEGAL COUNSEL	PACIFIC BELL WHITE PAGES		· ·· ·
1986	Blase Guy Blase Valentine & Klein A Professional Corporation attys	Pacific Bell		en e
	Blase Valentine & Klein A Professional Corporation attys	Pacific Bell		
	Dong Nelson Blase Valentine & Klein A Professional Corporation attys	Pacific Bell		
	Klein Lawrence A Blase Valentine & Klein A Professional Corporation attys	Pacific Bell		
	Mc Cown Jean Blase Valentine & Klein A Professional Corporation attys	Pacific Bell	2	
	Ritchey Craig S Blase Valentine & Klein A Professional Corporation attys	Pacific Bell	•	
	Turbow Ellen B Blase Valentine & Klein A Professional Corporation attys	Pacific Bell		
	Valentine Paul C Blase Valentine & Klein A Professional Corporation attys	Pacific Bell		
	Ware James Blase Valentine & Klein A Professional Corporation attys	Pacific Bell		
	BLASE GUY BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone		
	BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone		*
	DONG NELSON BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone		
	KLEIN LAWRENCE A BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone		
	LEE AYLEEN ITO BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone		
	MC COWN JEAN BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone		

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	RITCHEY CRAIG S BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone
	TURBOW ELLEN B BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone
	VALENTINE PAUL C BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone
	WARE JAMES BLASE VALENTINE & KLEIN A PROFESSIONAL CORPORATION ATTYS	Pacific Telephone
730 E	MBARCADERO RD	

1730 EMBARCADERO RU

<u>Year</u>	<u>Uses</u>
2012	CARLSEN AUDI
200 7	CARLSEN MOTOR CARS INC
2001	CARLSENAUDI
	ELY Leonard TARGA LEASING
1991	TARGA LEASING
	CARLSEN PORSCHE INC
	INTERNATIONAL AUTO DETAIL
1986	Targa Leasing
	Carlsen Porsche Audi Inc
	CARLSEN PORSCHE AUDI INC
	TARGA LEASING
1978	Carlsen Porsche Audi auto sis
1975	CARLSEN PORSCHE AUDI INC
1970	Mozart Porsche Audi

1731 EMBARCADERO RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2012	THIN MULTIMEDIA INC	Cole Inf
	CL SIGLER & ASSOCIATES INC	Cole Inf
	ROBINS & PASTERNAK LLP	Cole Inf
	IDENTITY MIND INCORPORATED	Cole Inf
	MERRILL CORPORATION	Cole Inf
	FARMERS INSURANCE GROUP	Cole Inf
2007	DIRECT MARKETING RESEARCH ASSOCIATES	Cole inf
	SANYIKA MORTGAGE GROUP	Cole Inf
	ROBINS & PASTERNAK LLP	Cole Inf

Source

Cole Information Services **Cole Information Services** Haines & Company, Inc. Haines & Company, Inc. PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES Pacific Bell Pacific Bell Pacific Telephone Pacific Telephone R. L. Polk & Co. Pacific Telephone R. L. Polk & Co.

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<u>Year</u>	<u>Uses</u>	<u>Source</u>
2007	MEIOSYS INC	Cole Information Services
	MATCHKEY CORP	Cole Information Services
	ACCET NETWORK	Cole Information Services
	MERRILL CORP	Cole Information Services
2001	ALTOWEB	Haines & Company, Inc.
	FELL 8 NICHOLSON	Haines & Company, Inc.
	TECH LOUTHAUTOMATION	Haines & Company, Inc.
1991	CATS SOFTWARE	PACIFIC BELL WHITE PAGES
	ENGLERT KARL P	PACIFIC BELL WHITE PAGES
1986	TFB PUBULIC RELATIONS	Pacific Telephone
	TYCER FULTZ BELLACK	Pacific Telephone
	Tycer Associates Inc	Pacific Bell
	TFB PUBULIC RELATIONS	Pacific Bell
	TYCER FULTZ BELLACK	Pacific Bell
1985	CONTROL DATA BUSINESS INFORMATION SERVICES	Pacific Bell
1982	Bray & Associates	Pacific Telephone
	Brostrom Edward Hins	Pacific Telephone
	Marine Yacht insurance Underwriters	Pacific Telephone
	Miller John A	Pacific Telephone
	Schwartz Michael Sylvester & Schwartz Ins Brokers	Pacific Telephone
	Service Bureau Company The A Control Data Company	Pacific Telephone
	Sylvester John Sylvester & Schwart Ins Brokers	Pacific Telephone
	SYLVESTER & SCHWARTZ INS BROKERS	Pacific Telephone
	WESTERN SURETY COMPANY	Pacific Telephone
	Wright Edwin C CLU ins	Pacific Telephone
1978	Western Surety Company bond undwrtrs	R. L. Polk & Co.
1975	Me Rae Bryan	Pacific Telephone
	Mc Rae Audie	Pacific Telephone
1970	Kumagai Nursery whol florist	R. L. Polk & Co.
	Kumagai Torn	R. L. Polk & Co.
	Shoshido Jimmy	R. L. Polk & Co.
1965	KUMAGAI NURSERY WHOL FLORIST	R. L. Polk & Co.
	KUMAGAI TOYOTSUGU	R. L. Polk & Co.
	FUKUI r EROUO T	R. L. Polk & Co.
1960	Kumagai Tom T whol florist da	R. L. Polk & Co.

<u>Year</u> <u>Uses</u> Source 1957 K(U NAGAL TOM Pacific Telephone 1735 EMBARCADERO RD Year <u>Uses</u> Source 1960 R. L. Polk & Co. Takamoto Harry T whol florist da 1957 Pacific Telephone TAKAMOTO HARRY NRSRY 1741 EMBARCADERO RD Source <u>Year</u> <u>Uses</u> 1960 R. L. Polk & Co. Nagatoishi Chuda R. L. Polk & Co. Nagatoishi Ben 1957 NAGATOISHI CHUDA Pacific Telephone 1755 EMBARCADERO RD <u>Year</u> <u>Uses</u> Source 2012 **Cole Information Services** JONES DAY 2007 DAVID COBB ATTORNEY Cole Information Services 2001 PETTY KEITH ATTY Haines & Company, Inc. Haines & Company, Inc. CORPORATION TRUEX Haines & Company, Inc. RESILIENCE Haines & Company, Inc. CHRISTOPHER LEGAL COUNSEL REGISMCKENNAINC PHELPSJB JUDGE Haines & Company, Inc. MINDEN SCOTTD Haines & Company, Inc. Haines & Company, Inc. EATTY MCKENNAGROUPTHE **MCCLINTOCKGORDON** Haines & Company, Inc. Haines & Company, Inc. GROUP THE MAROULISJAMES C Haines & Company, Inc. MARKET RELATIONS Haines & Company, Inc. NEMEROVSKICANABY KOPF DAVID G Haines & Company, Inc. HOWARD RICE ATTORNEY AT LAW HETTIG DAVIDW Haines & Company, Inc. LAW Haines & Company, Inc. HARMON 1 GRANTS Haines & Company, Inc. GRIFRFTHSJOHNR Haines & Company, Inc. **GRECOJOSEPHA** DEALCUAZ ANTHONY 650 842e Haines & Company, Inc. **GEMINIMCKENNA** Haines & Company, Inc. CULLENW ROBERT BUILDING COTE FRANK P Haines & Company, Inc. 1991 **REGIS MCKENNA INC** PACIFIC BELL WHITE PAGES

KPMG PEAT MARWICK

PACIFIC BELL WHITE PAGES

Page 12

1766 EMBARCADERO RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2012	ANDERSON HONDAISUZU	Cole Information Services
2007	AR AUTOMOTIVE LLC	Cole Information Services
	ANDERSON HONDA PARTS	Cole Information Services
	ANDERSON HONDA SERVICE	Cole Information Services
1991	MID PENINSULA MOTORS	PACIFIC BELL WHITE PAGES
	AUTO PLAZA INC	PACIFIC BELL WHITE PAGES
	AUTO PLAZA INC	PACIFIC BELL WHITE PAGES
	AUTO PLAZA INC	PACIFIC BELL WHITE PAGES
1986	CARLISEN VOLKSWAGEN SAAB CHRYSLER PLYMOUTH	Pacific Telephone
	CARLSEN SAAB	Pacific Telephone
	CARLSEN CHRYSLER PLYMOUTH FLEET DEPARTMENT	Pacific Telephone
	CARLSEN CHRYSLER PLYMOUTH	Pacific Telephone
	CARLSEN CHRYSLER PLYMOUTH	Pacific Telephone
	CARDINAL SALES & LEASING	Pacific Telephone
	Cardinal Sales & Leasing	Pacific Bell
	Carlsen Chrysler Plymouth Fleet Department	Pacífic Bell
	Carlisen Volkswagen Saab Chrysler Plymouth	Pacific Bell
	Carlsen Saab	Pacific Bell
	Carisen Chrysler Plymouth	Pacific Bell
	Carisen Chrysier Plymouth	Pacific Bell
1982	CARLSEN CARL R VOLKSWAGEN INC	Pacific Telephone
	Carisen Saab	Pacific Telephone
1978	Carleen Carl R Inc new cars	R. L. Polk & Co.
1975	CARLSEN CARL R VOLKSWAGEN INC	Pacific Telephone
1970	Mozart Leasing	R. L. Polk & Co.
	Mozart Gus Volkswagen new cars	R. L. Polk & Co.
1770 EME	BARCADERO RD	
<u>Year</u>	<u>Uses</u>	<u>Source</u>
1978	V W Used Cars	R. L. Polk & Co.
1970	Mozart Gus Used Cars	R. L. Polk & Co.
1775 EMBARCADERO RD		

YearUsesSource2001XXXXHaines & Company, Inc.

3.

<u>Year</u>	<u>Uses</u>	
1986	PASCO Debris Box Service	
	PALO ALTO SANITATION CO	
	PASCO DEBRIS BOX SERVICE	
	PALO ALTO SANITATION CO	
1982	PASCO Debris Box Service	
1978	Palo Alto Sanitation Co garbage colln serv	
1970	Palo Alto Sanitation Co garbage colln serv	
1965	PALO ALTO SANITATION CO GARBAGE COLLN SERV	

<u>Source</u> Pacific Bell Pacific Bell Pacific Telephone Pacific Telephone

Pacific Telephone R. L. Polk & Co. R. L. Polk & Co. R. L. Polk & Co.

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2280 GENG RD

GENG RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1986	Wilson David C atty Brobeck Phleger & Harrison	Pacific Bell

2300 GENG RD

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2012	GILFIX MICHAEL ATTORNEY	Cole Information Services
	XENSOURCE	Cole Information Services
	EASTMAN KODAK	Cole Information Services
	GILFIX & LA POLL ASSOCIATES	Cole Information Services
	ZOOVE CORP	Cole Information Services
20 0 7	FORTIFY SOFTWARE INC	Cole Information Services
	GILFIX & LA POLL ASSOCIATES	Cole Information Services
	APPSTREAM INC	Cole Information Services
	XEN SOURCE	Cole Information Services
2001	ADMINOFC	Haines & Company, Inc.
	PRIMUS	Haines & Company, Inc.
	ETRADESECURITIES	Haines & Company, Inc.
1991	SYSTEMS CONTROL TECHNOLOGY	PACIFIC BELL WHITE PAGES

2400 GENG RD

YearUsesSource2012FROST & SULLIVANCole Information ServicesHEALTH HERO NETWORKSCole Information ServicesLAKIN SPEARSCole Information ServicesYMCACole Information Services2007YMCA OF THE MID PENINSULACole Information Services
<u>Year</u>	<u>Uses</u>
2007	E TRADE CAPITAL INC
	NORA IMPORT & EXPORT
	ITERRA COMMUNICATIONS
	ETRADE
1991	INTERGRAPH CORP
	INTERGRAPH CORP
2401 GENG RD	

<u>Source</u>

Cole Information Services Cole Information Services Cole Information Services Cole Information Services PACIFIC BELL WHITE PAGES PACIFIC BELL WHITE PAGES

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2001	хххх	Haines & Company, Inc.
1991	PORTOLA SYSTEMS INC	PACIFIC BELL WHITE PAGES

WATSON CT

2370 WATSON CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2012	RUSHER LOSCAVIO	Cole Information Services
	BOARDWALKTECH INC	Cole Information Services
	APV TECHNOLOGY PARTNERS	Cole Information Services
	VUCAST MEDIA	Cole Information Services
	SEROS MEDICAL	Cole Information Services
	DORSEY HAZELTINE & WYNNE	Cole Information Services
	STANFORD HOSPITAL & CLINICS	Cole Information Services
2007	JACK NADEL INC	Cole Information Services
	FINANCIAL CROSSING INC	Cole Information Services
	APV TECHNOLOGY PARTNERS	Cole Information Services
	ARTIMAN VENTURES	Cole Information Services
	G V DINC	Cole Information Services
	GVO INC	Cole Information Services
2001	WALLSTREET ANALYTICS	Haines & Company, Inc.
	PLAN A	Haines & Company, Inc.
	GVO INC	Haines & Company, Inc.
	STANFRD HSP PHYSICALTHERAPY	Haines & Company, Inc.
1991	WIDMANN RANDALL M	PACIFIC BELL WHITE PAGES
	AMES TIMOTHY	PACIFIC BELL WHITE PAGES
	RUSSELL & MOLTZEN ATTORNEYS AT LAW	PACIFIC BELL WHITE PAGES
1986	PALO ALTO SUPREME COURT	Pacific Telephone
	SUPERFIT NAUTILUS AEROBIC CENTER	Pacific Telephone

<u>Source</u>

Year Uses 1986 SUPREME COURT PALO ALTO Palo Alto Supreme Court Supreme Court Palo Alto 1982 SUPREME COURT PALO ALTO 1978 Supreme Court Of Palo Alto racquet ball ct

Pacific Telephone Pacific Bell Pacific Bell Pacific Telephone R. L. Polk & Co.

2446 WATSON CT

<u>Year</u>	<u>Uses</u>	<u>Source</u>
2001	XXXX	Haines & Company, Inc.
1986	Dyn Digital Controls	Pacific Bell
	DYN DIGITAL CONTROLS	Pacific Telephone
1982	Microelectronic Technology Corp	Pacific Telephone
	Quadracast Systems Inc	Pacific Telephone
1978	Micro Electronics Technology Corp electronics co	R. L. Polk & Co.

2448 WATSON CT

<u>Year</u>	<u>Uses</u>	Source
2001	XXXX	Haines & Company, Inc.
1991	ENVIRONMENTAL VOLUNTEERS	PACIFIC BELL WHITE PAGES
	COMMITTEE FOR GREEN FOOTHILLS	PACIFIC BELL WHITE PAGES
	PENINSULA CONSERVATION CENTER	PACIFIC BELL WHITE PAGES
	SIERRA CLUB LOMA PRIETA CHAPTER	PACIFIC BELL WHITE PAGES
	SIERRA CLUB LOMA PRIETA CHAPTER OFC	PACIFIC BELL WHITE PAGES
	CONSERVATION CENTER-PENINSULA	PACIFIC BELL WHITE PAGES
	CALIFORNIA NATIVE PLANT SOCIETY	PACIFIC BELL WHITE PAGES
	CAMP UNALAYEE	PACIFIC BELL WHITE PAGES
1986	TRANSPORT INFORMATION SYSTEMS	Pacific Telephone
	TRANSPORT INFORMATION SYSTEM	Pacific Telephone
	TRAIL BLAZER SYSTEMS	Pacific Telephone
	Transport Information Systems	Pacific Bell
	Transport Information Systems	Pacific Bell
	Trail Blazer Systems	Pacific Bell
1985	TRAIL BLAZER SYSTEMS	Pacific Bell
1978	Allan Consulting Associates consulting firm	R. L. Polk & Co.

2450 WATSON CT

<u>Year</u>	<u>Uses</u>
2012	PERRY ARRILLAGE
2007	PALO ALTO MEDICAL FOUNDATION
197 8	Palo Alto Medical Cinic business ofc
1975	International Timesharing Corp
1970	IBM
	Service Bureau Corp The data processing
1965	SERVICE BUREAU CORP THE DATA PROCESSING
	BERNSTEIN HAROLD M

2452 WATSON CT

<u>Year</u>	<u>Uses</u>
2001	XXXX
1991	SELLECTEK
1986	Identix Incorporated
	Thermo Energy Corp
	IDENTIX INCORPORATED
	THERMO ENERGY CORP
1978	Argonaut Insurance

2459 WATSON CT

<u>Year</u>	<u>Uses</u>
2001	HECKERSYDNEY F

WOODSON CT

2482 WOODSON CT

<u>Year</u>	<u>Uses</u>
1980	Gray NWry Gertrude
	Gvay Michael C

<u>Source</u>

Cole Information Services
Cole Information Services
R. L. Polk & Co.
Pacific Telephone
R. L. Polk & Co.
R. L. Polk & Co.
R. L. Polk & Co.

R. L. Polk & Co.

<u>Source</u>

Haines & Company, Inc. PACIFIC BELL WHITE PAGES Pacific Bell Pacific Bell Pacific Telephone Pacific Telephone R. L. Polk & Co.

<u>Source</u>

Haines & Company, Inc.

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<u>Source</u>

Pacific Telephone Pacific Telephone

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
1700 Embarcadero Road	2006, 2000, 1996, 1985, 1982, 1980, 1975, 1974, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
1703 EMBARCADERO RD	2012, 2007, 2006, 2000, 1996, 1991, 1986, 1985, 1980, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1717 EMBARCADERO RD	2012, 2007, 2006, 2000, 1996, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1717 EMBARCADERO RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1730 EMBARCADERO RD	2012, 2007, 2006, 2000, 1996, 1985, 1982, 1980, 1974, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1730 EMBARCADERO RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1731 EMBARCADERO RD	2012, 2007, 2006, 2000, 1996, 1980, 1974, 1968, 1966, 1964, 1963, 1962, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1731 EMBARCADERO RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1735 EMBARCADERO RD	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1741 EMBARCADERO RD	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1755 EMBARCADERO RD	2012, 2007, 2006, 2000, 1996, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1755 EMBARCADERO RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

Address Researched	Address Not Identified in Research Source
1766 EMBARCADERO RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1766 EMBARCADERO RD	2012, 2007, 2006, 2001, 2000, 1996, 1985, 1980, 1974, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1770 EMBARCADERO RD	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1975, 1974, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
1775 EMBARCADERO RD	2012, 2007, 2006, 2000, 1996, 1991, 1985, 1980, 1975, 1974, 1968, 1966, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2275 BAYSHORE RD E	2012, 2007, 2006, 2001, 2000, 1996, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2275 E BAYSHORE RD	2012, 2007, 2006, 2000, 1996, 1991, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2275 E BAYSHORE RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2280 GENG RD	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2300 BAYSHORE RD E	2012, 2007, 2006, 2001, 2000, 1996, 1986, 1985, 1982, 1980, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2300 E BAYSHORE RD	2012, 2007, 2006, 2000, 1996, 1991, 1985, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2300 GENG RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2300 GENG RD	2012, 2007, 2006, 2000, 1996, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2351 E BAYSHORE BLVD	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2352 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2353 E BAYSHORE BLVD	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2353 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2354 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

Address Researched	Address Not Identified in Research Source
2355 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2356 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2357 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2358 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2359 E BAYSHORE HWY	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2370 WATSON CT	2012, 2007, 2006, 2000, 1996, 1985, 1980, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2370 WATSON CT	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2400 GENG RD	2012, 2007, 2006, 2001, 2000, 1996, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2400 GENG RD	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2401 GENG RD	2012, 2007, 2006, 2000, 1996, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2413 E BAYSHORE RD	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2446 WATSON CT	2012, 2007, 2006, 2000, 1996, 1991, 1985, 1980, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2448 WATSON CT	2012, 2007, 2006, 2000, 1996, 1982, 1980, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2450 E BAYSHORE RD	2012, 2007, 2006, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2450 WATSON CT	2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1974, 1968, 1966, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2450 WATSON CT	2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922
2452 WATSON CT	2012, 2007, 2006, 2000, 1996, 1985, 1982, 1980, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

Address	Resea	rched
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2459 WATSON CT

Address Not Identified in Research Source

2012, 2007, 2006, 2000, 1996, 1991, 1986, 1985, 1982, 1980, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

2012, 2007, 2006, 2001, 2000, 1996, 1991, 1986, 1985, 1982, 1978, 1975, 1974, 1970, 1968, 1966, 1965, 1964, 1963, 1962, 1960, 1957, 1955, 1950, 1946, 1945, 1942, 1940, 1936, 1935, 1931, 1930, 1926, 1925, 1922

2482 WOODSON CT

APPENDIX G

EDR VAPOR ENCROACHMENT SCREEN REPORT

(Provided on attached CD)

Property At 1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.10s May 21, 2013

EDR Vapor Encroachment Scheen

Prepared using EDR's Vapor Encroachment Worksheet



440 Wheelers Farms Road Milford, CT 06461 Yoll Free: 800.352.0050 www.cdmct.com

TABLE OF CONTENTS

SECTION

PAGE

Primary Map 2 Secondary Map 3 Aerial Photography 4 Map Findings 5 Record Sources and Curroncy GR-1	Exocutive Summary	ES ?
Secondary Map 3 Aerial Photography 4 Map Findings 5 Record Sources and Curroncy GR-1	Primary Map	2
Aerial Photography 4 Map Findings 5 Record Sources and Curroncy GR-1	Secondary Map	3
Map Findings 5 Record Sources and Curroncy GR-1	Aerial Photography	4
Record Sources and Curroncy GR-1	Map Findings	5
	Record Sources and Curroncy	GR-1

Thank you for your business. Please conlact EDR at 1-800-352-0050 with any questions or comments.

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The EDR Vapor Encroachment Worksheet enables EDR's customers to make certain online modifications that effects maps, text and calculations contained in this Report. As a result, maps, text and calculations contained in this Report may have been so modified. EOR has not taken any action to verify any such modifications, and this report and the findings set forth herein must ha read in tight of this fact. Environmentel Date Resources shall not be responsible for any customer's decision to include or not include in any final report any records dotomined to be within the relevant minimum search distances.

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EXECUTIVE SUMMARY

A soarch of available environmental records was conducted by Environmental Data Rosources, Inc (EDR). The report was designed to assist parties seeking to meet the search requiroments of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600-10).

		Sur	nmaŋ	(
STANDARD ENVIRONMENTAL RECORDS	Maximum Search Distance*	property	01/1	1/10 - 1/3
Federal NPL	0.333	0	0	0
Fodoral CERCLIS	0.333	0	0	0
Federal RCRA CORRACTS facilitios list	0.333	0	0	0
Federal RCRA TSD facilities list	0.333	0	0	0
Føderal RCRA generators list	property	0	-	-
Federal Institutional controls / engineering controls registries	0.333	0	0	0
Federal ERNS list	property	0	-	-
State and tribal - equivalent NPL	0.333	0	0	Ô
State and tribal - equivalent CERCLIS	0.333	0	0	រ
State and tribal landfill / solid waste disposal	0.333	¢	0	0
State and tribal leaking storage tank lists	0.333	0	1	5
State and tribal registored storage tank lists	property	0	-	-
State and tribal institutional control / engineering control registries	not searched	-	-	-
State and tribal voluntary cleanup sites	0.333	0	0	0
State and tribal Brownfields sites	not searched	-	-	-
Other Slandard Environmental Records	0.333	0	i	2

HISTORICAL USE RECORDS

Former manufactured Gas Plants	0.333	0	0	0
Historical Gas Stations	0.25	0	0	0
Historical Dry Cleaners	0.25	¢	0	0

"Each category may include several separate databases, each having a different search distance. For each category, the table reports the maximum search distance applied. Soo the section 'Record Sources and Currency' for information on individual databases.



EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

PROPERTY AT 1700 EMBARCADERO ROAD PALO ALTO, CA 94303

COORDINATES

Latitude (North):	37.4495 - 37 26 58.203735
Longitude (West):	122.1191 - 122' 7' 8.768921'
Elovation:	8 fi. above sea level

:



PHYSICAL SETTING INFORMATION

Flood Zone:	YES
NWI Weslands:	YES

AQUIFLOW®

Search Radius: 0.333 Mile.

No Aquiflow sites reported.

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY.

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	REYES
Soil Surface Texture:	ciay
Hydrologic Group:	Class D - Very slow infiltration rates. Soits are cloyey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Somewhat peerly. Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet.
Hydric Status:	Hydric Status: Soil does not most the requirements for a hydric soil.
Corrosion Potontial - Uncoated Steet:	HIGH
Depth to Bodrock Min:	> 60 Inches
Depth to Bedrock Max:	> 60 inches

	Soll Layer Information						
	Bou	indary		Classi	fication		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (In/br)	Soli Reaction (pH)
	0 inches	14 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayoy Solis.	FINE-GRAINED SOILS, Sills and Clays (liquid limit 50% or more), Elastic stil.	Max: 0.20 Man: 0.06	Max: 6.50 Min: 3.00

EXECUTIVE SUMMARY

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	Soll Layer Information						
	Bou	indary		ClassI	fication		
Layor	Upper	Lower	Soli Texture Class	AASHTO Group	Unified Soll	Permeability Rate (in/hr)	Soli Reaction (pH)
2	14 Inches	03 inches	clay	Silt-Clay Materials (more then 35 pct, passing No, 200), Clayey Solfs,	FINE-GRAINED SOILS, Silks and Clays (liquid limit 50% or more), Elestic silt.	Max: 0.20 Min: 0.06	Max: 6.00 Min: 3.60

OTHER SOIL TYPES IN AREA

: •

Based on Soll Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soli Surface Textures:	mucky - clay silty clay loam loam clay loam silt loam
Surficial Soil Types:	mucky - clay silty clay loam loam clay loam silt loam
Shallow Soil Typos:	clay
Deeper Soll Types:	mucky - cby cobbly - clay loam clay loam stratified silty clay loam

<u>.</u>

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SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
CARLSEN MOTORS LUST: State and tribal leaking storage tank fists CUPA Listings: Other Standard Environmental Records HIST CORTESE: Other Standard Environmental Records HIST LUST: State and tribal leaking storage tank lists	1730 EMBARCADERO RO	<1/10 NNE	▲1	10
STANFORD HONDA LUST: State and Inbat leaking storage tank lists CUPA Listings: Other Standard Environmental Records HIST CORTESE: Other Standard Environmental Records SLIC: State and Iribat leaking storage tank lists HIST LUST: State and tribat leaking storage tank lists	1766 EMBARCADERO RD	1/10 - 1/3 NE	▲2	13
COLLAGEN INC. HIST LUST: State and tribal leaking storage tank lists	2500 FABER PL	1/10 - 1/3 ENE	▲ A3	18
ANGIOTECH BIOMATERIALS CORP RCRA NonGen / NLR: Other Standard Environmental Records SWEEPS UST: State and Iribal registered storage tank fists UST: State and Iribal registered storage tank fists CA FID UST: State and tribal registered storage tank lists HIST CORTESE: Other Standard Environmental Records CUPA Listings: Other Standard Environmental Records HIST UST: State and Iribal registered storage tank lists	2500 FABER PL	1/10 - 1/3 ENE	▲ A4	19
OLD POST OFFICE PALO ALTO LUST: State and tribal leaking storage tank lists	2197 E BAYSHORE RO	1/10 - 1/3 WNW	▼ 85	28
OLD POST OFFICE PALO ALTO LUST: State and Iribal loaking storage tank lists HIST LUST: State and tribal leaking storage tank lists HISTORICAL USE RECORDS	2197 E BAYSHORE RD	1/10 - 1/3 WNW	▼ 86	29
Nanso	Address	Dist/Dir	Map ID	Page

Not Reported



ADDRESS: 1700 Embarcadero Road Palo Allo CA 94303 LAT/LONG: 37.4495 / 122.1191 CONTACT: Chris Palmer INQUIRY #: 3611943.10s DATE: May 20, 2013 5:17 pm	SITE NAME: Property At	CLIENT: Bomla Consulting Engineers
Pab Allo CA 94303 INQUIRY#: 3611943.10s LAT/LONG: 37.4495 / 122.1191 DATE: May 20, 2013 5:17 pm	ADDRESS: 1700 Embarcadero Road	CONTACT: Chris Palmer
LAT/LONG: 37.4495 / 122.1191 DATE: May 20, 2013 5:17 pm	Palo Allo CA 94303	INQUIRY #: 3611943.10s
	LAT/LONG: 37.4495 / 122.1191	DATE: May 20, 2013 5:17 pm





AERIAL PHOTOGRAPHY - 3611943.10s



SITE NAME: ADDRESS;	Propeny At 1700 Embarcadero Road
	Palo Alto CA 94303
LAT/LONG:	37.4495/122.1191

CLIENT: Romig Consulting Engineers CONTACT: Chrls Palmar INQUIRY #: 3611943.10s DATE: May 20, 2013 5:23 pm

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LEGEND

FACILITY NAME FACILITY ADDRE	SS, CITY, ST, ZIP	EDR SITE ID NUMBER	
▼ MAP 1D#	Direction Distance Range (Distance feet / miles) Relative Elevation Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, soo the section of the report Records Searched and Currency.	•
Worksheet: Comments: Comments may be a	ided on the online Vapor Encroachment Worksheet.		

OATABASE ACRONYM: Applicable categories (A hoverbox with database description).

CARLSEN MOTOR 1730 EMBARCADE	IS FRO RD, PALO ALT	0, CA,	\$103177425
	NNE <1/10	(334 ft, / 0.063 ml.)	State and tribal leaking storage tank lists Other Standard Environmental Records
▲ 1	Equal Elevation	8 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Can Be Roled Out

Comments: The site is closed by Santa CLare LOP, LOST cleanup site completed case closed.

Soli characteristics would make vapor naigration from the source or plame unlikely.

Conditions:

Petroleum Hydrocerbon Chemicals of Concern: YES

Groundwater Flow Gradient:

Downgradient: YES

Hydrogeologically: YES

Geological Attributes - Hydraulic Barrier:

Wellands: YES

Geological Attributes - Physical Barrier:

Impermaable soll layer: YES

Geological Attributes - Soli Geology:

Silty-clay, low-permeability soil: YES

LUST: State and tribal leaking starage tank lists

Region:	STATE
Global Id:	T0608502032
Latitude:	37.449859
Longitude:	-122.119257
Case Type:	LUST Cleanup Sile
Status:	Completed - Case Closed
Status Date:	01/30/1998

CARLSEN MOTORS, 1730 EMBARCADERO RD, PALO ALTO, CA (Continued)

Lead Agency:	SANTA CLARA COUNTY LOP
Cese Worker:	UST
Local Agency:	SANTA CLARA COUNTY LOP
RB Case Number:	Not Reported
LOC Case Number:	Not Reported
File Location:	Stored electronically as an E-file
Potentiel 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:	http://www.web.edmet.com/ordering/switchboard/redirect.aspx?s=GRR_CA_EUST_ST&globa}_id=T0608 502032

Contact:

Giobel Id:	T0608502032
Contact Type:	Regional Board Caseworker
Contact Name:	ZSC
Organization Name:	SAN FRANCISCO BAY RWOCH (REGION 2)
Address:	1515 CLAY STREET, SUITE 1400
City:	OAKLAND
Email:	Not Reported
Phone Number:	Not Reported
Głobał Id:	T0608502032
Contact Type:	Local Agency Caseworker
Contact Name:	UST CASE WORKER
Organization Name:	SANTA CLARA COUNTY LOP
Address:	1555 Berger Drive, Suite 300
City:	SAN JOSE
Ersaif:	Not Reported
Phone Number:	4069183400
Regulatory Activities:	
Global Id:	T0608502032
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Giobai Id:	T0608502032
Action Type:	REMEDIATION
Date:	01/01/1950
Action:	Excavation
Giolosi Id:	70608502032
Action Type:	ENFORCEMENT
Dale:	11/12/1996
Action:	Notice of Responsibility - #39186

LUST REG 2:

Region:

CARLSEN MOTORS, 1730 EMBARCADERO RD, PALO ALTO, GA. (Continued)

Facility Id:	Not Reported
Facility Status:	Casa Closed
Case Number:	05S2W31R02f
How Discovered:	Not Reported
Leak Ceuse:	Not Reported
Leak Source;	Not Reported
Date Leak Confirmed;	Not Reported
Oversight Program;	LUST
Prefim. Site Assesment Wokplan Submitted:	Not Reported
Preliminary Site Assessment Began:	10/6/1996
Pollution Characterization Bagan:	10/8/1996
Pollution Remediation Plan Submitted:	Not Reported
Date Remediation Action Underway:	Not Reported
Date Post Remedial Action Monitoring Began:	5/1/1997

LUST SANTA CLARA:

Region:	SANTA CLARA
SCVW0 ID:	05S2W31R02F
Date Closed:	01/30/1998

CUPA SANTA CLARA: Other Standard Environmental Records

Region: Program Description:	SANTA CLARA GENERATES 100 KG YR TO <5 TONS/YR
Region:	SANTA CLARA
Program Description:	PALO ALTO FIRE-BUSINESS PLAN (HM8P)

CORTESE: Other Standard Environmental Records

Region:	CORTESE
Facility County Code:	43
Reg By:	LTNKA
Reg id:	43-2214

HIST LUST SANTA CLARA: State and tribal leaking storage tank lists

Region:	SANTA CLARA
Region Code:	2
SCVWD (D:	05S2W31R02
Oversite Agency:	SCVWD
Date Elsted:	1996-11-12 \$3:00:00
Closed Date:	1998-01-30 00:00:00

STANFORD HOND	A RO RD, PALO ALTO, CA,		f@ID314835	- 11 <u>1</u> - 11
	NE 1/10 - 1/3	(558 ft. / 0.106 mš.)	Stete and tribel leaking storage tank lists Other Standard Environmental Records	
▲2	Equal Elevation	8 f. Above Sea Levei		

Worksheet:

Impact on Target Property: VEC Can Be Ruled Out

Comments: The source is not within the area of concern, based on its distance, gradient and suspected chemical of concern.

The site is closed by Santa Clara LOP LUST clenup site case closed.

Soil characteristics would make vapor migration from the source or plume unlikely. Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES Groundwater Flow Gradient:

Downgradient; YE\$

Hydrogeologically: YES

Geological Attributos - Hydraulic Barrier:

Wetlands: YES

Geological Attributes - Physical Barrier:

Impermeable soit layer: YES

Geological Attributes - Soli Geology:

Sitty-clay, low-permeability soil: YES

LUST: State and tribal leaking storage tank lists

Region:	STATE
Global Id:	70608501363
Latitude:	37.4508259562855
Longludo:	-122.117307186127
Case Type:	LUST Cleanup Site
Slatus:	Completed - Case Closed
Status Date:	07/17/1995
Load Agency:	SANTA CLARA COUNTY LOP
Case Worker:	UST
Local Agency:	SANTA CLARA COUNTY LOP
RB Case Number:	Not Reported
LOC Case Number:	Not Reported
File Location:	Stored electronically as an E-file
Potential Modia Affect:	Othor Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not Reported
Cilck here to access the California GeoTracker records for this facility:	http://www.wob.edmot.com/ordering/switchboard/redirect.aspx?s=GRR_CA_LUST_ST&global_id=T0608 501363

Contact:

Giobai Id:	70008501363
Conlact Type:	Regional Soard Caseworker
Contact Name:	ZSC

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STANFORD HONDA, 1766 EMBARCADERO RD, PALO ALTO, CA. (Continued)

U

Organization Name:	SAN FRANCISCO BAY RWOCE (REGION 2)
Address:	1515 CLAY STREET, SUITE 1400
City:	QAKI.AND
Email:	Not Reported
Phone Number:	Not Reported
Global td:	10008501363
Contact Type:	Local Agency Caseworker
Contact Name:	UST CASE WORKER
Organization Name:	SANTA CLARA COUNTY LOP
Address:	1555 Berger Orive, Suite 300
City:	SAN JOSE
Email:	Not Reported
Phone Number:	4089183400
Regulatory Activities:	
Globat Id:	T0608501353
Action Type:	ENFORCEMENT
Date:	07/17/1995
Action:	Closure/No Further Action Letter
Global Id:	T0608501363
Action Type:	Olher
Date:	01/01/1950
Action:	Leak Reported
Global Id:	T0608501353
Action Type:	RESPONSE
Date:	04/28/1995
Action:	Other Report / Document
Giobal Id:	T08085D13G3
Action Type:	ENFORCEMENT
Date:	04/25/1991
Action:	Notice of Responsibility - #39181
Globai M:	T0008501383
Action Type:	REMEDIATION
Date:	01/01/1850
Action:	Excavation
Sector:	STATE
Global Id-	TD6:18502336
Laibude:	37 4507578173723
Lonoikude:	-122 11754322052
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Dale:	01/12/1996
Lead Agency:	SANTA CLARA COUNTY LOP
Case Worker:	UST
• • • • • • • • • • • • • • • • •	

STANFORD HONDA, 1768 EMBARGADERO RO, PALO ALTO, GA. (Continued)

Local Agency:	SANTA CLARA COUNTY LOP
RB Caso Number:	Not Reported
LOC Case Number:	Not Reported
File Location:	Storod electronically as an E-file
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Sito History:	Not Reported
Cilcit hero to access the California GeoTracker records for this facility:	http://www.wob.odmot.com/ordering/switchboard/redirect.aspx?s=GRR_CA_LUST_ST&global_id=T0608 502336

Contact:

	Global Id:	76008502336
	Contact Type:	Regional Board Caseworker
	Contact Name:	ZSC
	Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)
	Address:	1515 CLAY STREET, SUITE 1400
	City:	QAKLAND
	Erseil:	Not Reported
	Phone Number:	Not Reported
	Global Id:	T060850233B
	Contact Type:	Local Agency Caseworker
	Contact Name:	UST CASE WORKER
	Organization Name:	SANTA CLARA COUNTY LOP
	Address:	1555 Berger Drive, Suite 300
	City:	SAN JOSE
	Email:	Not Reported
	Phone Number:	4089183400
	Regulatory Activities:	
	Globai to:	70608502336
	Action Type:	Other
	Date:	01/01/1950
	Action:	Leak Reported
LUS	TREG 2:	
	Secior:	2

Region:	2
Facility id:	Not Reported
Facility Status:	Case Closed
Case Number:	05S2W31J01f
How Discovered:	Not Reported
Leak Cause:	Not Reported
Leak Source:	Not Reported
Dale Leak Confirmed:	Not Reported
Oversight Program:	LUST
Prelim. Site Assesment Wokplan Submitted:	Not Reported
Preliminary Site Assesment Began:	12/28/1990

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STANFORD HONDA, 1766 EMBARCADERO RD, PALO ALTO, CA (Continued)

Pollution Characterization Began:	Not Reported
Poliution Remediation Pian Submitted:	Not Reported
Date Remediation Action Underway:	Not Reported
Date Post Remedial Action Monitoring Began:	Not Reported
Region:	2
Facility Id:	Not Reported
Facility Status:	Case Closed
Case Number:	65S2W31J02f
How Discovered:	Not Reported
Leak Gause:	Not Reported
Leak Source:	Not Reported
Date Leak Confirmed:	Not Reported
Oversight Program:	LUST
Prefim. Site Assesment Wokplen Submitted:	Not Reported
Preliminary Site Assesment Begen:	Not Reported
Pollution Characterization Began:	Not Reported
Pollution Remediation Plan Submitted:	Not Reported
Date Remediation Action Underway:	Not Reported
Date Post Romedial Action Monitoring Began:	Not Reparted

LUST SANTA CLARA:

Region:	SANTA CLARA
SCVWD (D:	05S2W31J02F
Date Closed;	01/12/1996
Region:	SANTA CLARA
Region: SCVWD ID:	SANTA CLARA 06S2W31J01F

CUPA SANTA CLARA: Other Standard Environmental Records

Region: Program Description:	SANTA CLARA GENERATES 5 TO <25 TONS/YR
Region:	SANTA CLARA
Program Description:	PALO ALTO FIRE-BUSINESS PLAN (HMBP)

CORTESE: Other Standard Environmental Records

Region:	CORTESE
Facility County Code:	43
Reg By:	LTNKA
Reg to:	43-2107
Region:	CORTESE
Facility County Code:	43

STANFORD HONDA, 1766 EMBARGADERO RD, PALO ALTO, CA (Continued)

Reg By:	LTNKA
Reg Id:	43-1388

SLIC: State and tribat leaking storage tank lists

Rogion:	STATE
Facility Status:	Open - Site Assessment
Status Data:	11/25/2008
Global Id:	71000000684
Lead Agency:	SAN FRANCISCO BAY RWOOD (REGION 2)
Lead Agency Case Number:	Not Reported
Lattude:	37.4505534002603
Longitude:	-122.117414474487
Case Type:	Gisanup Program Site
Case Worker:	MBR
Local Agency:	Not Reported
RB Case Number:	4381123
File Location:	Regional Board
Potential Media Affected:	Other Groundwater (uses other then drinking water), Soil
Potential Contaminants of Concern:	Diesel, Weste Oil / Motor / Hydrautic / Lubriceting
Site History:	Typical UST petroleum products here been used onsite. The USTs were
	removed in 1991 and case closure was greated in 1995/1906. Hydreulic
	lifts were removed from the site in 1994, 1 1996 Stanford Honda 2.
	1995 Stanford Auto Plaza 3, 1988 - Carlson Volkswagon/Saab/Chrysler
	Phymouth 4, 1982 -Carlson VW & Saab 5, 1978 - Carleen Carl R new cars
	6. 1975 - Carson Carl R VW 7. 1970 - Mozart VW 8. 1968 - auto
	dealership 9. 1930-1965 - agricultural use
Click here to access the California GeoTracker records for this facility;	http://www.web.edmet.com/ordering/sv/itchboard/redirect.aspx?s≂GRR_CA_SLIC_ST&gkbai_id=T10000 000584

HIST LUST SANTA CLARA: State and Iribal leaking storage tank lists

Region:	SANTA CLARA
Region Code:	2
SCVWD ID:	05\$2W31J01
Oversite Agency:	SCVWD
Date Listed:	1991-04-23 00:00:00
Closed Date:	1995-07-17 00:00:00
Region:	SANTA CLARA
Region Code:	2
SCVWD ID:	05S2W31J02
Oversite Agency:	SCVWD
Date Elsied:	1996-01-12 00:00:00
Closed Date:	1996-01-12 00:00:00



COLLAGEN INC. 2500 FABER PL, P	ALO ALTO, CA,	·	8103860523
. 40	ENE 1/10 - 1/3	(829 ft. / 0.155 mi.)	State and tribal loaking slorage tank lists
▲ ∧3	Equal Elevation	8 ft. Above Sea Level	

Worksheet:

Groundwater Flow Gradient:

Downgradient: YES

HIST LUST SANTA CLARA: State and tribal leaking storage tank lists

Region:	SANTA CLARA
Region Code:	2
SCVWD (D;	6552W31R01
Oversite Agency:	SFRWOCB
Date Listed;	1989-01-01 03:00:00
Closed Bale:	1294-67-20 00:00:00

ANGIOTECH BIOM 2500 FABER PL, P	IATERIALS CORP ALO ALTO, CA, 9430	3	1040276300
	ENE 1/10 - 1/3	(820 ft. / 0.155 mi.)	State and tribal leaking storage tank lists State and tribal registered storage tank lists
▲ A4 Eq	Equal Elevation	8 ft. Above Sea Level	Other Standard Environmental Records

Worksheet:

Impact on Target Property: VEC Can Se Ruled Out

Comments: The sile is listed as Closure/no lurther action letter by RWQCB, caso closed for waster ol/motor oil/hydraulic fluid.

Soli characteristics would make vapor migration from the source or plume unlikely.

Conditions:

Petroleum Hydrocarbon Chemicals of Concern: YES Groundwater Flow Gradient:

Downgradtent: YES

Hydrogeologically: YES

Geological Attributes - Hydraulic Barrlor:

Wetlands: YES

Geological Attributes - Physical Barrier:

Impermeable soil layer: YES

Geological Attributes - Soil Geology:

Silly-clay, low-permeability soll: YES

RCRA NonGon / NLR: Other Standard Environmental Records

Date form received by agency:	82/04/2005
Facility name:	ANGIOTECH BIOMATERIALS CORP
Facility address:	2500 FABER 91
	PALO ALTO, CA 94303
EPA ID:	CAD982006892
Mailing address:	1254 WILLO MAR ORIVE
	ENV AND SAFETY MGMT LLC
	SAN JOSE, CA 95116
Confact:	SCOTT RENOLEMAN
Contact address:	1254 WILLO MAR DRIVE ENV AND SAFETY MGMT LLC
	SAN JOSE, CA 95118
Contact country:	US
Contact telephone:	408-605-0322
Contact email:	Not Reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ANGIOTECH BIOMATERIALS CORP.
Owner/operator address:	Not Reported
Owner/operator country:	US

ANGIOTECH BIOMATERIALS CORP, 2500 FABER PL, PALO ALTO, CA 94303 (Continued)

Owner/operator telephone:	Not Reported
Legel status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	12/20/2004
Owner/Op end date:	Not Reported
Owner/cperator name:	ANGIOTECH BIOMATERIALS CORP
Owner/operator address:	2500 FABER PL
	PALO ALTO, CA 94303
Owner/operator country:	us
Owner/operator telephone:	Not Reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	12/20/2004
Owner/Op end deta:	Not Reported

Hendler 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
Treeter, 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 egency:	68/04/1998
Fecility name:	ANGIOTECH BIOMATERIALS CORP.
Site asine:	COHESION TECHNOLOGIES INC
Classification:	Small Quantity Generator

Hazardous Waste Summary:

Waste code: Waste name:	D001 IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Wasta code:	D002



ANGIOTECH BIOMATERIALS CORP. 2500 FABER PL, PALO ALTO, CA 94303 (Continued)

Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE, SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING, WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	2690
Waste name:	MERCURY
Waste code:	D035
Wasie neme:	METHYL ETHYL KETONE
Waste code:	D038
Waste name:	PYRIDINE
Waste code:	F003
₩aste name:	THE FOLLOWING SPENT NON-HALOGENATED 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 NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN FOD1, FOD2, FO04, AND FOD5, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste code:	F005
Waste namo:	THE FOLLOWING SPENT NON-HALOGENATED 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 NON- HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN FOOT, FOO4; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Malakaa Clabor	Manufacture French

Violation Status:

No violations found

SWEEPS UST: State and tribal registered storage tank lists

Status:	Active
Comp Naraber:	1818
Number:	9
Soard Of Equalization:	44-026037
Referral Data;	07-01-85
Action Date:	Not Reported
Created Date;	02-29-88
Tank Stalus;	A
Owner Tenk id:	SUMP2
Swreb Tank id:	43-006-001818-000001
Actv Dete:	07-01-85
Сарясіtу:	1000
Tank Use:	UNKNOWN
Stg:	W
Content;	Not Reported
Number Of Tanks:	5
Status:	Active
Comp Number;	1819

ANGIOTECH BIOMATERIALS CORP., 2500 FABER PL, PALO ALTO, CA 94303 (Continued)

Number:	6
Board Of Equalization:	44-026037
Referral Oste:	07-01-85
Action Bate:	Not Reported
Sreated Date:	02-29-88
Tanar Slatus:	A
Owner Tark Id:	7204
Swreb Tank id:	43-000-001818-000062
Aciv Date:	07-01-85
Canacity:	5900
Tank Use:	UNKNOWN
Sha	W
Content:	Not Renorled
Namher Of Tanka:	Not Reported
	, or (topol too
Status:	Activo
Comp Number:	1818
Number:	9
Soard Of Equalization:	44-026637
Referral Date:	07-01-85
Action Date:	Not Reported
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id;	T205
Swreb Tank Id:	43-006-001818-000003
Acty Date:	07-01-85
Canacity:	1480
Tank Uso:	UNKNOWN
Sia:	W
Content:	Not Reported
Number Of Tenks:	Not Reported
Status:	Active
Comp Number:	1818
Number:	9
Board Of Equalization:	44-026037
Referral Date:	07-01-85
Action Date:	Not Reported
Created Date:	02-29-88
Tank Status:	A
Owner Tank M:	T206
Swrch Tenk id:	43-636-001818-000004
Adv Date:	07-01-85
Capacity:	2015
Tenix Use:	UNKNOWN
Sla	Р
Content:	Not Reported
Number Of Tenke:	Not Reported
Status:	Active
Comp Number:	1618

.

ANGIOTECH BIOMATERIALS CORP, 2500 FABER PL, PALO ALTO, CA 94303 (Continued)

Number	9
Board Of Equalization:	44-026037
Referral Date:	07-01-85
Action Date:	Not Reported
Created Date:	02-23-66
Tank Status:	A
Owner Task Id:	TD
Swrob Tank Id:	43-006-001818-000005
Actv Date:	07-01-85
Capacity:	971
Tank Use:	M.V. FUEL
Stg:	ę
Content:	DIESEL
Number Of Tanks:	Not Reported

LUST: State and tribal leaking storage tank lists

Region:	STATE
Globai Id:	70608500443
Latitude:	37.4501
Longilude:	-122.1155
Case Type:	LUST Cleanup Sile
Status:	Completed - Case Closed
Status Date:	10/01/1907
Lead Agency:	SAN FRANCISCO BAY RWOCE (REGION 2)
Case Worker:	UNK
Local Agency:	SANTA CLARA COUNTY LOP
RB Caso Number:	43-0392
EOC Caso Number:	Not Reported
File Excetion:	Not Reported
Potentiai Media Affect:	Soit
Potential Contaminents of Concern:	Weste Oit / Motor / Hydraulic / Lubricating
Site History:	Not Reported
Click here to access the Celifornia GeoTracker records for this facility:	http://www.web.edmet.com/ordering/ewitchboard/redirect.aspx?s=GRR_CA_LUST_ST&global_id=T0608_500443

Confact:

Globel Id:	T0608500443
Contact Type:	Local Agency Caseworker
Contact Name:	UST CASE WORKER
Organization Name:	SANTA CLARA COUNTY LOP
Address:	1555 Berger Drive, Suite 300
City:	SAN JOSE
Email:	Not Reported
Phone Number:	4069183400
Global id:	T0008500443
Conlact Type:	Regional Board Caseworker
Contact Name:	R8 2
Organization Name:	SAN FRANCISCO BAY RWQCB (REGION 2)

ANGIOTECH BIOMATERIALS CORP, 2500 FABER PL, PALO ALTO, CA 94363 (Continued)

Address: City: Email: Phone Number:	1515 CLAY STREET, SUITE 1400 GAKLAND Not Reported Not Reported
Regulatory Activities:	
Globel (d:	70608500443
Action Type:	ENFORCEMENT
Data:	07/20/1994
Action:	Closuro/No Further Action Letter
Global Id:	T0608500443
Action Type:	Other
Data:	61/01/1950
Action:	Leak Reported
Global id:	T0608500443
Action Type:	Other
Date:	01/01/1950
Action:	Leak Stopped
Giobai id:	T0008500443
Action Type:	Other
Date:	01/01/1950
Action:	Leak Discovery
Głobal id:	T0608500443
Action Type:	RESPONSE
Date:	08/14/1987
Action:	Other Report / Document

LUST REG 2:

Region:	2
Facility kt;	43-6392
Fedility Status:	Caso Closed
Case Number:	43-0392
How Discovered:	Tank Closure
Leak Cause:	Sincluro Fallure
Leak Source:	Tank
Date Leak Continned:	Not Reported
Oversight Program:	LUST
Prelim, Site Assesment Wokplan Submittad;	Not Reported
Preliminery Site Assesment Began:	Not Reported
Pollution Cheracterization Began:	Not Reported
Pollution Remediation Plan Submitted:	Not Reported
Date Remadiation Action Underway:	Not Reported
Date Post Remedial Action Monitoring Began:	Not Reported

ANGIOTECH BIOMATERIALS CORP. 2500 FABER PL, PALO ALTO, CA 94303 (Continued)

LUST SANTA CLARA:

Region:	SANTA CLARA
SCYWD ID:	85S2W31R61F
Dale Closed:	07/20/1994

CA FID UST: State and tribal registered storage tank lists

Fecălity ID:	43000578
Regulated By:	UTNKA
Regulated ID:	81810000
Cortese Code:	Not Reported
SIC Code:	Not Reported
Facility Phone:	4158560200
Mail To:	Not Reported
Mailing Address:	2500 FABER PL
Mailing Address 2:	Not Reported
Maišing City,St,Zip:	PALO ALTO 94303
Contact:	Not Reparted
Contact Phone:	Not Reported
DUNs Number.	Not Reported
NPDES Number:	Not Reported
EPA ID:	Not Reported
Comments:	Not Reported
Status:	Active

CORTESE: Other Standard Environmental Records

Region:	CORTESE
Facility County Code:	43
Reg By:	LTNKA
Reg Id:	43-0392

CUPA SANTA CLARA: Other Standard Environmental Records

Region;	SANTA CLARA
Program Description:	GENERATES < 10 GALAYR

HIST UST: State and tribal rogistered storage tank lists

Region;	STATE
Facility ID:	0000001818
Facility Type:	Other
Other Type:	BIOMEDICAL RESEARCH
Totel Tanks:	0006
Contact Name:	PHIL KENT
Telephone:	4158560200
Owner Name:	COLLAGEN CORPORATION
Owner Address:	2500 FABER PLACE

ANGIOTECH BIOMATERIALS CORP, 2500 FABER PL, PALO ALTO, CA 94303 (Continued)

Owner City,St,Zlp:	PALO ALTO, CA 94303
Tank Num:	001
Container Nura:	F
Yoar Installed:	1982
Tank Canacia:	00001000
Tank Used for:	WASTE
Type of Fuel:	Not Reported
Taak Constantion:	2.5 inches
Leak Delection	Visual
Tank Num:	002
Container Num:	SUMP2
Year installed:	1977
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	Not Reported
Tank Construction:	2.5 inches
Leak Detection:	Visual
Tank Num:	003
Container Nuna:	T204
Year Installed:	1084
Tank Capacity:	00005900
Tank Used for:	WASTE
Type of Fuel:	Not Reported
Tank Construction:	0.316 inches
Loak Delection:	Visual, 10
Tank Num:	004
Container Num:	T205
Year Installed:	1964
Tank Capaday:	00001480
Tank Used for:	WASTE
Type of Fuel:	Not Reported
Tank Construction:	0.268 Inches
Leak Detection:	Visual, 19
Tank Num:	005
Container Num:	T206
Year Installed:	1984
Tank Capacity:	00002015
Tank Used for:	PRODUCT
Type of Fue:	Not Reported
Tank Construction:	0.268 inches
Leek Delection:	Visual, Stock inventor, 10
Tank Nuns:	300
Container Num:	TO
Year installed:	1983
Tank Capacity:	00000971
Tank Used for:	PRODUCT

ANGIOTECH BIOMATERIALS CORP, 2508 FABER PL, PALD ALTO, CA 94303 (Continued)

Type of Fuel: Tenk Construction: Leak Selection: DiESEL Not Reported Stock Inventor
MAP FINDINGS

OLD POST OFFICI 2197 E BAYSHORI	E PALO ALTO E RD, PALO ALTO, CA,		\$108223766
- 55	WNW 1/10 - 1/3	(1469 ñ. / 0.282 mi.)	State and Iribal leaking storage tank tists
₹85	2 ft. Lower Elevation	6 ft. Above Ses Level	

Worksheet:

Comments: The hydrologic characteristics of the physical setting suggests that vepors would not migrale from the source to the larget property.

Soil characteristics would make vapor migration from the source or plume unlikely. Site is reported as closed.

Conditions:

Petroleum Hydrocarbon Chemicais of Concern: YES

Groundwater Flow Gradient:

Crossgradient: YES

Hydrogeologically: YES

Geological Attributes - Physical Barrier:

Impermeable soil fayer: YES

Geological Attributes - Soll Geology:

Silty-clay, fow-permeability soil: YES

LUST SANTA CLARA: State and tribal leaking storage tank lists

Region;	SANTA CLARA
SCVWD (D;	05S2W31K01F
Daie Closed:	02/29/2000

MAP FINDINGS

OLD POST OFFICE 2197 E BAYSHOR	E PALO ALTO E RD, PALO ALTO, CA, 1	94303	\$103472945
	WNW 1/10 - 1/3	(1489 ft. / 0.262 ml.)	State and tribal leaking storage fank lists
¥ B0	2 ft. Lower Elevation	6 fl. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Can Be Roled Out

Commonte: The hydrologic chureceristics of the physical setting suggests that vapors would not migrate from the source to the target property.

The site is listed as LUST cleanup site completed case closed by Sanfa Clara LOP.

Conditions:

Pekoleum Hydrocarbon Cheralcals of Concorn: YES

Groundwater Flow Gradient:

Crossgradtent: YES

Hydrogeologically: YES

Geological Attributes - Physical Barrier:

Impereteable soll layer: YES

Geological Attributes - Soll Geology:

Silty-clay, low-permeability soil; YES

LUST: State and tribal leaking storage tank lists

Region:	STATE
Global Id:	T060850D20G
Latitude:	37,450331
Longliude:	-122,12171
Case Typo:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/28/2000
Load Agency:	SANTA CLARA COUNTY LOP
Case Worker:	UST
Local Agency:	SANTA CLARA COUNTY LOP
RB Case Number;	Not Reported
LOC Case Nornber;	Not Reported
File Location:	Stored electronically as an E-file
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not Reported
Cilck here to access the Celifornia GeoTracker records for this facility:	http://www.web.edmet.com/ordering/switchboard/redirect.aspx?s=GRR_CA_LUST_ST&globa1_ld=70608 500996

Contact:

Globa) ld:	T0508500996
Contact Type:	Regional Board Caseworker
Contact Name:	ZSC
Organization Name:	SAN FRANCISCO BAY RWOCB (REGION 2)
Address:	1515 CLAY STREET, SUITE 1400
City:	CAKLAND
Email:	Not Reported

MAP FINDINGS

OLD POST OFFICE PALO ALTO, 2197 E BAYSHORE RD, PALO ALTO, CA 94303 (Continued)

Phone Number:	Not Reported
Global Id:	T0608500996
Contact Type:	Local Agency Caseworker
Confact Name:	UST CASE WORKER
Omanization Name:	SANTA CLARA COUNTY LOP
Address:	1555 Berger Dove, Sulla 300
Cibr	SAN JOSE
Smallr	Not Reported
Phone Number:	4030183408
Phono Restance.	1000100100
Regulatory Activities:	
Giobal Id:	T0608500996
Action Type:	Other
Date:	01/01/1950
Action:	Leak Reported
Giobel id:	70608500996
Action Type:	RESPONSE
Date:	12/09/1069
Action:	Soil and Water investigation Report
Global Id:	10008500996
Action Type:	RESPONSE
Date:	09/07/1998
Action:	Soil and Water Investigation Workpian
Global Id:	TD60850C396
Action Type:	ENFORGEMENT
Date:	05/03/1984
Action:	Notice of Responsibility - #39182
Global Id:	T0608500993
Action Type:	ENFORCEMENT
Date:	10/14/1999
Action:	Staff Letter - #18257
Global Id:	T0808500996
Action Type:	ENFORCEMENT
Date:	07/24/1999
Action:	Staff Letter - #18255

LUST REG 2:

2
Not Reported
Case Closed
05S2W31K01f
Not Reported
Not Reported
Not Reported

OLD POST OFFICE PALO ALTO, 2197 E BAYSHORE RD, PALO ALTO, CA 94303 (Continued)

Date Loak Confirmed:	Not Reported
Oversight Program:	LUST
Pretim. Site Assesment Wokptan Submitted:	Not Reported
Preliminary Site Assosment Began;	5/3/1984
Pollution Characterization Began:	6V13/1999
Pollution Remediation Plan Submitted:	Not Reported
Date Remediation Action Underway:	Not Reported
Dato Post Remadial Action Monitoring Began:	Not Reported

HIST LUST SANTA CLARA: State and tribal loaking storage tank lists

Region:	SANTA CLARA
Region Code:	2
SCVWD ID:	05S2W31K01
Oversite Agency:	SCVWD
Date Listed:	1985-01-01 00:00:00
Closed Dalo:	2000-02-29 00:00:00

To maintain currency of the following databases, EDR contacts the appropriate agency on a monthly or quarterly basts, as required.

Number of Days to Lipdate: 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

PRP: Potentially Responsible Parties

Standard Environmental Record Source: Othor Standard Environmental Records Search Distance: Property

A listing of verified Potentially Responsible Partics

Date of Government Version: 12/02/2012 Number of Days to Opdate: 69 Last EDR Contact :04/04/2013 Source: EPA Telephone: 202-564-6023

RMP: Risk Management Plans

Standard Environmental Record Source: Other Standard Environmentel Records Search Distance: Property

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chamical accidant prevention at facilities using extremely hexardous substances. The Risk Management Program Rule (PMP 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 uso certain frammable 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 spalls out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g. the five department) should an accident occur.

Date of Government Version: 05/08/2012 Number of Days to Update: 46 Last EDR Contact: 04/29/2013 Source: Environmentel Protection Agency Telephone: 202-564-8800

ALAMEDA CO. UST: Underground Tanks

Standard Environmontal Record Source: State and tribal registered storage tank lists Underground storage tank sites located in Alameda county.

Date of Government Version: 04/15/2013 Number of Days to Updata: 30 Last EDR Contect :04/01/2013 Source: Alameda County Environmental Health Scrvices Telephone: 510-507-6700

AST: Abovoground Petroleum Storage Tank Facilities Standard Environmental Record Source: State and tribal registered slorage bark lists

Search Distanco: Property

Registant Aboveground Storage Tanks.

Date of Government Version: 08/01/2009 Number of Days to Update: 21 Last EDR Contact :04/08/2013 Source: State Water Resources Control Board Telephone: 916-327-5092

Alameda County CS: Contarrinated Siles

Standard Environmental Record Source: State and tribei leaking storage lank lists Search Distance: 0.333 Mile

	RECORD SO	URCES AND CURRENCY
<u> </u>		
	A listing of contaminated sites overseen by the	Toxic Release Program (oil and groundwater contamination from chereical
	releases and spills) and the Leaking Undergroun petroloum USTs).	d Storage Tank Program (seil and ground water contamination from leaking
	Date of Government Version: 04/15/2013	Source: Alameda County Environmental Health Services
	Last EDR Contact :04/01/2013	(C)CPR202:578-567-670D
	CA BOND EXP. PLAN: Bond Expenditure Plan	
	Standard Environmental Record Source: Other Sta Swarch Distance: 0.333 Mile	andard Environmentel Records
	Department of Health Services developed a sile Substance Cleanup Bond Act funde. It is not up)-specific expenditure pien as the basis for an appropriation of Hazardous polated.
	Date of Government Version: 01/01/1989	Source: Department of Health Services
	Number of Days to Update: 6 Last EDR Conlact :05/31/1994	Telephone: 910-255-2118
(CA FID UST: Facility Inventory Database	
	Standard Environmental Record Source; State and Search Distance: Property	i tribel registered storage tank lists
	The Facility inventory Detabase (FID) contains a h the State Water Resource Control Board. Refer to	istorical listing of active and inactive underground storage tank locations from I local/county source for current data.
	Date of Govornment Version; 10/31/1994	Source: California Environmental Protection Agency
	Number of Days to Update; 24 Last EDR Contect :12/20/1998	Telephone: 916-341-5851
C	IA LA LF: City of Los Angeles Landfills	
	Standard Environmental Record Source: State and Landfills owned and maintained by the City of Los.	l fribal landfili / solid waste dieposel Angeles.
	Date of Government Venilon: 03/05/2008	Source: Engineering & Construction Division
	Number of Days to Update: 29	Telephone: 213 473 7869
	Last EDR Contact :05/20/2013	
C	DL: Clandestine Drug Labs	
	Standard Environmental Record Source: Other Sta Search Distance: Property	indard Environmental Records
	A fisting of drug lab locations. Listing of a location were not present there, and does not constitute a cleanup work.	in this database does not indicate that any illegal doug leb materials were or determination that the location either requires or doos not require additional
	Date of Govornment Version: 12/31/2012	Source: Department of Toxic Substances Control
	Number of Days to Update: 41 Last EDR Contact :04/01/2013	Telephane: 916-265-6504
¢	HMIRS: California Rezardous Material Incident Ropo	rt System
	Standard Environmental Record Source: Other Sta Search Distance: Property	ndard Environmental Records
	second placement roberty	

Celifornia Hazardous Material Incident Reporting System. CHMIRS contains Information on reported hazardous material Incidental releases or spille).

Date of Government Version: 12/06/2012	Source: Office of Emergency Services
Number of Days to Update: 49 Last EDR Contact :05/01/2013	Tetephone: 916-845-8400
CONTRA COSTA CO. SITE LIBT: Site Lisi	
Standard Environmental Record Source: Other S Search Distance: 0.25 Mile	landard Environmental Records
List includes sites from the underground tark, ha	zardous waste generator and business plan/2185 programs.
Date of Government Version: 04/09/2013	Source: Conica Costa Health Services Department
Number of Days to Update: 34 Lest EDR Contact :05/00/2013	Telephone: 925-046-2280
CORTESE: "Cortese" Hazardous Waste & Substanc	es Sites List
Standard Environmentol Record Source: Other S Search Disfance: 0.333 Mile	tandard Environmental Records
The siles for the fist are designated by the State t and the Department of Toxic Substances Control	Water Resource Control Board (LUST), the integrated Waste Soard (SWF/LS (Cal-Sites).
Date of Government Version: 04/01/2013	Source: GAL EPA/Office of Emergency information
Number of Days to Update: 42	Telephone: 916-323-3400
CUPA AMADOR: CUPA Facility List	
Standard Environmental Record Source: Other Si Cupa Facility List	tacdard Environmental Records
Date of Government Version: 03/13/2013	Source: Amador County Environmental Health
Number of Days to Update; 21 Last EDR Contect :03/11/2013	Telephane: 209-223-6439
CUPA BUTTE: CUPA Facility Listing	
Standard Environmental Record Source: Other S Gupa facility list.	tandard Envíronmental Records
Date of Government Version: 10/16/2012	Source: Public Health Department
Number of Bays to Update: 27	Telephone: 530-538-7149
CUPA CALVERAS: CUPA Facility Listing Standard Environmental Record Source: Other St	tandag) Environmentel Records
Cupa Facility Listing	DIGGU LINNONG NOVIUS
Date of Government Version: 04/16/2013	Sourco: Galveras County Environmental Health
Number of Days to Update: 29 Last EDR Contact :04/15/2013	Tolophono: 209-754-6399
CUPA COLUSA: CUPA Facility List	
Standard Environmental Record Source: Other S Cupa facility list.	landard Environmental Records
Date of Government Version: 01/04/2013	Source: Health & Human Services
Marchae of Branch (Marchae) and	T-1-5 000 450 0000

•••••••

CUPA DEL NORTE: CUPA Facility List	
Standard Environmental Record Source: Other Sta	indard Environmental Recorde
Cupa Facility ist	
Data of Government Version; 01/08/2013	Source: Del Norte County Environmental Héalth Division
Number of Days to Update: 46	Telephone: 707-465-0426
Last EDR Contact :05/08/2013	•
CUPA EL DORADO; COPA Facility List	
Standard Environmental Record Source: Other Sta	ndard Environmental Records
CUPA facility list.	
Date of Government Version: 02/27/2013	Source: El Dorado County Environmental Management Departmen
Number of Days to Update: 25	Telephone: 530-621-6623
Last EDR Contact :05/06/2013	
UPA FRESNO: CUPA Resources List	
Standard Environmental Record Source: Other Sta	ndard Environmental Records
Certified Unified Program Agency, CUPA's are re- waste management regulatory program. The age operate underground storage tanks or abovegrou	esponsible for implementing a unified hozardous materials and hazardou may provides oversight of businessee that deal with hazardous materials and storage tanks.
Date of Government Version: 03/31/2013	Source: Dept. of Community Health
Number of Daug to Redotor 90	Tata-based FED AAE 0076
manuel of pays to option: 30	1010001010:008-440-3277
Last EDR Contact:04/15/2013	Telephone: 558-445-3271
Last EDR Contact :04/15/2013 UPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list,	ndard Environmental Records
 Hamber of Days to Opdate: 30 Last EDR Contact :04/15/2013 SUPA HUM8OLDT: CUPA Facility List Standard Environmental Record Source: Other 5ta CUPA facility jist, Date of Government Version: 03/15/2013 	ndard Environmental Records Source: Humboldt County Environmental Health
Last EDR Contact :04/15/2013 UPA HUM8OLDT: CUPA Facility List Standard Environmental Record Source: Other 5/a CUPA facility list, Date of Government Version: 03/15/2013 Number of Days to Update: 6	adard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported
 Humber of Days to Opdate: 30 Last EDR Contact :04/15/2013 SUPA HUM8OLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list, Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported
 Humber of Days to Opdate: 30 Last EDR Contact :04/15/2013 CUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list, Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 CUPA IMPERIAL: CUPA Facility List 	adard Environmental Records Source: Numboldt County Environmental Health Telephone: Not Reported
 Humber of Days to Opdate: 30 Last EDR Contact :04/15/2013 CUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list, Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 CUPA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Curpa facility list 	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported
Last EDR Contact :04/15/2013 CUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list, Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 CUPA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list.	adard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported
Last EDR Contact :04/15/2013 CUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list, Date of Government Version: 03/15/2013 Number of Days to Updata: 6 Last EDR Contact :02/25/2013 CUPA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list. Date of Government Version: 05/01/2012	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Border Held Office
Last EDR Contact :04/15/2013 CUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility (st. Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 CUPA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Gupa facility (tat. Date of Government Version: 05/01/2012 Number of Days to Update: 40	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Border Field Office Tolephone: 760-339-2777
Last EDR Contact :04/15/2013 CUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list, Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 CUPA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sia Cupa facility list. Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contact :04/29/2013	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Barder Field Office Telephone: 760-339-2777
Last EDR Contact :04/15/2013 CUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility jist, Date of Government Version: 03/15/2013 Number of Days to Updata: 6 Last EDR Contact :02/25/2013 CUPA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Gupa facility list, Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contact :04/29/2013 CUPA INYO: CUPA Facility List	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Barder Field Office Tolephone: 760-339-2777
 Invaluer of Days to Opdate: 30 Last EDR Contact :04/15/2013 20PA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility (ist, Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 20PA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Gupa facility list. Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contact :04/29/2013 20PA INYO: CUPA Facility List Standard Environmental Record Source: Other Sta 	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Border Field Office Tolephone: 760-339-2777
 Humber of Days to Opdate: 30 Last EDR Contact :04/15/2013 SUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list. Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 SUPA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list. Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contact :04/29/2013 SUPA INYO: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list. 	ndard Environmental Records Source: Humboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Border Field Office Tolophone: 760-339-2777
 Instatute of Days to Opdate: 30 Last EDR Contact :04/15/2013 20PA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility jist, Date of Government Version: 03/15/2013 Number of Days to Update: 6 Last EDR Contact :02/25/2013 20PA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list, Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contact :04/29/2013 20PA INYO: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta 	ndard Environmental Records Source: Numboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Barder Field Office Telephone: 760-339-2777
 Invaluer of Days to Opdate: 30 Last EDR Contact :04/15/2013 20PA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other 5/a CUPA facility jist, Date of Government Version: 03/15/2013 Number of Days to Update: 8 Last EDR Contact :02/25/2013 20PA IMPERIAL: CUPA Facility List Standard Environmental Record Source: Other Sia Cupa facility list. Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contact :04/29/2013 20PA INYO: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list. Date of Government Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Governmental Record Source: Other Sta Cupa facility list. Date of Government Version: 00/26/2012 Number of Days to Update: 51 	ndard Environmental Records Source: Numboldt County Environmental Health Telephone: Not Reported Indard Environmental Records Source: San Diogo Border Field Office Telephone: 760-339-2777 Indard Environmental Records Source: Inyo County Environmental Health Sorvices Telephone: 760-878-0238
 Humber of Days to Opdate: 30 Last EDR Contact :04/15/2013 SUPA HUMBOLDT: CUPA Facility List Standard Environmental Record Source: Other Sta CUPA facility list. Date of Government Version: 03/15/2013 Number of Days to Updata: 6 Last EDR Contact :02/25/2013 SUPA IMPERIAL: CUPA Facility 1.ist Standard Environmental Record Source: Other Sta Gupa facility list. Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contact :04/29/2013 SUPA INYO: CUPA Facility List Standard Environmental Record Source: Other Sta Gupa facility list. Date of Government Version: 05/01/2012 Number of Days to Update: 40 Lest EDR Contect :04/29/2013 SUPA INYO: CUPA Facility List Standard Environmental Record Source: Other Sta Cupa facility list. Date of Government Version: 00/26/2012 Number of Days to Update: 51 Last EDR Contact :02/25/2013 	Indard Environmental Records Source: Humboldt County Environmental Health Télaphone: Not Reported Indard Environmental Records Source: San Diogo Border Field Office Telephone: 760-339-2777 Indard Environmental Records Source: Inyo County Environmental Health Sorvices Telephone: 750-878-0238
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DECODD FO	
RECORD SO	URCES AND CURRENCT
A listing of sites included to the couplys Certified	Unified Program Agency database. Californias Socretary for Environmental
Protection established the unified hazardous mate the California Health and Safety Code. The Un enforcement activities.	rials and hazardous wasto regulatory program as required by chapter 6.11 of tifled Program consolidates the administration, parrelts, inspections, and
Date of Government Version: 02/12/2013	Source: Kings County Department of Public Health
Number of Days to Opdate: 36 Last EDR Contact :02/12/2013	Telephane: 559-584-2411
CUPA LAKE: CUPA Facility List	
Standard Environmental Record Source: Other Sta Cupa facility list	andard Environmental Rocords
Date of Government Version: 01/23/2013	Source: Leke County Environmental Hoatth
Number of Days to Update: 33 Lest EDR Contect :04/19/2013	Telephone: 707-263-1164
CUPA MADERA: CUPA Facility List	a de la Caulan e de la Caucade
Standard Environmental Record Source: Other Standard Environmental Record Source: Other Sta A Esting of sites included in the countys Certified Protection established the unified hazardous mate the California Health and Safety Code. The Un enforcement activities.	indard Environmental Records Unlied Program Agency database. Californias Secretary for Environmental reals and hazardous waste regulatory program as required by chapter 6.11 of lifted Program consolidates the administration, permits, inspections, and
Date of Government Version: 04/15/2013	Source: Madera County Environmental Hoaith
Number of Days to Update: 31 Last EDR Contect :04/01/2013	Telephone: 558-675-7823
CUPA MERCED: CUPA Facility List	
Slandard Environmental Record Source: Other Six CUPA facility list.	anderd Eqvironmental Records
Date of Government Version: 62/25/2013	Source: Merced County Environmental Health
Number of Days to Update: 27 Last EDR Contact :02/25/2013	Tetephone: 209-381-1094
CUPA MONO: CUPA Facility List	
Standard Environmental Record Source: Other Str CUPA Facility List	indero tanyeonmenia: Records
Date of Government Version: 03/04/2013	Source: Mono County Heelth Department
Number of Days to Updals; 17 Last EDR Contact :03/04/2013	Telephone: 760-932-5560
CUPA MONTEREY: CUPA Facility Listing Standard Environmental Record Source: Other Sta CUPA Program listing from the Environmental Hea	anderd Environmental Records and Division.
	Proven Menhany Prote Media Decartment
Date of Government Version: 03/14/2013 Number of Days to Update; 12 Last EDR Contect :02/25/2013	Source: Monterey County Health Department Telephone: 831-796-1297
CHOA NEVADA: CHOA Facility List	

Standard Environmental Record Source: Other Standard Environmental Records

RECORD SO	DURCES AND CURRENCY
CUPA tecitity ist.	
Date of Government Version: 03/08/2013 Number of Days to Opdate: 17 Last EDR Contact :05/17/2013	Source: Community Development Agency Telephono: 530-265-1467
UPA SAN LUIS OBISPO: CUI?A Facility List Standard Environmental Record Source: Other S Cupa Facility List,	landard Environmental Records
Date of Government Version: 02/26/2013 Number of Days to Update: 27 Last EDR Contact :02/25/2013	Source: Sen Luis Obispo County Public Health Department Telephone: 805-781-5696
UPA SANTA BARBARA: CUPA Facility Listing Standard Environmental Record Source: Other S CUPA Program Listing from the Environmental H	tandard Environmentat Records lealth Services division.
Date of Government Version: 09/08/2011 Number of Days to Update: 28 Last EDR Contact:05/20/2013	Source: Santa Barbara County Public Health Department Telephone: 805-686-8167
UPA SANTA CLARA: Cupa Facility List Standard Environmentol Record Source: Other S Cupa facility list	landerd Environmental Records
Date of Government Version: 03/04/2013 Number of Days to Update; 20 Last EDR Contact :03/04/2013	Source: Department of Environmental Health Telephone: 408-918-1973
UPA SANTA CRUZ: CUPA Facility List Standard Environmental Record Source: Other S CUPA facility listing.	tandard Environmental Records
Date of Government Version; 02/26/2013 Number of Days to Update; 22 Last EDR Contact :02/25/2013	Source: Santa Croz County Environmental Health Telephano: 831-464-2781
UPA SHASTA: CUPA Facility List Standard Environmental Record Source: Other St Cupe Facility List.	andard Environmental Records
Date of Government Version: 03/15/2013 Number of Days to Update: 12 Last EDR Contact :02/25/2013	Source: Shasta County Department of Rosource Management Telephone: 530-225-5789
UPA SONOMA: Cupa Facility List Standard Environmental Record Source: Other Si Cupa Facility list	tandard Environmental Records
Dete of Government Version: 04/01/2013 Number of Days to Update: 41	Source: County of Sonoma Fire & Emergency Services Dopartm Telephone: 707-565-1174

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CUPA TUOLUMNE: CUPA Facility List Standard Environmental Record Source: Other Standard Environmental Records Cupa facility list Date of Government Version: 01/14/2013 Source: Divison of Environmental Health Tolophone: 209-533-5633 Number of Days to Update: 42 Last EDR Contact :05/15/2013 CUPA YUBA: CUPA Fecility List Standard Environmental Record Source: Other Standard Environmental Records CUPA facility listing for Yuba County. Source; Yuba County Environmental Health Department Date of Government Version: 03/05/2013 Telephone: 530-749-7523 Number of Days to Update: 19 Last EDR Contact :05/20/2013 DEED: Oeed Restriction Listing Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.333 Mile Site Miligation 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 flat 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 the line program by DESC HWIPP are a restriction at the Inscal county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hezardous substances that remain on site after the facility (or part of the facility) has been closed or cloaned up. The types of land use rostriction include deed notice, deed restriction, or a land use restriction that blods current and future owners. Date of Government Version: 03/11/2013 Source: Department of Toxic Substances Control Telephone: 916-323-3400 Number of Days to Update: 13 Last EDR Contact :03/12/2013 **DRYCLEANERS:** Cleaner Facilities Stendard Environmental Record Source: Other Stendard Environmental Records Search Distence: 0.25 Mile A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power faundries, ferrilly and commercial; garment pressing and cloaner's agents; linen supply; coln-operated laundrise and cloaning; drycleaning plants, except rugs; carriet and uphoistor cleaning; industrial launderers; faundary and garment services. Source: Department of Toxic Substance Control Data of Government Version: 12/11/2012 Telephone: 910-327-4498 Number of Days to Update: 23 f.sst EDR Conlact :03/11/2013 EL SEGUNDO UST: City of El Segundo Underground Storege Tank Standard Environmental Record Source: State and tribel registered storage tank kets Underground alorage tank sitos located in El Segundo cliv. Source: City of El Segundo Fire Department Date of Government Version: 04/22/2013 Telephone: 310-524-2236 Number of Days to Update: 18 Lest EDR Contact :04/19/2013 EMI: Emissions Inventory Data Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

Toxics and criteria pollulant emissions data collected by the AR8 and total air pollution agencies.

Date of Government Version: 12/31/2008 Number of Days to Update: 19 Last EDR Contact:03/28/2013

Source: California Air Resources Beard Telephone: 916-322-2990

ENF: Enforcement Action Listing

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

A listing of Weter Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Viotetion, Expedited Paymont Letter, and Stell Enforcement Letter.

Data of Government Version: 04/20/2013 Number of Days to Update: 17 Last EDR Context:04/20/2013 Source: State Water Resoraces Control Board Telephone: 916-445-9379

ENVIROSTOR: EnviroStor Database

Standard Environmental Record Source: State and Inbal - equivalent CERCUS Search Distance: 0.333 Mile

The Department of Toxic Substances Conirol's (DTSC's) Site Militigation and Brownfields Reuse Program's (SMBRP's) EnviroSior database identities sites that have known contamination or sites for which there may be reasone to investigate further. The database includes the following site types: Federal Superiund sites (National Priorities List (NPL)); Stale Response, including Military Facilities and State Superiund; Voluntery Cleanup; and School sites. EnviroStor provides similar Information to the information that was available in CatSites, 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, end risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 03/13/2013 Number of Days & Update: 13 Last EDR Contact: 05/07/2013 Source: Department of Toxic Substances Control Telephone: 916-323-3400

HAULERS: Registered Waste Tire Haulers Listing

Standard Environmental Record Source: Other Standard Environmental Records Search Elstence: Property

A tisting of registered waste tire haulers.

Date of Government Version: 04/26/2013 Number of Days to Update: 20 Last EDR Contact :05/20/2013 Source; Integrated Waste Management Board Telephone: 916-341-3422

HAZNET: Facility and Manifest Date

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

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.

Date of Government Version: 12/31/2011 Number of Days to Update: 14 Lest EDR Contact :04/19/2013 Source: California Environmental Protection Agency Telephone: 916-255-1136

HIST CAL-SITES: Calsilos Database

Standard Environmental Record Source: State and tribel - equivatent CERCLIS

PECOPD SO	
RECORD SO	UNCES AND ODIALINOT
Search Distance: 0.333 Millo	
The Calsites database contains potential or con reevaluated and significantly reduced the number has been replaced by ENVIROSTOR.	ifirmed hazardous substance release properties, in 1995, California EP, of sitos in the Celsites database. No longer updated by the state agency.
Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Number of Days to Update: 21	Telephone: 916-323-3400
Last EDR Confact :02/23/2009	
HST CORTESE: Hazardous Waste & Substance Site	List
Standard Environmental Record Source: Other Sta	andard Environmental Records
Search Ekstence: 0.333 Milo	
The sites for the list are dosignated by the State V and the Department of Toxic Substances Control	Valer Resource Control Board [LUST], the Integrated Wasto Board (SWF/LS [CALSITES]. This listing is no longer updated by the state agency.
Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Number of Days to Updato: 76	Telephone: 916-323-3400
Last EDR Contect :01/22/2009	
HIST LUST SANTA CLARA: HIST LUST - Fuel Leak	Site Activity Report
Standard Environmental Record Source: State and	i tribal leaking storage lank lists
Search Distance: 0.333 Mile	
A listing of open and closed leaking undergroun underground storage tanks are now handled by	d storage tanks. This listing is no longer updated by the county. Leakir the Department of Environmental Health.
Dete of Government Version: 03/29/2005	Source: Santa Clara Valley Weter District
Number of Days to Update: 22	Telephone: 408-285-2600
Lest EDR Contact :03/23/2009	
HST UST: Hazardous Substance Storage Container	Database
Stendard Environmental Pocord Source: State an	d tribal registered storage tank lists
Standard Ethnikasherika Necom bource. State day	
Search Distance: Property	
Standard Environmental Record Bourde, State an Search Distance: Property The Hazardous Substance Storage Container D current data.	alabase is a historical listing of UST sites. Refer to local/county source (
Standard Environmental Record Boards, State an Search Distance: Property The Hazardous Substance Storage Container D current data.	atabase is a historical listing of UST sites. Refer to local/county source is Source: State Water Resources Control Board
Standard Environmental Record Bound. State an Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Govornment Version: 10/15/1990 Number of Days to Bodate: 18	atabase is a historical listing of UST sites. Refer to local/county source i Source: State Water Resources Control Board Telephone: 916-341-5851
Standard Environmental Record Boards, State an Search Distance: Property The Hazardous Substance Storage Conteiner D. current data. Date of Government Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001	atabase is a historical listing of UST sites. Refer to local/county source i Source: State Water Resources Control Board Telephone: 916-341-5851
Standard Environmental Record Bodrot State an Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Government Version: 10/15/1990 Number of Days to Opdate: 18 Last EDR Contact :07/26/2001 WP: EnviroStor Permitted Facilitios Usting	atabase is a historical listing of UST sites. Refer to local/county cource i Source: State Water Resources Control Board Telephone: 916-347-5851
Standard Environmental Record Source: Other St Search Distance: Property The Hazardous Substance Storage Container D. current data. Date of Government Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001 WP: EnviroStor Permitted Facilitios Listing Standard Environmental Record Source: Other St	atabase is a historical listing of UST sites. Refer to local/county cource i Source: State Water Resources Control Board Telephone: 916-341-5851 andard Environmental Records
Standard Environmental Record Source: Other State and Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Govornment Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001 #WP: EnviroStor Permitted Facilities Usting Standard Environmental Record Source: Other St Search Distance: 0.333 Mile	atabase is a historical listing of UST sites. Refer to local/county source f Source: State Water Resources Control Board Telephone: 916-341-5851 andard Environmental Records
Standard Environmental Record Source: State and Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Govornment Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001 IWP: EnviroStor Permitted Facilitios Usting Standard Environmental Record Source: Other St Search Distance: 0,333 Mile Detailed information on permitted hazardous wast	atabase is a historical listing of UST sites. Refer to local/county source i Source: State Water Resources Control Board Telephone: 916-341-5851 andard Environmental Records e facilities and correctivo action ("cleanups") tracked in EnviroStor.
Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Government Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001 tWP: EnviroStor Pennitted Facilities Listing Standard Environmental Record Source: Other St Search Distance: 0.333 Mile Detailed information on permitted hazardous wast Date of Government Version: 02/25/2013	atabase is a historical listing of UST sites. Refer to local/county source is Source: State Water Resources Control Board Telephone: 916-341-5851 andard Environmental Records e facilities and correctivo action ("cleanups") tracked in EnviroStor. Source: Department of Toxic Substances Control
Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Government Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001 tWP: EnviroStor Pennitted Facilities Listing Standard Environmental Record Source: Other St Search Distance: 0.333 Mile Detailed information on permitted hazardous wast Date of Government Version: 02/25/2013 Number of Days to Environ: 02/25/2013	atabase is a historical listing of UST sites. Refer to local/county source f Source: State Water Resources Control Board Telephone: 916-341-5851 andard Environmental Records e facilities and corrective action ("cleanups") tracked in EnvireStor. Source: Department of Texic Substances Control Telephone: 916-323-3400
Standard Environmental Record Source: State an Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Government Version: 10/15/1890 Number of Days to Update: 18 Last EDR Contact :07/26/2001 (WP: EnviroStor Permitted Facilitos Listing Standard Environmental Record Source: Other St Search Distance: 0.333 Mile Detailed information on permitted hazardous wast Date of Government Version: 02/25/2013 Number of Days to Update: 27 Last EDR Contact :02/26/2013	atabase is a historical listing of UST sites. Refer to local/county source i Source: State Water Resources Control Board Telephone: 916-341-5851 andard Environmental Records e facilities and corrective action ("cleanups") tracked in EnvireStor. Source: Department of Texic Substances Control Telephone: 916-323-3400
Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Government Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001 tWP: EnviroStor Permitted Facilities Listing Standard Environmental Record Source: Other St Search Distance: 0.333 Mile Detailed information on permitted hazardous wast Date of Government Version: 02/25/2013 Number of Days to Update: 27 Last EDR Contact :02/26/2013 IWT: Registered Hezerdous Wasto Transporter Data	atabase is a historical listing of UST sites. Refer to local/county source (Source: State Water Resources Control Board Telephone: 916-341-5851) andard Environmental Records e tacifities and corrective action ("cleanups") tracked in EnvireStor. Source: Department of Texic Substances Control Telephone: 918-323-3460
Search Distance: Property The Hazardous Substance Storage Container D current data. Date of Government Version: 10/15/1990 Number of Days to Update: 18 Last EDR Contact :07/26/2001 tWP: EnviroStor Permitted Facilitios Listing Standard Environmental Record Source: Other St Search Distance: 0,333 Mile Detailed information on permitted hazardous wast Date of Government Version: 02/25/2013 Number of Days to Update: 27 Last EDR Contact :02/26/2013 IWT: Registered Hezerdous Wasto Transporter Data Standard Environmental Record Source: Other St	atabase is a historical listing of UST sites. Refer to local/county source i Source: State Water Resources Control Board Telephone: 916-341-5851 andard Environmental Records e tacifities and corrective action ("cleanups") tracked in EnvireStor. Source: Department of Toxic Substances Control Telephone: 916-323-3460 base andard Environmental Records

RECORD SO	URCES AND CURRENCY
A listing of hazardous waste transporters, in Calif hazardous wastes unless the person holds a valu valid for one year and is assigned a unique regist	fornia, unless specifically exempted, it is unlawful for any person to transport d registration issued by DTSC. A hazardous waste transporter registration is ration number.
Date of Government Version: 04/15/2013 Number of Days to Update: 31 Last EDR Contact :04/16/2013	Source: Department of Toxic Substances Control Telephone: 916-440-7145
KERN CO. UST: Underground Slorage Tank Sites & Standard Environmental Record Source: State and Xern County Sites and Tanks Elsting.	Fank Listing š tribel registered storage tank lists
Date of Government Version: 06/31/2010 Number of Days to Update: 29 Last EDR Contact :05/10/2013	Source: Kern County Environment Health Services Department Telephone: 661-862-8700
LA Co. Site Mitigation: Site Mitigation List Standard Environmental Record Source: Other Sta Soarch Distance: Property	inderd Environmental Records
Industrial sites that have had some sort of spill or o	xomplaint.
Date of Government Version: 01/36/2013 Number of Days to Update: 32 Last EDR Contact :04/19/2013	Source: Community Health Services Telephone: 323-890-7806
LDS: Land Disposel Sites Listing Standard Environmental Record Source: Other Sta Soarch Distance: Property	ndard Environmental Records
The Land Disposel program regulates of waste d units.	ischargo to land for treatment, storage end disposal in waste management
Date of Government Version: 03/18/2013 Number of Days to Update: 8 Lest EDR Contact :05/02/2013	Source: State Water Quaility Control Board Telephone: 866-480-1028
LIENS: Environmental Liens Listing Standard Environmental Record Source: Other Sta Search Distance: Property	ndard Environmental Records
A listing of property locations with environmental lie	ens for California where DTSC is a lien holder.
Dato of Government Version: 03/15/2013 Number of Days to Update: 12 Last EDR Contect :03/11/2013	Source: Department of Texic Substances Control Telephone: 916-323-3400
LONG BEACH UST: City of Long Beach Underground Standard Environmental Record Source: State and Underground storage tank sites located in the city of	Storage Tank Bibel registered storege lank lists of Long Beach.
Date of Government Version: 03/28/2003 Number of Days to Update: 34 Last EDR Contact :04/20/2013	Source: City of Long Beach Fire Department Telephone: 582-570-2563
LOS ANGELES CO. HMS: HMS: Street Number List	

DEACHO	AAUDARA MIN AUDDENAV
	STHUT'ES ANT THERENT Y
REGURD	JOURGED AND CONNENCT

Stendent Environmental Record Source: Other Standard Environmental Records Search Distance: Property

Industrial Waste and Underground Storage Tank Siles.

· . .

Date of Government Version: 10/31/2012. Number of Days to Update: 28 Last EDR Contact :04/15/2013

Source: Depertment of Public Works Telephone: 626-458-3517

LOS ANGELES CO. LF: List of Solid Weste Facilities

Standard Environmental Record Source; State and tribal landfill / solid waste disposal Solid Waste Facilities in Los Angeles County.

Oate of Government Vorsion: 04/24/2013 Number of Days to Update: 23 Lest EDR Contact :04/24/2013

Source: La County Department of Public Works Telephone: 818-458-5185

LUST: Geotracker's Leaking Underground Fuel Tank Report

Standard Environmental Record Source: State and tribat leaking storage tank lists Soarch Distance: 0.333 Mile

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 storad varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 03/18/2013 Number of Days to Update: 8 Last EDR Contact :05/02/2013

Source: State Water Resources Conirol Board Telephone: see region list

LUST REG 1: Active Toxic Sile investigation Standard Environmental Record Source: State and tribel leaking storago lank lists

Del Norte, Hamboldt, Lako, Mondocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, ploase refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001

Number of Days to Update: 29 Last EDR Contact :08/01/2011

LUST REG 2: Fuel Leak List

Source: Celifornia Regional Water Quality Control Board North Coast (1) Telephone: 707-570-3769

Standard Environmental Record Source: State and tribal teaking storage tenk lists Leaking Underground Storage Yank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonema countes.

Date of Government Version: 08/30/2001

Number of Days to Lipdate: 30 Last EDR Contect :09/19/2011 Source: California Regional Water Quality Control Board San Frencisco Bay Region (2) Telephone: 510-622-2433

LUST REG 3: Loaking Underground Storage Tank Database

Standard Environmental Record Source: State and Iribal leaking storage tank lists Leaking Underground Storage Tank locations. Monterey, San Senita, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003

Number of Days to Update: 14

Source: Celifornia Regional Water Quality Control Board Central Coast Region (3) Telephone: 885-542-4786



	RECORD SC	
Number of Days to Op	odate: 4 f	Telephane: 909-782-4496
Last EOR Contact :08	/15/2011	
LUST REG 9: Leaking Ur	iderground Storage Tank F	Report
Stendard Environmen	tal Record Source: State a	nd tribal leaking storage lank lists
Orange, Rivorside, S Board's LUST databa	an Diego countles. For r ase,	nore current information, please rofor to the State Water Resources Contro
Date of Government \	/ersion: 03/01/2001	Source: Catifornte Regional Water Quality Control Board San Diego Region (9)
Number of Days to Up	xiats; 26	Telephone: 858-637-5595
Last EDR Contact :08	/28/2011	
LUST SANTA CLARA: L	OP Listing	
Standard Environmen	tal Record Source: State a	nd Iribal leaking storage lank lists
A listing of leaking und	terground storage tanks lo	caled In Santa Clark county.
Date of Government \	fersion: 03/04/2013	Source: Department of Environmental Health
Number of Dava to Br	xiala: 19	Tolophone: 408-918-3417
Last EDR Contact :03	/04/2013	
MARIN CO. URT: Bodem	iround Storage Tank Sites	
Standard Environmen	tal Record Source: State a	nd InScol registered storage tank fists
Currently permitted []	STs in Marin County.	
outoito, pointed o	515 III - L .III - 05111-7-	
Date of Government \	/ersion: 11/26/2012	Source: Public Works Department Wasle Management
Number of Days to Up	ndete: 54	Telephone: 415-499-6647
Last EDR Contact :04	/08/2013	
MCS: Military Cleanup St	tes Listing	
Standard Environmen	tal Record Source: Other S	Standard Environmental Records
Search Distance: Pro	perty	
The State Water Res Defense (DoD) throu remediation of water	ourcos Controt Board ent ugh the Defense and Sta r quality issues at military	t nine Regional Water Quality Control Boards partner with the Department of the Memorandum of Agreement (DSMOA) to oversee the Invostigation any facilities.
Date of Government \	/ersion: 03/18/2013	Source: State Water Resources Conirol Board
Number of Days to Up	idale: 8	Telephone: 866-480-1028
Last EDR Contact :05	/02/2013	
MED WASTE VENTURA	; Medical Waste Program I	Liat
Standard Environment	tel Record Source: Other S	Standard Environmental Records
Search Distance: Pro	perty	
To protect public heal	In and safety and the envi cal Waste Program regulat y.	ronment from potonibit exposure to disease causing agents, the Environments tes the generation, handling, storage, freatment and disposel of medical wast
throughout the Count		
throughout the Count	Version: 01/28/2013	Source: Ventura County Resource Management Agency
Date of Government Number of Dave to U	Version: 01/28/2013 pdate: 47	Source: Ventura County Resourco Management Agency Tolophone: 805-854-2813
Date of Government Number of Days to Up	Version: 01/28/2013 pdate: 47 /26/2613	Source: Ventura County Resource Management Agency Talophone: 805-854-2813

1.5

RECORD SOURCES AND CURRENCY 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 Wasta Transporters. Date of Government Version: 03/06/2013 Sourco: Department of Public Health Number of Days to Update: 13 Telephono: 916-558-1784 Last EDR Contact :00/11/2013 NAPA CO. LUST: Sites With Reported Contamination Standard Environmental Record Source: State and Ideal leaking storage tank lists A listing of teaking underground storage tank sitos localed in Napa county, Date of Government Version: 12/05/2011 Source: Napa County Department of Environmental Management Number of Days to Update: 63 Telephone: 707-253-4269 Last EDR Contact :03/04/2013 NAPA CO. UST: Closed and Operating Underground Storage Tank Sites Standard Environmental Record Source: State and tribal registered storage tank lists Underground storage lank sites located in Nege county, Date of Government Version: 01/15/2008 Source: Napa County Department of Environmental Management. Number of Days to Update: 23 Telephone: 707-253-4269 Last EDR Contact :03/04/2013 NOTIFY 65: Proposition 65 Records Stendard Environmental Record Source: Other Stendard Environmental Records Search Distance: Property 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: 10/21/1993 Source: State Water Resources Control Board Number of Days la Update: 18 Telephone: 916-445-3846 Last EDR Contact :03/25/2013 NPDES: NPDES Permits Listing Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property A listing of NPDES permits, including stormwater. Date of Government Version: 02/18/2013 Source: Siste Water Resources Control Roard Number of Days to Update: 30 Telephone: 916-445-9379 Last EDR Contact :02/18/2013 ORANGE CO. LUST: List of Underground Storage Tank Cleanups Standard Environmental Record Source: State and tribat leaking storago tank lists Orange County Underground Storage Tank Cleanups (LUST). Date of Government Version: 02/04/2013 Source: Health Care Agency Number of Days to Update: 29 Telephone: 714-834-3446 Last EDR Contact :05/10/2013 ORANGE CO. UST: List of Underground Slorage Tank Facilities Standard Environmental Record Source: State and Inbai registered storago Lark lists

RECORD SOURCES AND CURRENCY Orange County Underground Storage Tank Facilities (UST).

Source: Health Care Agency Date of Government Version: 02/04/2013 Telephono: 714-834-3446 Number of Days to Opdate: 37 Last EDR Contact :05/10/2013 Orange Co. Industrial Site: List of Industrial Site Cleanups Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property Petroleum and non-patroleum spills. Date of Government Version: 02/04/2013 Source: Health Care Agency Number of Days to Update: 22 Tetephone: 714-834-3446 Lest EOR Contect :05/10/2013 PLACER CO. MS: Master List of Facilities Standard Environmental Record Source: Other Standard Environmental Records Search Olstance: 0.25 Mile List includes aboveground tanks, underground tanks and cleanop eites. Source: Placer County Health and Human Services Date of Government Version: 63/12/2013 Telephone: 530-745-2363 Number of Days to Update: 14 Last EDR Contact :03/11/2013 PROC: Cartilled Processors Database Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.333 Mile A listing of certified processors. Source: Department of Conservation Date of Government Version: 03/18/2013 Telephone: 916-323-3836 Number of Days to Update: 8 Last EDR Contact :03/19/2013 RESPONSE: State Response Sites Stendard Environmental Rocord Source: State and tribal - equivalent NPL Seerch Distence: 0.333 Mile identifies confirmed release sitos where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed roloase sites are generally high-priority and high potential risk. Oate of Government Version: 03/13/2013 Source: Depertment of Toxic Substances Control Telephone: 916-323-3400 Number of Days to Update: 13 Last EDR Contact :05/07/2013 RIVERSIDE CO. LUST: Listing of Underground Tank Cleanup Sitos Standard Environmental Record Source: State and tribal leaking storago tank lists Riverside County Underground Storage Tank Cleanup Sites (LUST). Date of Government Version: 04/23/2013 Source: Department of Environmental Health Number of Days to Update: 23 Telephone: 951-358-5055 Last EOR Contact :03/25/2613

RIVERSIDE CO. UST: Underground Storage Task Task List



Last EDR Contact (00/10/2013	
SAN JOSE HAZMAT: Hazardous Meterial Facilities	
Standard Environmental Record Source: Other Sta	ndard Environmental Records
Search Distance: Property	
Hazardous material facilities, including undergroun	d storage tank sites.
Date of Government Version: 02/12/2013	Source: City of San Jose Fire Department
Number of Days to Update: 34	Telephone: 408-535-7694
Last EDR Contact :05/13/2013	
SAN MATEO CO. LUST: Fuel Leak List	
Standard Environmental Record Source: State and	i iribel leaking slorage tank liste
A listing of leaking underground storage tank sites	located in San Maloo county.
Dete of Government Version: D3/18/2013	Source: See Matoo County Environmental Health Services Divis
Mumber of Days to Findale: 8	Telephone: 050-363-1921
Last EDR Contact :03/16/2013	
SCH: School Property Evaluation Program	
Standard Environmental Record Source: Other Sta	inderd Environmental Records
Search Distance: Property	
This calegory contains proposed and existing sche contamination. In some cases, these properties ma health and safety or the environment they pose.	ool sites that are being evaluated by DTSC for possible hazardous mater ay be listed in the CalSites category depending on the level of threat to pu
Date of Government Version: 03/13/2013	Source: Department of Toxic Substances Control
Number of Days to Update: 13	Telephone: 916-323-3400
Last EDR Conlact :05/07/2013	
SLIC: Slatewide SLIC Cases	
Standard Environmental Record Source: State and	i tribal leaking storage tank ilsts
Search Distance: 0.333 Mile	
The SLIC (Spills, Leaks, Investigations and Clears and aimiter discharges.	up) program is designed to protect and rostore water quality from splits, to
Date of Government Version: 03/16/2013	Source: State Water Resources Control Board
Number of Dava to Opdate: 8	Tolephone: 666-480-1028
Last EDR Contact :05/02/2013	-
SLIC REG 1: Active Toxic Site investigations	
Stendard Environmental Record Source: State and	1 tribal leaking storage tank lists
The SLIC (Splits, Leaks, Investigations and Cleans and similar discharges.	up) program is designed to protect and reators water quality from spills, le
Date of Government Version: 04/03/2003	Source: Celifornia Rogional Water Quality Control Board, North Coast Rogion (1)
Number of Oncore in Ondering 40	Telephone: 707-576-2220
Number of Uays to Opdate: 10	Tomphano: Fat of o EEEo

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing Standard Environmental Record Source: State and Libbit leaking storage tank lists

RECORD SOURCES AND CURRENCY The SLIC (Spills, Leaks, Invostigations and Cleanup) program is designed to protect and rostoro water quality from spills, leaks, and similar discharges. Date of Government Version: 09/30/2004 Source: Regional Water Quality Control Board San Francisco Bay Region (2) Number of Days to Update: 30 Telophone: 510-288-0457 Last EDR Contect :09/19/2011 SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing Standard Environmental Record Source: State and tribal leaking storage tank lists The SLIC (Spills, Leaks, lavestigations and Cleanup) program is designed to protect and restore water quality from spills, teaks, and similar discharges. Date of Government Version: 05/18/2006 Source: California Regional Water Quality Control Board Central Coast Region (3) Number of Days to Update: 28 Telephono: 805-549-3147 Last EDR Contact :07/18/2011 SLIC REG 4: Spills, Leaks, investigation & Cleanup Cost Recovery Listing Standard Environmental Record Source: State and tribal leaking storage task lists 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 Source: Region Water Quality Control Board Los Angeles Region (4) Number of Days to Update: 47 Telephone: 213-570-6600 Last EDR Contect :07/01/2011 SLIC REG 5: Spills, Leaks, invostigation & Cleanup Cost Recovery Listing Standard Environmental Record Source: State and tribal leaking storage tank lists The SLIC (Spills, Leaks, investigations and Cleanup) program is designed to protect and restore water quality from spills, teaks, and similar discharges. Date of Government Version: 04/01/2005 Source: Regional Water Quality Control Board Central Velley Region (5) Number of Days to Update: 16 Telephone: 818-464-3291 Last EDR Contact :09/12/2011 SLIC REG 6L: SLIC Siles Standard Environmental Record Source: State and tribal leaking storage tank lists The SEIC (Splits, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from epills, teaks, and similar discharges. Date of Govornment Version; 09/07/2004 Source: California Rogional Water Quality Control Board, Labortan Region Number of Days to Update: 35 Telephone: 530-542-5574 Last EDR Contact :06/15/2011 SLIC REG 6V: Splits, Leaks, investigation & Cleanup Cost Recovery Listing Standard Environmental Record Source: State and Iritral leaking storage tank lists The SLIC (Splits, Leaks, investigations and Cleanup) program is designed to protect and restore water quality from splits, leaks, and similar discharges. Date of Government Version: 05/24/2006 Source: Regional Water Quality Control Source, Victorville Branch. Number of Days to Update: 22 Telephone: 619-241-6583 East EDR Contact (08/15/2011

Standard Environmental Record Source: State and The SLIC (Spills, Leaks, Investigations and Clean and similar discharges.	d tribal loaking storage tank lists up) program is designed to protect and restore water quality from spills, leaks
Bate of Government Version: 11/24/2004	Source: California Regional Quality Control Board, Colorado River Basin Region
Number of Days to Update: 30 Last EOR Contact :06/01/2011	Telephone: 700-346-7491
SLIC REG 8: Späls, Leaks, Investigation & Cieanup C	ost Rocovery Using
Standard Environmental Record Source: State and	i mai loaking storage lank lista
The SLIC (Spitls, Leaks, Investigations and Cleans and similar discharges.	up) program is designed to protect and restore water quality from spills, leak:
Date of Government Version: 04/03/2008	Source: Colifornia Region Water Quelity Control Board Santa Ana Region (8)
Number of Days to Update: 11	Telephone: 951-782-3298
Last EDR Contact :00/12/2011	
SLIC REG 9: Splits, Leaks, Investigation & Cleanup C	ost Recovery Listing
Standard Environmental Record Source: State and	l tribel leeking storago tonk lista
The SLIC (Splits, Leaks, Investigations and Cleans and similar discharges.	ap) program is designed to protect and restore water quality from spills, leak
Date of Government Version: 09/10/2007	Source; California Regional Water Quality Control Board San Diego Region (9)
Number of Days to Update: 17	Telephono: 858-467-2960
Last EDR Contact :06/08/2011	
SOLANO CO. LUST: Leaking Underground Storage T	anks
Standard Environmentel Record Source: State and	t tribat leaking storage lank lists
A listing of leaking underground storage lank sites	located in Solano county.
Date of Goussement Version: 03/20/2013	Source: Solano County Department of Environmental Manadoment
Number of Days to Medalar 47	Telenhone: 707-784-6770
Lest EDR Contact :03/16/2013	
SOLANO CO, UST: Undermound Storage Tanks	
Standard Environmental Record Source: Stale and	i lishai registered storage tarik lists
Underground storage tank sites located in Solano	county.
	One of the Court Read of Fully and the backgroup
Date of Government Version: 03/20/2013	Source: Source County Department of Environmental Management
Number of Days to Opdate: 46	Telephone: /0/-/84-5//0
Last EBR Conlact 193/18/2013	
SONOMA CO. LUST: Leaking Underground Storage " Standard Environmental Record Source: State and A listion of Institute underground storage task slige	Tank Sites d tribal leaking storage tank ilsts tecrited in Sename county
ម ១១៨នៅ ១៤ ខេតនាទាំ សាក់ចំពើលោះថា ទានមេងិង បានេ ទាំងខ	would a source would a
Date of Government Version: 04/02/2013	Sourco: Department of Health Services
Number of Days lo Update: 41	Telephone: 707-565-6585
Last EDR Contact:04/01/2013	
SUTTER CO. UST: Underground Storage Tanks	



RECORD SOURCES AND CURRENCY Any business that has hazardous materials on site - hazardous material storage sites, underground storage lanks, waste generators. Source: Sacramento County Environmental Management Date of Government Version: 02/04/2013 Number of Days to Update: 34 Telephone: 916-875-8400 Last EDR Contact :04/08/2013 San Bern, Co. Permit: Hazardous Material Permits Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.25 Mile This listing includes underground storage tenks, medical waste handlers/generators, hazardous materials handlers, hazardous wests generators, and waste oil generators/handtors. Source: San Bernardine County Fire Department Hazardous Date of Government Version: 03/04/2013 Materials Division Number of Days to Update: 20 Telephone: 909-387-3041 Lest EDR Contect :05/13/2013 San Mateo Co. Bl: Business Inventory Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.25 Mile List includes Hazardous Materiais Business Plan, hazardous waste generators, and underground storage tanks. Source: San Mateo County Environmental Health Servicos Division Date of Government Version: 04/09/2013 Number of Days to Update: 34 Telephone: 650-363-1921 Lest EOR Contact :03/18/2013 TORRANCE UST: City of Torrance Underground Storage Tank Standard Environmental Record Source: State and tribal registered storage lank lists Underground storage fank sites located in the city of Torrence. Date of Government Version: 04/15/2013 Source: City of Torrance Fire Department Telephone: 310-618-2973 Number of Days to Update: 31 Last EDR Contact :04/15/2013 TOXIC PITS: Toxic Pits Cleanup Act Sites Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.333 Mile 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 Source: State Water Resources Control Board Telephone: 918-227-4384 Number of Days to Update: 27 Last EDR Contact :01/26/2009 UIC: UIC Lis\$ng Standard Environmental Record Source: Other Stendard Environmental Records Search Distance: Property A listing of underground control injection wells. Date of Government Version: 03/05/2013 Source: Deepriment of Conservation Telephone: 916-445-2408 Number of Days to Update: 8

Last EBR Contect :00/18/2013	
UST: Active UST Facilities Slandard Environmental Record Source: State a Search Distance: Property	nd tribal registered storage tank lists
Active UST facilities gathered from the local regu	latory agencios
Bate of Covernment Version: 01/18/2013	Source: SMACE
Number of Days to Update: 30	Telephone: 916-341-5851
Last EDR Contact (05/02/2013	
UST MENDOCINO: Mondocino County UST Databa:	\$ 0
Standard Environmental Record Source: State er	nt Wibei registered storage tank liste
A isong or underground storage rank locations in	Mendadina County.
Data of Government Version; 09/23/2009	Source: Department of Public Health
Number of Days to Updete; 8	Telephone: 707-463-4466
Last EDR Contact :03/04/2013	
UST SAN JOAQUIN: San Joaquin Co. UST	
Standard Environmental Record Source: State an	nd tribai registerari storaga tank lista
A listing of underground storage tank locations in	San Joaquin county,
Date of Government Version: 03/25/2013	Source: Environmental Health Department
Number of Days to Update: 24	Telephone: Not Reported
Last EDR Contact :03/25/2013	
VGP: Voluntary Cleanup Program Properties	
Standard Environmental Record Source: State an	d filbal voluntary cisanup sites
Search Distance: 0.333 Mile	
Contains low threat level properties with either co DTSC oversee investigation and/or cleanup activi	nfirmed or unconfirmed releases and the project proponents have request that lites and have agreed to provide coverage for DTSC's costs.
Date of Government Version: 03/13/2013	Source: Department of Toxic Substances Control
Number of Days to Updato: 13	Telephone: 916-323-3400
Last EDR Contact:05/07/2013	
VENTURA CO. BWT: Business Play, Hazardous Wa	she Producers, and Operating Underground Tanks
Standard Environmental Record Source: Other St	tandard Environmental Records
Scarch Distance: Property	
The BWT list indicates by site address whether it and/or Underground Tank (T) information.	ie Environmental Health Division has Business Plan (B), Wasto Producer (W),
Date of Government Version: 03/30/2012	Source: Ventura County Environmental Health Division
Number of Days to Update; 42	Tetephone: 805-654-2813
Last EDR Contact :05/20/2013	
VENTURA CO. LF: inventory of likegal Abandonod as	nd inactive Sites
Standard Environmental Record Source: State an	ାର୍ଣ tribal landନ୍ତି। / colid waste disposal
Ventura County inventory of Closed, litegal Aband	foned, and inactive Sites.
Date of Government Version: 12/01/2011	Source: Environmental Health Division
Number of Days to Upriate: 49	Telephope: 805-654-2813





	Last EDR Contact :04/08/2013	
VI	ENTURA CO. LUST: Listing of Underground Tank Cleanup	Siles
	Standard Environmental Record Source: State and Iribai k	eaking slorage lenk liels
	Ventura County Underground Storage Tank Cleanup Sites	a (LUST).
	D-1	Provide Englishmental Harith Civilian
	Date of Government Version; 00/20/2008	Totabara: 805 SEA 2842
	Number of Days to Opdate: 37	Feiepitene, 603-634-2613
	Last EDR Contact :02/16/2013	
V	INTURA CO. UST: Underground Tank Closed Siles List	
	Standard Environmental Record Source: State and tribal r	egistered storage tank ästs
	Vontura County Operating Underground Storage Tank Slit	as (UST)/Underpround Tank Closed Sites List.
	Data of Coverenant Version: 03/05/2053	Source: Environmental Health Division
	Sumbor of Doug to Hadden (C	Teleshere: BB5 664 1919
	Lest EDR Contact :03/18/2013	Teepsone, aug-correspina
W	DS: Waste Discharge System	
	Standard Environmental Record Source: Other Standard E	Environmental Records
	Search Distance: Property	
	Sitos which have been issued waste discharge requirement	ારક.
	Date of Government Version: 06/19/2067	Source: State Water Resources Control Board
	Number of Days to Opdata: 9	Telephone: 916-341-5227
	Last EDR Contect :02/25/2013	
W	P: Woll Investigation Program Case List	
	Standard Environmental Record Source: Other Standard 2	Environmental Records
	Search Distance: 0.25 Mile	
	Welt Investigation Program case in the San Gabriet and Sa	an Fernando Valley arca.
	Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
	Number of Days to Update: 13	Telephone: 213-576-6726
	Last EDR Contact :04/01/2013	
W	MUDS/SWAT: Wasto Manzgement Unit Database	
	Standard Environmonial Record Source: Other Standard E	Environmental Records
	Search Distance: 0.333 Mite	
	Waste Management Unit Database System. WMUDS i Regional Water Quality Control Boards for program trackl of the following databases: Facility information, Schedu SWAT Program Information, SWAT Report Summary Subchapter 15) Information, Chapter 15 Monitoring Par Closure Information, and Information	is used by the State Water Resources Control Board staff and the ing and inventory of waste management units. WMUDS is composed used inspections information, Waste Management Unit Information, Information, SWAT Roport Summary Data, Chapter 15 (formerly remotors, TPCA Program Information, RCRA Program Information,
	Data of Government Version: 04/01/2000	Source: State Water Resources Control Board
	Number of Days to Update: 30	Telephone: 918-227-4448
	Last EBR Contact :05/10/2013	

YOLO CO. UST: Underground Storage Tank Comprohensive Facility Report Standard Environmental Record Source: State and tribal registered storage tank lists Underground storage tank sites located in Yolo county.



Date of Government Version: 03/25/2013 Number of Days to Update: 45 East EDR Contact:03/25/2013 Source: Yolo County Department of Health Telephone: 530-666-8646

2020 COR ACTION: 2020 Corrective Action Program List

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.25 Mile

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 remodiation. Inclusion in the 2020 Universe does not accessarily lepty failure on the part of a facility to meet as RCRA obligations.

Date of Government Version: 11/11/2011 Number of Days to Update: 7 Last EDR Contact :05/17/2013 Source: Environmental Protection Agency Telephone: 703-308-4044

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

Standard Environmental Record Source: Federal CERCLIS

Search Distance: 0.333 Mile

CERCLIS 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 Comprohansive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version; 02/04/2013 Number of Days to Update; 12 Last EDR Context (M/05/2013 Source: EPA

Telephone: 703-412-9910

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

Archived sites are sites that have been removed and archived from the Inventory of CERCUS 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 staps will be taken to list this 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. This 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 a potential NPL site.

Date of Government Version: 02/05/2013 Number of Days to Update: 12 Last EDR Contact :04/05/2013 Source: EPA Telephone: 703-412-9810

COAL ASH DOS: Steam-Electric Plan Operation Data Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A listing of power plants that store ash to surface ponds.

Date of Government Version: 12/31/2005 Number of Days to Update: 75 Last EDR Contect :04/18/2013 Source: Department of Energy Telephone: 202-586-8719

COAL ASH EPA: Cost Combustion Residuos Surface Impoundments List Standard Environmental Record Source: Othor Standard Environmental Records Search Distance: 0.333 Mile

RECORD SOURC	ES AND CURRENCY
A listing of coal combustion residues surface impoundmen	is wil h high hazard potential ratings.
Data of Government Version: 06/17/2010 Number of Days to Update: 77 Lest EDR Contact :00/15/2013	Source: Environmental Protection Agency Telephone: Not Reported
CONSENT: Superfund (CERCLA) Consent Docrees Standard Environmental Record Source: Federal NPL Search Distance: 0.333 Mile	
Major legal settlements that establish responsibility and s by United States District Courts after settlement by parts	tandards for cleanup at NPL (Suporfund) sites. Released periodically a fo litigation matters.
Date of Government Version: 12/31/2011 Number of Days to Update: 57 Last EDR Contact :04/01/2013	Source: Department of Justico, Consent Decree Library Telephone: Varies
CORRACTS: Corrective Action Report Standard Environmental Record Source: Federal RCRA C Search Distance: 0.333 Mile	ORRACTS facilities ket
CORRACTS Identifies hazardous waste handlers with RC	RA corrective action activity.
Date of Government Version: 02/12/2013 Number of Days to Update: 6 Last EDR Contact :05/02/2013	Source: EPA Telephone: 800-424-0346
DEBRIS REGION 9: Torros Martinez Reservation Megel Durr Standard Environmendai Record Source: State and tribel I Search Distance: 0.333 Mile	p Sile Locations andfili / solid waste disposat
A listing of lilegel dump slips location on the Torres Ma northern importal County, California.	rtinez Indian Roservation located in eastern Riverside County and
Date of Government Version: 01/12/2009 Number of Days to Update: 137 Last EDR Contact :04/28/2013	Source: EPA, Region 9 Telephone: 415-947-4219
DELISTED NPL: National Priority List Deletions Standard Environmental Record Source: Other Standard : Search Distance: 0.333 Mile	Environmental Records
The National OI and Hazardous Substances Poliution C doloto sites from the NPL. In accordance with 40 CF5 response is appropriate.	onlingency Plan (NCP) establishes the criteria that the EPA uses to 300.425.(e), sites may be deleted from the NPL where no further
Data of Government Version: 07/01/2013 Number of Days to Opdate: 12 Last EDR Contact :05/09/2013	Source: EPA Telephone: Not Reported
DOT OPS: Incident and Accident Data Standard Environmental Record Source: Other Standard Search Distance: Property	Environmental Rocords
Department of Transporation, Office of Pipeline Safety inc	ident end Accident data.
Date of Government Version: 07/31/2012	Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595

Number of Days to Update: 42 Last EDR Contact :05/07/2013

EPA WATCH LIST; EPA WATCH LIST

Standard Environmental Record Source: Other Standard Environmontal Records Search Distance: Property

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. Boing 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 altege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher leval of concern regarding the alleged violations that were detected, but instead indicates cases regulating 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: 12/31/2012 Number of Days to Update: 81 Last EOR Control: 06/10/2013 Source: Environmental Protection Agency Telephane: 617-520-3000

ERNS: Emergency Response Notlication System

Standard Environmental Rocord Source: Federal ERNS fist Search Distance: Property

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2012 Number of Days to Update: 29 Last EDR Contact :04/02/2013 Source: National Response Contor, United States Coast Guard Telephone: 202-267-2180

FEMA UST: Underground Storage Tank Listing

Standard Environmental Record Source: State and tribal registared storage tank lists Search Distance: Property

A listing of all FEMA owned underground storage tanks.

Date of Govornment Version: 01/01/2010 Number of Days to Update: 55 Last EDR Contact :04/18/2013 Source: FEMA Telephone: 202-646-5797

FINDS: Facility Index System/Facility Registry System

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

Facility Index System. FINDS contains both facility information and 'pointars' to other sources that contain more detail. FDR includes the following FINDS tatabases in this report: PCS (Permit Compliance System), AIRS (Acrometric Information Retrieval System), DOCKET (Enforcement Docket used to menege and track information on civit judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criticial 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 Date System).

Date of Government Version: 18/23/2011 Number of Days to Opdate; 70 Last EDR Contact :03/12/2013 Source: EPA

Telephone: Not Reported

FTTS: FIFRA/TSCA Tracking System - FIFRA (Federal insociacide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

FTTS tracks administrative cases and pesticido onforcement 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 Number of Days to Update: 25 Last EDR Contact :02/25/2013 Source: 2PA/Office of Prevention, Pesticides and Toxic Substances Telephone: 202-566-1667

FTT8 INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodonitcide Act)/TSCA (Toxic Substances Control Act)

Standard Environmental Record Source: Other Standard Environmental Records A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2000 Number of Days to Opdate: 25 Last EDR Contact :02/25/2013 Source: EPA Telephone: 202-506-1667

FUDS: Formerly Used Defonse Sites

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.333 Mile

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take nacessary cleanup actions.

Date of Government Version: 12/01/2011 Number of Days to Update: 15 Last EDR Contact :03/11/2013 Source; U.S. Army Corps of Engineers Telephone: 202-528-4285

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

A complete administrative case tisting 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 (Fedoral insocilcide, 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 Number of Days to Update: 40 Last EDR Contact :12/17/2007 Source: Environmental Protection Agency Telephone: 202-564-2501

HMIRS: Hazardous Materials information Reporting System

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

Hazardous Materials Incident Report System. HMIRS contains hezerdous material spill incidents reported to DOT.

Date of Government Version: 12/31/2012 Number of Days to Update: 55 Last EDR Contect :04/02/2013 Source: U.S. Department of Transportation Telephone: 202-396-4555

ICIS: integrated Compliance Information System

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

The integrated Compliance information Syste compliance program as well as the uniquo neor	m (ICIS) supports the information needs of the national enforcement and is of the National Pollutant Discharge Elimination System (NPDES) program.
Date of Government Version: 07/20/2011 Number of Days to Updato: 61 Last EDR Contact :04/15/2013	Source: Environmental Protection Agency Telephone: 202-564-5088
INDIAN LUST R1: Leaking Underground Storage Ta Standard Environmental Record Source: State as Search Distance: 0.333 Mile	nke on Indian Land nd tribal leaking storage fank lists
A Esting of loaking underground storage lank loca	alions on Indian Land.
Data of Government Version: 09/28/2012 Number of Days to Update: 162 Last EDR Contact :05/01/2013	Source: EPA Region 1 Telephono: 617-918-1313
INDIAN LUST R10: Leaking Underground Storago Ta Standard Environmental Record Source: State an LUSTs on Indian land in Alaska, Idaho, Oregon a	anks on Indian Land Id kibal leaking storage Lank liste Ind Washington.
Date of Government Version; 02/05/2013 Number of Days to Updete; 65 Last EDR Contect :04/20/2013	Source: EPA Region 10 Telephone: 206-553-2857
NDIAN LUST R4: Leaking Underground Slorago Tai Standard Environmental Record Source: State an LUSTs on Indian tand in Florida, Mississippi and I	nks on Indian Land Id tribai leaking storage tarix lisis North Carolina.
Date of Government Version: 02/00/2013 Number of Days to Update: 63 Last EDR Conlact :04/29/2013	Source: EPA Region 4 Telephone: 404-562-6677
NDIAN LUST R5: Leaking Underground Storago Ta: Standard Environmental Record Source: State an LUSTs on Indian land in New Mexico and Oktaha	nks on Indian Land Id fribal leaking storage tank fists ma.
Date of Government Version: 09/12/2011 Number of Days to Update: 59 Last EDR Contact :04/29/2013	Source: EPA Region 6 Telephone: 214-665-6597
NDIAN LUST R7: Leeking Underground Storage Tar Slandard Environmental Record Source: State an LUSTs on Indian land in Iowa, Kanaaa, and Nebra	nke on Indian Land I kribal leaking storage tank lisis Iska
Date of Government Version: 12/31/2012 Number of Days to Update: 43 Last EDR Contact :04/29/2013	Source: EPA Rogion 7 Telephone: 913-551-7003
NDIAN LUST R8: Looking Underground Storage Tar Standard Environmental Record Source: State an	ska on Indian Land d Inide! leaking storage tank lists

RECORD SOURCES AND CURRENCY	



Date of Government Version: 02/06/2013 Number of Days to Opdate: 63 Last EOR Contect (04/29/2013 Source: EPA Region 4 Telephone: 404-562-9424

INDIAN UST R5: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribel registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage lanke on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribai Nations).

RECORD SOURCES AND CURRENCY Date of Government Version: 08/02/2012 Source: EPA Region 5 Number of Days to Update: 94 Telephone: 312-886-6136 Last EDR Conlact :04/29/2013 INDIAN UST R6: Underground Storage Tanks on Indian Land Standard Environmental Record Source: State and tribal registered storage tank lists The indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkanses, Oklahoma, New Mexico, Texas and 65 Tribos). Date of Government Version: 05/10/2011 Source: EPA Region 6 Number of Days to Update: 34 Telephono: 214-665-7591 Last EDR Contact :04/29/2013 INDIAN UST R7; Underground Storage Tanks on Indian Land Standard Environmental Record Source: State and tribal registered storage tank sate The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (lowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations). Data of Government Version: 12/31/2012 Source: EPA Region 7 Number of Days to Update: 43 Telephone: \$13-551-7003 Last EDR Contact :04/29/2013 INDIAN UST R8: Underground Storage Tenks on Indian Land Standard Environmental Record Source: State and tribal registered storage tank ista 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; 08/27/2012 Source: EPA Region 8 Number of Days to Update; 49 Telephone: 303-312-6137 Last EDR Contact :04/29/2013 INDIAN UST R9: Underground Storage Tanks on Indian Land Standard Environmental Record Source: State and Irlbal registered storage tank lists The Indian Underground Storage Tank (UST) database provides Information about underground storage tanks on Indian land In EPA Region 9 (Arizona, California, Hawail, Nevada, the Packle Islands, and Tribal Nations). Date of Government Version: 02/21/2013 Source: EPA Region 8 Number of Days to Update: 45 Telephone: 415-972-3368 Last EDR Confact :04/29/2013 INBIAN VCP R1: Voluntary Cleanup Priority Listing Standard Environmental Record Source: State and tribal voluntary cleanup sites Search Dislance: 0.333 Mile A listing of voluntary cleanup priority sites located on Indian Land located in Region 1. Date of Government Version: 09/28/2012 Source: EPA, Region 1 Number of Days to Update: 14 Telephone: 617-918-1102 East EDR Contact :04/05/2013 INDIAN VCP R7: Voluntary Cleanup Priority Listing Standard Environmental Record Source: State and tribal voluntary cleanup sites A listing of voluntary cleanup priority sites located on Indian Lend located in Region 7. Date of Government Version: 03/20/2008 Source: EPA, Region 7

	RECORD SC	OURCES AND CURRENCY		
1		The former of a constant of the constant of th		
	Number of Days to Update: 27 Last EDR Contact :04/20/2009	Telephano: 973-55%-7360		
LE	AD SMELTER 1: Lead Smelter Sites Standard Environmentel Record Sourco: Other S Search Distance: Property	Standard Environmental Records		
	A listing of former lead smaller site locations.			
	Date of Government Version: 01/29/2013 Number of Days to Update: 13 Lest EDR Contact :04/08/2013	Source: Environmental Protection Agency Telephone: 703-803-8787		
LE	AD SMELTER 2: Lead Smolter Sites Standard Environmental Rocord Source: Other \$ A list of several hundred sitos in the U.S. where a threat to public health through ingestion or Infra	Standard Environmental Records secondary lead smalting was done from 193 tend 1984. These sites may pose station of contaminated soit or dust		
	Date of Government Version: 04/05/2001 Number of Days to Update: 36 Last EDR Contect :12/02/2009	Source: American Journal of Public Health Telephone: 703-305-6451		
Ļl£	iNS 2: CERCLA Lien Information Standard Environmental Record Source: Federa Search Distance: Property	i Cerclia		
	A Federal CERCLA ('Superfund') lien can exist monies. These monies are spent to investigate provides information as to the identity of these	by operation of law at any site or property at which EPA has spent Superfund a and address releases and threatened releases of contamination. CERCLIS sites and properties.		
	Date of Government Version: 02/03/2013 Number of Days to Update: 15 Lest EDR Contact :04/29/2013	Source: Environmental Protection Agency Telephone: 202-564-0023		
LU	CIS: Land Use Control Information System Standard Environmental Record Source: Fodera Standard Environmental Record Source: Other & Search Distance: 0.333 Mile	al Institutional controls / englacentag controls registries Standard Environmental Rocords		
	LUCIS contains records of land use control Information pertaining to the former Navy Base Realignment and Closure properties.			
	Date of Government Version: 12/00/2005 Number of Days to Update: 31 Lest EDR Confact :05/20/2013	Source: Department of the Navy Telephone: 843-820-7326		
ML	TS: Matarial Licensing Tracking System Standard Environmental Record Source: Other 5 Search Distance: Property	Standerd Environmental Records		
	METS 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: 06/21/2011 Number of Days to Update: 60	Source: Nuclear Regulatory Commission Telephone: 301-415-7169		



East EOR Contact :03/11/2013

NPL: National Priority List

Standerd Environmental Record Source: Federal NPL Search Distance: 0.333 Mile

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, EOR 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: 02/01/2013 Number of Days to Update: 12 Lest EDR Contact :05/09/2013 Source: EPA Telephone: Net Reported

NPL Site Boundaries

Sources:

EPA's Environmental Pholographic Interpretation Center (EPIC) Telephone: 202-566-0690

EPA Region 1 Telephone: 617-918-1102

EPA Region 2 Telephone: 212-637-4293

EPA Rogion 3 Telephone: 215-814-5418

EPA Region 4 Telephone: 404-562-8681

EPA Region 5 Telephone: 312-353-1063

EPA Region 6 Telephone: 214-655-5659

EPA Region 7 Telephono: 913-551-7247

EPA Region 8 Tolophone: 303-312-0116

EPA Region 9 Telepisone: 415-947-4579

EPA Region 10 Telephone: 208-553-4479

NPL LIENS: Federal Superfund Liens

Stenderd Environmental Record Source: Federal NPL Search Distance: Property

Sectaral 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 fiability. USEPA complies a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991 Number of Days to Update: 56 Last EDR Contact :08/15/2011 Source: SPA Telephone: 202-564-4267

ODI: Open Dump Inventory

Standard Environmental Record Source: Other Standard Environmental Records. Search Distance: 0.333 Mile
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: 00/30/1985 Number of Days to Update: 39 Last EDR Contact :06/00/2004 Source: Environmental Protection Agency Telephone: 800-424-0346

PADS: PCB Activity Database System

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposors of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/01/2012 Number of Days to Update: 114 Last EDR Confact :04/19/2013 Source: EPA Telephono: 202-566-0500

PCB TRANSFORMER: PCB Transformer Registration Database

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

The database of PC8 transformer registrations that includes all PCB registration submittals.

Date of Government Vorsion: 02/01/2019 Number of Days to Update: 83 Last EDR Contact :05/03/2013 Source: Environmental Protection Agency Telephono: 262-566-0517

Proposed NPL: Proposed Netional Priority List Sites Standard Environmentsi Record Source: Fedoral NPL Search Distance: 0.333 Mile

A site that has been proposed for fieling on the NationalPriorities List through the issuance of a proposed rule in the Federal Register.EPA then accepts public comments on the site, responds to the commonts and places on the NPL those sites that common to meet therequirements for listing.

Date of Government Version: 02/01/2013 Number of Days to Update: 12 Last EDR Contact :05/09/2013 Source: EPA Telephone: Not Reported

RAATS: RCRA Administrative Action Tracking System

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

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, 1905, date antry in the RAATS database was discontinued. EPA will relate 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 Number of Days to Update: 35 Last EDR Contact :00/02/2008 Source: EPA Telephone: 202-554-4104

RADINFO: Radiation Information Database

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

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: 04/09/2013 Number of Days to Update: 29 East EDR Contact :04/11/2013 Source: Environmental Protection Agency Telephone: 282-343-9775

RCRA NonGen / NLR: RCRA - Non Generatore

Standard Environmental Record Source: Officer Standard Environmental Records. Search Distance: Property

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 (ISSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous wasto as dofined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/12/2013 Number of Days to Opdete: 12 Last EDR Contect :05/02/2013 Source: Environmental Protection Agency Telephone: 703-308-8895

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

RCRAInto is EPA's comprohensive 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 quentity 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: 02/12/2013 Number of Days to Update: 12 Last EDR Contact:05/02/2013

Source: Environmental Protection Agency Telephone: 703-308-9895

RCRA-LQG; RCRA - Large Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list Search Distance: Property

RCRAInto is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1979 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 exutely hazardous waste per month.

Date of Government Version: 02/12/2013 Number of Days to Update: 12 Last EDR Contact :05/02/2013 Source: Environmental Protection Agency Telephane: 703-308-8895

RCRA-SQG: RCRA - Small Quantity Generators

Standard Environmental Rocord Source: Federal RCRA generators list Search Distance: Property

RCRAinfo is EPA's comprehensive information system, providing eccess to dete supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Wasto Amondmonts (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: 02/12/2013 Number of Days to Update: 12 Source: Environmental Protection Agency Telephone: 703-308-8895



Last EDR Contact :05/02/2013

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

Standard Environmental Record Source: Federal RCRA TSD facilities list. Search Distance: 0.333 Mile

RCRAinto 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 Amendmente (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.

Date of Government Vorsion: 02/12/2013 Number of Days to Updato: 12 Last EDR Contact :05/02/2013 Source: Environmental Protection Agency Telephone: 703-308-8895

ROD: Records Of Decision

Standard Environmentel Record Source: Federal NPL Search Distance: 0.333 Mile

Record of Decision. ROD documents mandate a permanent remody at an NPL (Superfund) site containing technical and health information to eld in the cleanup.

Date of Government Version: 12/18/2012 Number of Days to Update: 30 Last EDR Contact :03/13/2013 Source: EPA Telephone: 703-416-0223

SCRD DRYCLEANERS: State Coalition for Remodiation of Drycleaners Listing

Standard Environmental Record Source: Othor Standard Environmental Records

Search Distance: 0.333 Mile

The State Coatition for Remeritation 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, Miscouri, North Carolina, Oregon, South Carolina, Tennessea, Texas, and Wisconsin.

Date of Government Version: 03/07/2011 Number of Days to Update: 54 Last EDR Contact :05/06/2013 Source: Environmental Protection Agancy Telephone: 615-532-8599

SSTS: Section 7 Tracking Systems

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

Section 7 of the Federal Insecticide, Fungicitie and Rodanticide Act, as amended (92 Stat. 829) requires all registered posticide-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 posticides, ective ingredients and devices being produced, and these having been produced and eotd or distributed in the past year.

Date of Government Version: 12/31/2009 Number of Days to Update: 77 Lest EDR Contact :04/29/2013 Source: EPA Telephone: 202-564-4203

TRIS: Toxic Chemical Release Inventory System Standard Environmental Record Source: Other Standard Environmental Records

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: 12/31/2009 Number of Days to Update: 131 Last EDR Contact :02/26/2013 Source: EPA Talaphono: 202-566-0250

TSCA: Toxic Substances Control Act

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

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: 12/31/2008 Number of Days to Update; 64 Last EDR Contact :03/26/2013 Source: EPA Telephone: 202-260-5521

UMTRA: Uranium Mill Tailings Sites

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.333 Mile

Uranium are was mined by private companies for federal government use in national defense programs. When the mills shot down, large piles of the eand-like material (mill teilings) 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 Number of Deys to Upriate; 148 Last EDR Contect (02/25/2013 Source: Department of Energy Telephone: 505-845-0011

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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, stool mills, factories, and universitios, and provides information about the air pollutants they produce. Action, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 01/23/2013 Number of Days to Update: 100 Last EDR Contact :04/01/2013 Source: EPA Telephone: 202-564-5962

US AIRS MINOR: Air Facility System Data

Standard Environmental Record Source: Other Standard Environmental Records A listing of minor source facilities.

Date of Government Version: 01/23/2013 Number of Days to Update: 100 Last EDR Contact :04/01/2013 Source: EPA Telephone: 202-564-5862

US BROWNFIELDS: A Listing of Brownfields Silos

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: 0.333 Mile



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 lakes 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 and by Brownfields grant programe.

Date of Government Version: 12/10/2012 Number of Days to Updata: 9 Last EDR Contact :03/20/2013 Source: Environmental Protection Agency Telephone: 202-566-2777

US CDL: Clandestine Drug Laba

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

A listing of clandestine drug (ab 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 prosonce of either clandestine drug laboratorios 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: 03/04/2013 Number of Days to Update: 59 Lest EDR Contact :03/04/2013 Source: Drug Enforcement Administration Telephone: 202-307-1000

US ENG CONTROLS: Engineering Controls Sites List

Standard Environmental Record Source: Federal institutional controls / engineering controls registries Search Distance: Property

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, iners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/14/2013 Number of Days to Update: 42 Last EDR Contact :03/11/2013 Source: Environmental Protection Agency Telephone: 703-603-0695

US FIN ASSUR: Financial Assurance Information

Standard Environmental Record Source: Other Stendard Environmental Records Search Distance: Property

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: 03/04/2013 Number of Days to Update: 56 Last EDR Contect: 05/20/2013 Source: Environmental Protection Agency Telephone: 202-566-1917

US HIST CDL: National Clandeetine Laboratory Register

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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 taw enforcement agancies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or cumpsites. 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 feelth departments.

Date of Government Version: 09/01/2007

Source: Drug Enforcement Administration

RECORD SC	URCES AND CURRENCY
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Number of Deve to Undele: 134	Telephone: 202-307-4900
Last EDR Contact: 10/23/2004	rolopinalisi zazioorii tooo
US INST CONTROL: Sites with Institutional Controls	
Standard Environmental Record Source: Federal	Institutional controls / angineering controls registries
Search Distance: Property	
A listing of siles with institutional controls in place use restrictions, construction restrictions, property exposure to contaminants remaining on site. Dee	 institutional controls include administrative measures, such as groundwater y use restrictions, and post remediation care requirements intended to prevent id restrictions are generally required as part of the institutional controls.
Date of Government Version; 03/34/2013	Source: Environmental Protection Agency
Number of Days to Update; 42	Telephone: 703-603-0695
Lasi EDR Contact :03/11/2013	-
18 MINES: Minor Master Inday File	
Standard Environmental Record Source: Other St	landard Environmenial Records
Search Distance; Property	
Contents all mine identification numbers issued information.	s for mines active of opened since 1971. The data also includes violation
Onte of Government Version: 62/05/2013	Source: Department of Labor, Mine Safety and Health Administration
Number of Days to Update: 22	Telephone: 303-231-5959
Last EDR Contect :03/06/2013	-
ADCONCERN: San Cabriel Valley Areas of Concern	
Standard Environmental Record Source: State an	d tribal - coulvalent CERCLIS
Search Distance: 0.333 Mile	
San Gabriel Valley areas whoro VOC contaminati	on is at or above the MCL as designated by region 9 EPA office.
Date of Government Version: 03/30/2009	Source: EPA Region 9
Number of Days to Update; 205	telephone: 415-972-3178
Last EUR Contact too 102013	
DOD: Depertment of Defense Silos	
Standard Environmental Record Source: Other St	andard Environmental Records
Search Distance: 0.333 Mže	
This data set consists of federally owned or adm area equal to or greater than 640 acres of the U	inistorod lands, administored by the Department of Defense, that have any inited States, Puerto Rico, and the U.S. Virgin Islands.
Date of Government Version: 12/31/2005	Source: USGS
Number of Days to Update: 62	Tolephona: 888-275-6747
Last EDR Contact :04/19/2013	
BIDIAN OFSCOM Indian Occasions	
Standay! Covinamental Dennel Covina Other St	enderf Envisonmenial Gernete
Search Distance: Property	anana –nakamanana nacana
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	Source: USGS
Number of Days to Update: 34	Telephone: 202-208-3710

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PWS: Public Water System Data

Standard Environmental Record Source: Other Standard Environmental Records Search Distance: Property

This Safe Drinking Water information System (SDWIS) file contains public water systems name and address, population served and the primary source of water

Date of Government Version: 04/12/2007 Number of Days to Update: N/A Last EDR Contact :03/11/2013 Source: EPA Telephone: Not Reported .

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HISTORICAL USE RECORDS

EDR MGP: EDR Proprietory Manufactured Gas Plants

Standard Environmental Record Source: Former manufactured Gas Plants Search Distance: 0.333 Mile

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) complied by EDR's researchers. Manufactured gas sites were used in the United States from the 1600's to 1950's to produce a gas that could be diskibuled and used as fuel. These plants used whale oil, rostl, 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-volatite chemicsis), eludges, 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: 08/28/2009 Number of Days to Update: 55 Last EDR Contact :11/30/2012 Source: EDR, Inc. Telephone: Net Reported

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

Standard Environmental Record Source: Historical Gas Stations

Search Distance: 0.25 Mile

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/sorvice station sites that were available to EDR researchers. EDR's review was illutted 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 elsition, filling station, suto, automobile repair, auto service station, service station, this database fails within a category of information EDR classifies as "High Risk Historical Records", or HRIR. EOR's HRNR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not about up in current government records searches.

Date of Government Version: 02/20/2007

Number of Days to Update: 42 Last EDR Contact :02/21/2007 Source: EDR, Inc.

Telephone: Not Reported

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

Standard Environmental Record Source: Historical Dry Cleaners

Search Distance: 0.25 Mile

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner eiter 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/faundry, wash & dry etc. This database fails within a category of information EDR cleaners. Fligh Risk Historical Records", or HRIR. EDR's HRIR 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.

Data of Government Version: 02/20/2007 Number of Days to Update: 42 East EDR Contact :02/21/2007 Source: EDR, inc. Telephone: Not Reported



TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5 Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This date, evaluate in select counties across the country, was obtained by EDR in 1969 (rom the Federal Emergency Management Agency (FEMA). Date depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlends inventiony. This data, available in solact counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service,

HYDROGEOLOGIC INFORMATION

AQUIFLOW[®] Information System

Source: EDR proprietery database of groundwater flow information EDR has developed the AQUIFLOW[®] information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and death to water table information.

GEOLOGIC INFORMATION

STATSGO: Stele Scil Geographic Database

Source: Department of Apriculture, Natural Resources Conservation Services. The U.S. Department of Apriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soli survey information for privately owned fends in the United States. A soil map In a soli survey is a representation of soil patierns in a landscape. Soli maps for STATSGO are complied by generalizing more detailed (SSURGO) soll survey maps.

SSURGO: Soll Survey Geographic Delabase

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping dono by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:03,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) datebase. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by fandowners, townships and county natural resource planning and management.

STREET AND ADDRESS INFORMATION

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APPENDIX H

EDR BUILDING PERMIT REPORT

(Provided on attached CD)

ROMIG ENGINEERS, INC.

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Property At 1700 Embarcadero Road Palo Alto, CA 94303

Inquiry Number: 3611943.11 May 20, 2013

EDR Building Permit Report Target Property and Adjoining Properties



440 Wheelers Farms Road Milford, CT 96461 800,352,0050 www.cdmct.com

EDR Building Permi	t Report: Search Documentation	5/20/13
Site Name: Property At 1700 Embarcadero Palo Alto, CA 94303	Client Name: Romig Consulting Engineers 1390 El Camino Real San Carlos, CA 94070	· · · · ·
EDR Inquiry # 3611943.11	Contact: Chris Palmer	
Search Documentation		

DATA GAP

The complete collection of Building Pormit data available to EDR has been searched, and as of 5/20/13, EDR does not have access to building permits in the city where your target property is located (Palo Alto, CA).

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About This Report

The EDR Building Permit Report provides a practical and efficient method to search building department records for indications of environmental conditions. Generated via a search of municipal building permit records gathered from more than 1,600 cities nationwide, this report will assist you in meeting 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-1527-05), or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

Building permit data can be used to identify current and/or former operations and structures/features of environmental concern. The data can provide information on a larget property and adjoining properties such as the presence of underground storage tanks, pump islands, sumps, drywells, etc., as well as information regarding water, sewer, natural gas, electrical connection dates, and current/former septic tanks.

ASTM and EPA Requirements

ASTM E 1527-05 lists building department records as a "standard historical source," as detailed in § 8.3.4.7: "Building Department Records – The term building department records means those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demoitsh improvements on the property." ASTM also states that "Uses in the area surrounding the property shall be identified in the report, but this task is required only to the extent that this information is revealed in the course of researching the property itself."

EPA's Standards and Practices for All Appropriate Inquires (AAI) states: *§312,24: Reviews of historical sources of information. (a) Historical documents and records must be reviewed for the purposes of achieving the objectives and performance factors of §312.20(e) and (f). Historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."

Methodology

EDR has developed the EDR Building Permit Report through our partnership with BuildFax, the nation's largest repository of building department records. BuildFax collects, updates, and manages building department records from local municipal governments. The database new includes 30 million permits, on more than 10 million properties across 1,600 cities in the United States.

The EDR Building Permit Report comprises local municipal building permit records, gathered directly from local jurisdictions, including both target property and adjoining properties. Years of coverage vary by municipality. Data reported includes (where evailable): date of permit, permit type, permit number, status, valuation, contractor company, contractor name, and description.

Incoming permit data is checked at seven stages in a regimented quality control process, from initial data source interview, to data preparation, through final auditing. To ensure the building department is accurate, each of the seven quality control stages contains, on average, 15 additional quality checks, resulting in a process of approximately 105 quality control "touch points."

For more information about the EDR Building Permit Report, please contact your EDR Account Executive at (800) 352-0050.





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Appendix E

Project Traffic Impact Analysis and May 2016 Supplemental Traffic Memorandum

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date:	May 23, 2016
То:	Kristen Cessna, Gensler
From:	Gary Black, Ricky Williams
Subject:	1700 Embarcadero CEQA Comments

This memorandum provides responses to comments from the Santa Clara Valley Transportation Authority (VTA) and the County of Santa Clara regarding the 1700 Embarcadero Mercedes Benz Dealership Transportation Impact Analysis (TIA). The comments to the TIA can be seen in Table 1, along with Hexagon's responses to these comments. Also included in this memo are revised figures, transit delay calculations, and the project's Auto Trip Reduction Statement.

Table 1 VTA and County Comments and Responses

Agency	Comment	Response
County of Santa Clara	The MND should describe the San Francisco Bay Trail and the California Avenue Trail in the vicinity of the project site	Noted, see "Bicycle and Pedestrian Facilities" below
	Figure 3 should be amended to show the on- street bicycle route within road right-of-way on Geng Road, and the California Avenue Trail beyond the "Bike/Pedestrian Bridge"	See revised Figure 3, attached
	The TIA should include an analysis of transit delay.	Transit delay analysis included
	The TIA is required to include an Auto Trip Reduction Statement (ATRS)	ATRS attached
VTA	The pedestrian improvements shown in Figure 12 should be described within the text of the TIA. These improvements are supported by VTA and are recommeded as conditions of approval for the project.	Noted, see "Pedestrian Accommodations" below



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Bicycle and Pedestrian Facilities

San Francisco Bay Trail

The San Francisco Bay trail is a partially existing, Class I trail that provides a regional connection along the San Francisco Bay shoreline. This is a multi-use trail designed for hiking and cycling. This trail is located near the project site, with access along E. Bayshore Road. The project is not expected to generate any significant impacts to the trail.

California Avenue Trail

The California Avenue Trail is a partially existing Class II trail that currently extends from St. Fancis Drive to the Baylands preserve. The planned trail will provide bicycle and pedestrian access between the existing bike/pedestrian bridge over US 101 to the existing Class II bicycle lanes along Louis Road. The completion of this trail will enhance the pedestrian and bicycle access to and from the west side of the US 101 and the project area. The proposed project is not expected to generate any significant impacts to this trail.

Transit Vehicle Delay

The increase in project traffic on roadways where bus transit service is provided could result in increased congestion and affect transit operations. There are no regular VTA bus lines that travel through the study intersections, but there are two shuttles:

- City of Palo Alto Embarcadero Shuttle Service
- Marguerite Shuttle Service, operated by Stanford

The increase in transit delay was determined by summing the increase in movement delay at each of the study intersections for each route in each direction. These movement delays were obtained from the level of service calculation sheets at each signalized study intersection, which were included in the 1700 Embarcadero TIA (Appendix C). The sum of movement delay that the buses would experience at each of the study intersections was calculated under existing and existing plus project conditions for both the AM and PM peak hours. Table 2 presents the delay that the buses would experience in each travel direction under existing and existing plus project conditions.

		Tr	Transit Service Delay at Study Intersections (sec.)					
		Α	M Peak Hou	r	P	M Peak Hou	r	
Route		Existing	Ext + Proj	+/-	Existing	Ext + Proj	+/-	
City of Palo Alto	NB	71.5	79.9	8.4	42.6	46.0	3.4	
Embarcadero Shuttle	SB	138.4	141.4	3.0	110.7	118.6	7.9	
Stanford Marguerite Tech Shuttle	NB SB	171.9 138.4	156.2 141.4	(15.7) 3.0	129.0 110.7	127.0 118.6	(2.0) 7.9	

Table 21700 Embarcadero Transit Vehicle Delay

The TIA identified a significant traffic impact at the intersection of Embarcadero Road & East Bayshore Road. The TIA recommended an intersection improvement that would offset the additional delay created by the project. The increase in transit delay as a result of the proposed project is relatively minimal, thus the intersection improvements would only reduce this delay. The project is not expected to generate any significant impact on transit services in the area.



Pedestrian Accommodations

The improvement at the intersection of E Bayshore Road and Embarcadero Road, as proposed in the TIA, is supported by VTA. The improvement includes modifications to the pedestrian crossing, not described within the TIA. These pedestrian modifications include removing an existing porkchop island at the southwest corner of the intersection, thus reducing the total pedestrian crossing distance on the south leg. A new crosswalk will also be added across the north leg of the intersection. Similar to the overall intersection improvements, the project should make a fair-share contribution towards these pedestrian improvements.

Attachments

Attachment 1 – Auto Trip Reduction Statement (ATRS)

Required per Section 8.2 and Appendix C of the 2014 TIA Guidelines.

Attachment 2 – Revised Figure 3 from TIA

Bicycle facilities map including Geng Road bicycle route, and California Avenue Trail

AUTO TRIP REDUCTION STATEMENT

UPDATED: October 2014



PROJECT INFORMATION		Relevant	TIA Section:		
Project Name: 1700 Embarcadero	Mercedes Benz Dea	lership			
Location: Palo Alto, CA					
Description:					
The proposed project would cons area, and large indoor inventory s	st of the development torage. Ming's restau	nt of a Merced arant, now clos	es Benz dealersh sed, currently exis	ip, including sales sts on the site.	floor (18,500 s.f.), service
Size (net new):	D.	U. Residential	110,000	Sq. Ft. Comm.	Acres (Gr.)
Density:		D.U. / Acre			Floor Area Ratio (FAR)
Located within 2000 feet w	alking distance of a	n LRT, BRT, B	ART or Caltrain	station or major b	us stop? No
PROJECT AUTO TRIP GENERATION Relevant TIA Section:					
Auto Trips Generated:	102	AM Pk Hr	149	PM Pk Hr	Total Weekday
Methodology (check one)	E	• Other (Please describe below)			
Driveway counts were collected a were used.	three nearby, simila	r automobile o	dealerships. The t	rip generation rate	es calculated from these sites
AUTO TRIP REDUCTION APPI	ROACH	Relevant	TIA Section:		
G Standard Complete Table A below	Peer/Stue Complete Table	dy-Based e B below	Complete Te	jet-Based able C below	None Taken
TRIP REDUCTION REQUIREM	ENTS	Relevant	TIA Section:		
Is the project required to meet a	ny trip reduction red	quirements or	targets? No	If so, spec	ify percent:
Reference code or requirement:					

TRIP REDUCTION APPROACHES

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

B. PEER/STUDY-BASED APPROACH

Relevant TIA Section:

Basis of Reduction	TOTAL REDUC	TION CLAIMED
A large amount of the project will be used as automobile storage for the dealership. Because of this,	%	Trips
ITE rates based on 1,000 s.f. we're deemed excessive in their trip generation estimates as the total project s.f. is 110,000. Trip generation was determined based on showroom size. Showroom sizes and trip generation rates from similar dealerships in the area were gathered and used to estimate the number of trips for this project.		AM: 109 PM: 139

C. TARGET-BASED	APPROACH		Relevant	TIA Section:			
Type of Reduction (check all that apply)					TOTAL REDUC	FION CLAIMED	
🗖 % Trip Re	duction	🗖 % SOV m	ode share	О Т	rip Cap	%	Trips
Description							
Time period for	Pea	ak Hour	Peal	<pre> Period </pre>	Full Day		
reduction		AM/PM		AM/PM			

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

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

Last updated 11/4/2014









1700 Embarcadero Road Mercedes Benz Dealership



Traffic Impact Analysis

Prepared for:

Fletcher Jones Management Group January 29, 2016



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Hexagon Transportation Consultants, Inc. Hexagon Office: 4 North Second Street, Suite 400 San Jose, CA 95113 Hexagon Job Number: 14GB47 Phone: 408.971.6100 Client Name: Steve Emslie

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Table of Contents

Execu	tive Summary	iv
1.	Introduction	1
2.	Existing Conditions	8
3.	Existing Plus Project Conditions	19
4.	Background Conditions	28
5.	Cumulative Conditions	33
6.	Other Transportation Issues	38
7.	Conclusions	42

Appendices

Appendix A Traffic Counts

Appendix B	/olume Summary
------------	----------------

Appendix C Level of Service Calculations

List of Tables

Table ES 1	Intersection Level of Service Summary	vi
Table 1	Signalized Intersection Level of Service Definitions Based on Control Delay	5
Table 2	Freeway Segment Level of Service Definitions Based on Density	7
Table 3	Existing Intersection Levels of Service	14
Table 4	Existing Freeway Ramp Capacity Analysis	15
Table 5	Existing Freeway Levels of Service in Santa Clara County	
Table 6	Existing Freeway Levels of Service in San Mateo County	17
Table 7	Project Trip Generation Estimates	20
Table 8	Existing Plus Project Intersection Levels of Servict	21
Table 9	Existing Plus Project Freeway Ramp V/C Analysis	25
Table 10	Existing Plus Project Freeway Segment Capacity Summary in Santa Clara County	
Table 11	Existing Plus Project Freeway Segment Capacity Summary in San Mateo County	27
Table 12	Background Level of Service Summary	29
Table 13	Cumulative Level of Service Summary	35
Table 14	Queuing Analysis Summary	
Table 15	E Bayshore Driveway Level of Service Calculations	41

List of Figures

Site Location and Study Intersections	2
Concept Plan Line	3
Existing Bicycle Facilities	11
Existing Lane Configurations	
Existing Traffic Volumes	13
Project Trip Distribution and Driveway Trips	22
Existing Plus Project Traffic Volumes	23
Background Without Project Traffic Volumes	
Background Plus Project Traffic Volumes	32
Cumulative Without Project Volumes	36
Cumulative with Project Traffic Volumes	
E Bayshore Road and Embarcadero Road Improvements	45
	Site Location and Study Intersections Concept Plan Line Existing Bicycle Facilities Existing Lane Configurations Existing Traffic Volumes Project Trip Distribution and Driveway Trips Existing Plus Project Traffic Volumes Background Without Project Traffic Volumes Background Plus Project Traffic Volumes Cumulative Without Project Volumes Cumulative with Project Traffic Volumes E Bayshore Road and Embarcadero Road Improvements



Embarcadero Road Satellite Parking Study



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Executive Summary

This report presents the results of the traffic impact analysis conducted for the proposed Mercedes Benz dealership at 1700 Embarcadero Road in Palo Alto, California. The proposed project would consist of the development of a Mercedes Benz dealership, including sales floor, service area, and large indoor inventory storage. Access to the site would be provided by a full-access driveway on East Bayshore Road and a right-in/right-out driveway on Embarcadero Road. Currently, Ming's restaurant, now closed, exists at the proposed site.

This study was conducted for the purpose of identifying potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Palo Alto and the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP). The traffic analysis is based on AM and PM peak-hour levels of service for two signalized intersections, two freeway segments, and four freeway ramps.

Project Trip Generation

Trip generation for the proposed automobile dealership was estimated based on the driveway counts of the existing Mercedes Benz dealer located in Belmont, CA, which is assumed to generate a comparable number of trips to the proposed dealership. Driveway counts were conducted at the Belmont dealership, Autobahn Motors, during the AM and PM peak hours. During the AM peak hour the project is estimated to produce 102 total trips, with 57 trips inbound and 45 trips outbound. During the PM peak hour, the project is estimated to produce 149 total trips, with 58 trips inbound and 91 trips outbound.

Project Impacts

Intersection Level of Service Analysis

The results of the intersection level of service analysis are shown in Table ES 1. The intersection of Embarcadero Road & E. Bayshore Road is shown to operate at LOS D during the AM peak hour, and LOS F during the PM peak hour. The addition of project-generated traffic would create a significant impact at the intersection of East Bayshore Road and Embarcadero Road during the PM peak hour under Background Plus Project and Cumulative scenarios, and during the AM peak hour under the Cumulative scenario.



East Bayshore Road and Embarcadero Road

Improvements to the intersection of E. Bayshore Dr/Embarcadero Rd should be made. The recommended improvement at this intersection is to revise the eastbound leg on Embarcadero to include two left-turn pockets, a through lane, and a shared through/right-turn lane. The improvement also includes changing the east-west phasing from split phase timing to protected left turn phasing. There is a large volume of left turns and a large volume of through traffic on eastbound Embarcadero Road in the morning. Creating two separate dedicated left turn lanes and two through lanes will reduce delay for eastbound traffic. Also, the split phase signal operation is generally less efficient compared to protected left turn phasing. A change to protected left turn phasing means that the eastbound and westbound through traffic will be able to proceed simultaneously. This will reduce delays for the through traffic. In addition to the east/west Embarcadero improvements, the city should consider restriping the northbound approach to have one left turn lane and one shared left-through-right. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection. The recommended improvements would reduce the project impact to a level that is less than significant. The project should make a fair-share contribution to the cost of the recommended improvements.

Table ES 1Intersection Level of Service Summary

				Exist	ing	Existir Proje	ng + ect	Backgi	round	B	ackgro	ound + Proje	ect ²	Cumula No Pro	ative oject		Cu	mulative ³	
Study Number	Intersection	Peak Hour	Count Date	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Incr. In Crit. Delay (sec.)	Incr. In Crit. V/C	Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
1	E Bayshore Dr/Embarcadero Rd ¹ With Mitigation	AM	05/27/15	47.7	D	52.4	D	48.7	D	53.5	D	2.8	0.009	65.7	Е	73.0 61.1	E E	10.3	0.028
	With Mitigation	PM	05/27/15	83.5	F	91.2	F	95.6	F	104.2 88.7	F F	5.1	0.015	122.0	F	136.3 <i>111.</i> 6	F F	19.4	0.048
2	St Francis Dr/Embarcadero Rd	AM PM	05/27/15 05/27/15	20.8 11.8	C B	20.8 11.8	C B	21.9 16.0	C B	21.8 15.9	C B	0.0 0.0	0.002 0.002	22.9 16.4	C B	23.0 16.4	C B	0.0 0.0	0.002 0.002

Notes:

Bold indicates a substandard level of service

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.

² Increase in critical delay and increase in crictical V/C as compared to Background scenario

³ Increase in critical delay and increase in critical V/C as compared to Cumulative No Project Scenario



Freeway Segment Analysis

The project would contribute trips equivalent to less than one percent of the capacity on each of the studied freeway segments. Thus, the project would have an insignificant impact on nearby freeway segments.

Freeway Ramp Capacity Analysis

The analysis of freeway ramps showed that the US 101 ramps at Embarcadero Road that provide access to the project site would have sufficient capacity to serve the projected traffic volumes with the proposed project. The study ramps are expected to have volume-to-capacity (V/C) ratios below 1.0. Therefore, the project is considered to have an insignificant impact on the study freeway ramps. Based on field observations, the freeway ramps are congested during peak hours. This congestion is largely due to the congestion on the freeway itself due to the current construction project at the San Francisquito Creek crossing. Absent the construction project, the ramps themselves would have adequate capacity to serve the volumes of vehicles that used them prior to the construction.

It is recommended that these ramps be reevaluated following the completion of these construction projects. With the completion of the construction, the freeway is expected to carry additional traffic, and the ramp should be analyzed to determine if ramp metering rates or signal timing at the ramp-arterial intersection should be adjusted to reduce potential on- and off-ramp queuing.

Other Transportation Issues

Queuing Analysis

The existing storage capacity for the northbound left-turn lane from East Bayshore Road onto Embarcadero Road is up to 11 vehicles (275 feet) without interfering with other movements. The existing queue length is 425 feet during the PM peak hour. This queue length would remain the same under Background conditions. The project would add 77 vehicles to the left turn movement during the PM peak hour and would increase the 95th percentile queue length by 75 feet, or 3 vehicles. The roadway is not wide enough, between the striped center line and the curb, to allow for all vehicles going right or through at the intersection to make it around this queue.

Embarcadero Road is wide enough for the center line to be restriped to extend the left turn pocket should the City desire to do so.

1. Introduction

This report presents the results of the traffic impact analysis conducted for the proposed automobile dealership located at 1700 Embarcadero Road in Palo Alto, California. The proposed project would consist of the development of a Mercedes Benz dealership, including sales floor, service area, and large indoor inventory storage. Access to the site would be provided by a full-access driveway on East Bayshore Road and a right-in/right-out driveway on Embarcadero Road. Currently, Ming's restaurant, which is now closed, exists at the proposed site.

The project site and the surrounding study area are shown on Figure 1. The proposed site plan is shown on Figure 2.

Scope of Study

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Palo Alto and the Santa Clara Valley Transportation Authority CMP. A County Congestion Management Program (CMP) analysis is required, as the proposed project is estimated to generate greater than 100 peak hour trips. The traffic study includes an analysis of AM and PM peak hour traffic conditions for two signalized intersections, two freeway segments, and four freeway ramps in the vicinity of the project site. Intersections chosen for analysis were based on the expected number of trips the site will generate at each location, in accordance with CMP guidelines. For this project, only two intersections were analyzed as they were the only intersections that would have an increase of more than 10 trips per lane due to the project. The study also includes an analysis of transit, bicycle, and pedestrian access.

Study Intersections

- 1. East Bayshore Road & Embarcadero Road
- 2. St. Francis Drive & Embarcadero Road

Study Freeway Segments

- 1. US 101 North of Embarcadero Road
- 2. US 101 South of Embarcadero Road











LEGEND

= Driveway Operations

Figure 2 Concept Plan



Study Freeway Ramps

- 1. Southbound US 101 Off Ramp at Embarcadero Road
- 2. Southbound US 101 On Ramp at Embarcadero Road
- 3. Northbound US 101 Off Ramp at Embarcadero Road
- 4. Northbound US 101 On Ramp at Embarcadero Road

The freeway ramps to and from Oregon Expressway were not analyzed because the project is not expected to add enough trips to warrant an analysis, based on VTA TIA Guidelines.

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

Traffic conditions were evaluated for the following scenarios:

- **Scenario 1:** *Existing Conditions.* Existing traffic volumes at study intersections were based on traffic counts conducted in May 2015. The two study intersections were evaluated with a level of service analysis using TRAFFIX software in accordance with the *2000 Highway Capacity Manual* methodology. Study freeway segments were analyzed in accordance with VTA and San Mateo CMP methods and study freeway ramps were analyzed using demand to capacity ratios.
- **Scenario 2:** *Existing plus Project Conditions.* Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- Scenario 3: Background Conditions. Background traffic volumes reflect traffic added by nearby approved projects that have not been completed or occupied, including the Palo Alto Golf Course Reconfiguration Project, Palo Alto Audi Expansion, and the Edgewood Plaza Shopping Center Project.
- **Scenario 4:** Background plus Project Conditions. Background traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.
- **Scenario 5:** *Cumulative With Project Conditions.* Cumulative traffic volumes were obtained by applying a 1.4% annual growth factor to the existing counts to the year 2020. Project and approved trips were added to these calculated counts to create the Cumulative traffic conditions.

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 traffic counts, the City of Palo Alto, and field observations. The following data were collected from these sources:

- existing traffic volumes
- existing lane configurations
- signal timing and phasing



Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS) standards set forth by the City of Palo Alto and the County's Congestion Management Plan. *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 Palo Alto Signalized Intersections

The two signalized study intersections are located in the City of Palo Alto and are therefore subject to the City of Palo Alto level of service standards. The City of Palo Alto evaluates level of service at signalized intersections based on the *2000 Highway Capacity Manual* (HCM) level of service methodology using TRAFFIX software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. The City of Palo Alto level of service standard for signalized intersections is LOS D or better. Table 1 shows the level of service definitions for signalized intersections.

Table 1

Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (Sec.)		
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0		
в	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0		
с	Operation with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0		
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0		
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	. 55.1 to 80.0		
F	Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	Greater than 80.0		
Source: Tra	ansportation Research Board,2000 Highway Capacity Manual, (Washington, D.	C., 2000)		

Freeway Ramps

A freeway ramp analysis was performed in order to verify that the freeway ramps would have sufficient capacity to serve the expected traffic volumes with and without the project. This analysis consisted of a volume-to-capacity ratio evaluation of the freeway ramps at the selected interchange. The ramp capacities were obtained from the *Highway Capacity Manual 2000*, and consider both the free-flow speed and the number of lanes on the ramp.

Based on VTA TIA Guidelines 9.1.2, queuing analyses are to be conducted for freeway on-ramps in the study area that have existing or planned ramp meters, and off-ramps controlled by signals at junctions with local streets. The current conditions at these ramps, due to US 101 construction activities, are not normal, and ramp queuing analyses are not included as part of this report.



Freeway Segments

The Santa Clara /San Mateo County line is located between the Embarcadero Road and University Avenue interchanges on US 101. For this reason, the segments of US 101 between San Antonio Drive and Embarcadero Road were analyzed based on the Santa Clara CMP guidelines, and the segment of US 101 between Embarcadero Road and University Avenue was analyzed based on San Mateo County CMP guidelines. The Santa Clara County CMP and San Mateo County CMP guidelines for freeway analysis are described below.

Santa Clara County Freeway CMP Guidelines

As prescribed in the CMP technical guidelines, the level of service for freeway segments is estimated based on vehicle density. Density is calculated by the following formula:

$$\mathsf{D}=\mathsf{V}\,/\,(\mathsf{N}^*\mathsf{S})$$

where:

D= density, in vehicles per mile per lane (vpmpl)

V= peak hour volume, in vehicles per hour (vph)

N= number of travel lanes

S= average travel speed, in miles per hour (mph)

The vehicle density on a segment is correlated to level of service as shown in Table 2. The CMP requires that mixed-flow lanes and auxiliary lanes be analyzed separately from high-occupancy vehicle (HOV) lanes (otherwise known as carpool lanes). The CMP specifies that a capacity of 2,300 vehicles per hour per lane (vphpl) be used for segments three lanes or wider in one direction and a capacity of 2,200 vphpl be used for segments two lanes wide in one direction. HOV lanes are specified as having a capacity of 1,800 vphpl.

San Mateo County Freeway CMP Guidelines

The City/County Association of Governments of San Mateo County (C/CAG) established LOS E as the minimum acceptable level of service for all segments of US 101 within San Mateo County, unless the segment was operating at LOS F in 1991 (the date when the CMP was first adopted), in which case the LOS standard is LOS F (Final San Mateo County Congestion Management Program, 2011). The LOS F standard was applied to the freeway segment on US 101 between University Avenue and Embarcadero Road as this segment was operating at LOS F in 1991.

The freeway segment level of service definitions are shown in Table 2.



Table 2

Freeway Segment Level of Service Definitions Based on Density

Level of Service	Description	Density (vehicles/mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	0-11
В	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	<11-18
С	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	<18-26
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	<26-46
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	<46-58
F	Vehicular flow breakdowns occurs. Large queues form behind breakdown points.	<58
Source: S March 20	Santa Clara Valley Transportation Authority, Transportation Impact Analysis Guidelin 09 (Based on the <i>Highway Capacity Manual</i> (2000), Washington D.C.)	es, Updated

Report Organization

The remainder of this report is divided into seven chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian facilities. Chapter 3 describes the methods used to estimate project traffic and its impact on the existing transportation system. Chapter 4 describes the background scenario conditions, approved projects in the City of Palo Alto, and the background plus project conditions which are used to determine the impacts the project will have on the network. Chapter 5 describes the cumulative conditions, generated from applying a growth factor to the network and analyzed with project traffic. Chapter 6 presents the projects impacts on other transportation issues including transit, bicycle and pedestrian facilities, and vehicle queuing. Chapter 7 includes a summary of project impacts, any proposed mitigation measures, and 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 US 101.

US 101 is a north/south freeway that extends from San Francisco through San Mateo and Santa Clara Counties. In Palo Alto, US 101 is eight lanes wide, including two HOV lanes (one in each direction). Embarcadero Road provides access to and from US 101.

Local access to the site is provided on Embarcadero Road and East Bayshore Road. These roadways are described below.

Embarcadero Road extends in an east-west direction starting at El Camino Real and terminating near the Palo Alto Municipal Airport. In the vicinity of the project site, Embarcadero Road is a four-lane roadway and runs along the northern boundary of the project. Embarcadero Road provides access to the Mercedes Benz site via a planned site driveway with right-in/right-out access only. Near the project site, Embarcadero Road is not wide enough for vehicles to make U-turns after exiting the right-in/right-out driveway.

East Bayshore Road is a two-lane frontage roadway that runs parallel to and immediately west of US 101. The project site has one full-access driveway on East Bayshore Road.

Existing Pedestrian and Bicycle Facilities

In the project vicinity, east of US 101, sidewalks exist along the office/commercial development along both sides of Embarcadero Road. Sidewalks exist on both sides of East Bayshore Road south of Embarcadero Road and on the east side of East Bayshore Road, north of Embarcadero Road. West of US 101, sidewalks are found along both sides of Embarcadero Road, both sides of Saint Francis Drive, both sides of Channing Avenue, and most residential roadways.

In the vicinity of the project, a bikeway/multi-use path (Class I Bikeway) exists off of East Bayshore Road and Farber Place. This Class I Bikeway makes up the Renzel Trail which merges with the Adobe Creek Loop trail, which traverses through the Baylands open space area of Palo Alto. In addition, bike lanes (Class II Bikeways) exist along both sides of Embarcadero Road and East Bayshore Road east of US 101(see Figure 3). In addition, bicyclists and pedestrians are able to cross US 101 via a dedicated pedestrian/bike bridge at Oregon Expressway. Bicyclists can access the pedestrian/bike bridge via East Bayshore Road.


Existing Transit Service

Existing transit service to the study area is provided by the City of Palo Alto and Stanford University. This is described below.

City of Palo Alto Embarcadero Shuttle Service

The Embarcadero Shuttle provides weekday peak-hour service between the University Avenue Caltrain Station and the Baylands Business Parks east of Highway 101. Local schools and community facilities are also served including Palo Alto High School, Jordan Middle School and Castilleja School. The Embarcadero Shuttle runs approximately every 15 minutes, Monday through Friday during commute hours (7:00 to 10:00 AM and 3:30 to 7:00 PM) and is coordinated with the Caltrain schedule. The nearest shuttle stops are located at Harbor Place on the south side of Embarcadero Road east of Faber Place and near the intersection of Geng Road and Embarcadero Road.

Marguerite Shuttle Service

Marguerite is Stanford's free public shuttle service, which travels around campus and connects to nearby transit, shopping, dining, and entertainment. The TECH shuttle line travels between the Palo Alto Transit Center and the Palo Alto Technology Center at 1810 and 1850 Embarcadero Rd, Palo Alto. Service is provided Monday through Friday during commute hours (6:00 to 10:00 AM and 2:30 to 7:30 PM). The nearest shuttle stops are located within the Palo Alto Technology Center at 1810 Embarcadero Road and near the intersection of Geng Road and Embarcadero Road.

Other transit services (VTA bus services & Caltrain) are provided at the Caltrain Station.

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 4.

Existing Traffic Volumes

Existing traffic volumes were obtained from peak hour counts collected on May 27th, 2015. The Monday of the week these counts were conducted was Memorial Day, but a Wednesday count is unlikely to have been affected by this holiday. At the time of the counts, the Palo Alto Unified School District was still in session. The existing peak-hour intersection volumes are shown in Figure 5. Intersection turning-movement counts conducted for this analysis are presented in Appendix A.

Existing Intersection Levels of Service

Intersection levels of service were evaluated against City of Palo Alto standards. The results of the intersection level of service analysis under existing conditions are summarized in Table 3. The results of the analysis show that the intersection of St Francis Drive and Embarcadero Road operates at acceptable levels during both the AM and PM peak hours. The intersection of E Bayshore Road and Embarcadero Road operates at an acceptable LOS D during the AM peak hour, but at an unacceptable LOS F during the PM peak hour. The intersection levels of service calculation sheets are included in Appendix C.



E Bayshore Road and Embarcadero Road

The LOS calculations are based on traffic counts from May 2015. More recent field observations show that conditions have changed due to the construction on US 101. During the PM peak hour, lengthy queues along the northbound segment of E Bayshore Road, between Clarke Avenue and Embarcadero Road, significantly hinder vehicles from getting onto the north leg of the intersection. This includes northbound through vehicles, eastbound left turns, and westbound right turns. Queues from the US 101 NB on-ramp also impact the operations of this intersection and not all northbound left-turn vehicles are able to make this movement due to the high number of vehicles attempting to enter the freeway. The LOS calculations were adjusted to reflect these conditions, and thus the intersection is shown to operate at LOS F.

Construction on US 101

In early summer 2015, Caltrans began a 3 to 4 year construction project that removed one auxiliary lane in each direction of US 101 between Embarcadero Road and University Avenue. Upon completion of this project, the City of East Palo Alto is anticipated to begin construction of a grade separated bicycle and pedestrian bridge south of University Avenue that is anticipated to require similar lane closures. The City of Palo Alto will also be constructing a bicycle and pedestrian bridge at Adobe Creek (just north of San Antonio Road), which will require median work and likely lane closures.





1700 Embarcadero Road





Figure 4 **Existing Lane Configurations**



1700 Embarcadero Road





Figure 5 **Existing Traffic Volumes**



Existing Intersection Levels of Service

Study Number	Intersection	Peak Hour	Count Date	Avg. Delay (sec.)	LOS
1	E Bayshore Rd/Embarcadero Rd ¹	AM	05/27/15	47.7	D
2	St Francis Dr/Embarcadero Rd	PM AM	05/27/15	83.5 20.8	F C
		PM	05/27/15	11.8	В
Notes:					

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.

Existing Freeway Ramp Capacity Analysis

This analysis consisted of a volume-to-capacity ratio evaluation of the freeway ramps at the Embarcadero Road interchange with US 101. The ramp capacity was obtained from the Highway Capacity Manual 2000 (Chapter 25), which considers both the free-flow speed and the number of lanes on the study ramps. The peak-hour freeway ramp volumes were obtained from Caltrans. The most recent counts available on these ramps are from 2009 and 2010. Table 4shows the AM and PM peak hour volumes. It should be noted that any count conducted on a heavily congested segment is a measure of throughput, and not the true demand. In these situations the true demand is typically higher than the measured throughput.

The analysis of freeway ramps showed that the US 101 ramps at Embarcadero Road that provide access to the project site would have sufficient capacity to serve the projected traffic volumes with the proposed project. The study ramps are expected to have volume-to-capacity (V/C) ratios below 1.0. Therefore, the project is considered to have an insignificant impact on the study freeway ramps. Based on field observations, the freeway ramps are congested during peak hours. This congestion is largely due to the congestion on the freeway itself due to the current construction project. Absent the construction project, the ramps themselves would have adequate capacity to serve the volumes of vehicles that used them prior to the construction.

It is recommended that these ramps be reevaluated following the completion of these construction projects. With the completion of the construction, the freeway is expected to carry additional traffic, and the ramp should be analyzed to determine if ramp metering rates or signal timing at the ramp-arterial intersection should be adjusted to reduce potential on- and off-ramp queuing.



Existing Freeway Ramp Capacity Analysis

				Existing C	onditions			
Ramp	Туре	Capacity	Hour	Volume ¹	V/C			
SB US 101 to EB Embarcadero Rd.	Loop	1,800	AM	270	0.15			
			PM	100	0.06			
WB Embarcadero Rd. to SB US 101 ²	Loop	900	AM	290	0.32			
			PM	560	0.62			
NB US 101 to EB Embarcadero Rd.	Diagonal	2,000	AM	580	0.29			
			PM	420	0.21			
WB Embarcadero Rd. to NB US 101 ²	Diagonal	900	AM	115	0.13			
			PM	370	0.41			
1. Existing AM and PM Peak-hour ramp volumes are based on 2009 and 2010 hourly counts provided by Caltrans.								
2 This ramp is controlled by a ramp meter during the peak hours. Capacity reflects the maximum ramp meter rate.								

Existing Freeway Levels of Service

Santa Clara County

Existing weekday AM and PM peak-hour traffic volumes on the study freeway segments were obtained from the 2012 CMP Annual Monitoring Report. The existing freeway levels of service during the weekday peak hours of traffic are summarized in Table 5. During peak hours, three of the mixed flow lanes and one HOV lane experience a level of service below acceptable LOS E standards. These four segments include:

- NB 101 San Antonio to Oregon, AM Mixed flow lanes
- SB 101 Embarcadero to Oregon, PM Mixed flow lanes
- SB 101 Oregon to San Antonio, PM Mixed flow and HOV lanes

San Mateo County

The levels of service for the freeway segments were obtained from the 2013 San Mateo County Congestion Management Program (CMP) Monitoring Report. Table 6 summarizes the level of service standard and existing levels of service on the study freeway segments. C/CAG established LOS E as the minimum acceptable level of service for all segments of US 101 within San Mateo County, unless the segment was operating at LOS F in 1991 (the date when the CMP was first adopted), in which case the LOS standard is LOS F. The study freeway segments between University Avenue and Embarcadero Road are subject to the LOS F standard. As shown in Table 6, both the northbound and southbound directions presently operate at LOS F during the PM peak hour.

Existing Freeway Levels of Service in Santa Clara County

					Mixe	d-Flow La	anes		F	IOV Lai	ne Traffic '	Volume	
			Peak	Avg.	# of				Avg.	# of			
Freeway	Segment	Direction	Hour	Speed ¹	Lanes	Volume ¹	Density	LOS	Speed ¹	Lanes	Volume ¹	Density	LOS
US 101	San Antonio to Oregon	NB	AM	32	3	5,960	62	F	38	1	2,060	54	Е
			PM	36	3	6,050	56	Е	70	1	2,450	35	D
US 101	Oregon to Embarcardero	NB	AM	58	3	6,620	38	D	58	1	2,210	38	D
			PM	51	3	6,580	43	D	70	1	2,520	36	D
US 101	Embarcadero to Oregon	SB	AM	45	3	6,480	48	Е	58	1	2,210	38	D
			PM	23	3	5,320	77	F	50	1	2,450	49	Е
US 101	Oregon to San Antonio	SB	AM	42	3	6,300	50	Е	54	1	2,220	41	D
			PM	26	3	5,540	71	F	40	1	2,440	61	F

1. Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2012.



Table 6Existing Freeway Levels of Service in San Mateo County

Freeway	Segment	Direction	Peak Hour	Lanes ¹	Capacity	1% Capacity ²	LOS Standard	Existing LOS ³
							_	
US 101	Embarcadero to University	NB	AM	3.5	8,050	81	F	F
			PM	3.5	8,050	81	F	F
US 101	University to Embarcadero	SB	AM	3.5	8,050	81	F	F
			PM	3.5	8,050	81	F	F
¹ Includes r	nixed-flow lanes and one auxilar	y lane (equiva	lent to 0.5	lane) in each	direction on U	IS 101.		
² A capacity in the 20	′ of 2,300 vehicles per hour per la)00 Highway Capacity Manual.	ine (vphpl) wa	s assume	d for freeways	segments six	lanes or wider	in both directio	ons, as specified
³ Reported	levels of service were obtained for	rom the 2013	San Mateo	CMP Monitor	ing.			



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.

Field observations showed that operational issues currently occur at the Embarcadero Road/E Bayshore Road intersection that may not be reflected when calculating the level of service using the existing volumes.

During the AM peak hour, there was a long vehicle queue in the southbound right-turn lane on E Bayshore Road due to high traffic volume. Vehicles were observed to take more than one cycle to get through the intersection.

During the PM peak hour, there were long vehicle queues in the eastbound lanes on Embarcadero Road and the northbound lane on E Bayshore Road. The long vehicle queues are contributed by high eastbound left-turn and northbound through traffic and by the dropped northbound receiving lanes on E Bayshore Road. Two northbound exit lanes on E Bayshore Road are reduced to one lane immediately north of the intersection, which causes the merging traffic to frequently queue back to the intersection and stops eastbound left-turn and northbound through traffic entering the intersection even when there are green times left in the cycle. Additional issues along northbound E Bayshore Road stem from queues at the signalized intersection of E Bayshore Road and Clarke Avenue, where queues extend in the northbound lane from this intersection to Embarcadero Road.

The long vehicle queue caused by high eastbound left-turn traffic extend beyond the access point of the US101 northbound off-ramp and also result in a long vehicle queue on the off-ramp because it is difficult for the off-ramp vehicles to merge to the eastbound traffic on Embarcadero Road and change to the left-turn lanes. Vehicles on eastbound Embarcadero Road, the northbound off-ramp, and on northbound E Bayshore Road were observed to take 2-3 cycles to clear the intersection.

Northbound left-turn queues were occasionally unable to clear within a single cycle due to queuing from the US 101 northbound on-ramp from Embarcadero Road. The high number of vehicles attempting to turn left from northbound East Bayshore Road and quickly merge to enter the US 101 North on-ramp blocked the remaining through lanes in the westbound direction, and the on-ramp queue was observed spilling back into the intersection of East Bayshore Road and Embarcadero Road.

The westbound vehicle queue on Embarcadero Road occasionally reached Geng Road and took more than one cycle to clear the intersection.

3. Existing Plus Project Conditions

This chapter describes traffic conditions with the project. 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 is presented in this chapter. Existing plus project conditions are represented by existing traffic conditions with the addition of traffic generated by the project. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area.

Transportation Network under Existing Plus Project Conditions

It is assumed in this analysis that the transportation network under existing plus project conditions 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 proposed Mercedes Benz dealership was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Trip generation for the proposed automobile dealership was estimated based on calculating the average trip generation rates for nearby automobile dealerships in Palo Alto and Belmont, based on Showroom/Office Space square footage. Driveway counts for the Palo Alto Audi, Anderson Honda, and Autobahn Motors were conducted on 7/22-23/2015. Using these driveway counts, and the estimated showroom and office size, average rates for trips per 1,000 s.f. were calculated from the three dealerships. Based on showroom size, the nearby automobile dealerships were found to produce 5.52 trips per 1,000 s.f. during the AM peak hour, and 8.01 trips per 1,000 s.f. during the PM peak hour. Using these rates the project is estimated to produce 102 total trips, with 47 trips inbound and 45 trips outbound during the AM peak hour. During the PM peak hour, the project is estimated to produce 149 total trips, with 58 trips inbound and 91 trips outbound. No credit was given for the existing restaurant on the site because it is vacant. The trip generation estimates for the Mercedes Benz project are shown in Table 7.



Trip Distribution

Peak hour project traffic was distributed to the transportation network based on the existing trip distribution patterns in the project vicinity. It is expected that most of the trips to/from the proposed project would be from the freeway. It is expected that 25% of the trips would come from the north via US 101, and 30% from the south via US 101. Another large number of the trips would come from west of the project. It is expected that 20% of the trips will come via Oregon Expressway, and 10% of the trips will come via Embarcadero Road from the west. Of the remaining trips, it is expected that 9% will come from the east via Embarcadero Road, 5% will come from the north via E Bayshore Road, and 1% will come from the south via E Bayshore Road. The trip distribution pattern is shown on Figure 6. Though the 9 percent of vehicles travelling to and from east of the project site appears relatively high considering the existing development in this direction, the trip distribution here is meant to account for test drives to and from the site.

Trip Assignment

The peak-hour trips associated with the proposed project were added to the transportation network in accordance with the distribution patterns discussed above. Inbound project trips would enter the site through the driveways off of Embarcadero Rd and E Bayshore Road. Some traffic would enter from northbound E Bayshore Road. This traffic would make a right turn into the E Bayshore Road driveway. Most traffic would enter from eastbound Embarcadero Road. This traffic would be split between the E Bayshore Road driveway, making a left turn, and the Embarcadero driveway, making a right turn. To exit the site, almost all vehicles would use the E Bayshore Road driveway to turn right or left. Then they could use the signal at Embarcadero is not wide enough to allow U-turns, thus no trips exiting the site to travel west were assigned to this driveway. Figure 6 shows the assignment of project traffic on the local transportation network, and the project trips at each driveway. A tabular summary of project traffic at each study intersection is contained in Appendix B.

Table 7Project Trip Generation Estimates

				AM	Peak H	our	PM	Peak H	our
	Showroom	Rate	9 ¹		Trips			Trips	
	Size (ksf)	AM	PM	In	Out	Total	In	Out	Total
Proposed Project									
Mercedes Benz	18.537	5.52	8.01	57	45	102	58	91	149
NEW TRIPS GENE	RATED			57	45	102	58	91	149
¹ Peak Hour rates b	ased on trips per ?	1.000 squar	e feet of Sh	owroom/C	Office Sr	ace from	similar A	uto	

Existing Plus Project Traffic Volumes

Project trips, as represented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 7.

Existing Plus Project Intersection Analysis

The results of the level of service analysis under existing plus project conditions are summarized in Table 8. This analysis is presented for information only as the criteria that define a significant project impact at a signalized intersection are based on background plus project conditions.

The results of the analysis show that the intersection of E Bayshore Road and Embarcadero Road, during the PM peak hour, is operating at an unacceptable level of service. The addition of project trips, primarily to the northbound left-turn movement, would increase the average delay at the E Bayshore Road and Embarcadero Road intersection by 2.8 seconds during the AM peak hour, and by 4.5 seconds during the PM peak hour. The project would not change the average delay at the St Francis Drive and Embarcadero Road intersection, and will Intersection level of service calculation sheets are included in Appendix C.

Improvements to the intersection of E. Bayshore Dr/Embarcadero Rd should be made. The recommended improvement at this intersection is to revise the eastbound leg on Embarcadero to include two left-turn pockets, a through lane, and a shared through/right-turn lane. The improvement also includes changing the east-west phasing from split phase timing to protected left turn phasing. There is a large volume of left turns and a large volume of through traffic on eastbound Embarcadero Road in the morning. Creating two separate dedicated left turn lanes and two through lanes will reduce delay for eastbound traffic. Also, the split phase signal operation is generally less efficient compared to protected left turn phasing. A change to protected left turn phasing means that the eastbound and westbound through traffic will be able to proceed simultaneously. This will reduce delays for the through traffic. In addition to the east/west Embarcadero improvements, the city should consider restriping the northbound approach to have one left turn lane and one shared left-through-right. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection. The project should make a fair-share contribution to the cost of the recommended improvements.

Table 8

Existing Plus Project Intersection Levels of Service

				Exist	ing	Existing Plus Projec		lus Project	
Oteste		Deal	0	Avg.		Avg.		Incr. In	
Study		Реак	Count	Delay		Delay		Crit. Dela	/ Incr. In
Number	Intersection	Hour	Date	(sec.)	LOS	(sec.)	LOS	(sec.)	Crit. V/C
1	E Bayshore Rd/Embarcadero Rd ¹	AM	09/26/06	47.7	D	52.4	D	2.8	0.009
		PM	09/26/06	83.5	F	91.2	F	4.5	0.016
2	St Francis Dr/Embarcadero Rd	AM	03/27/07	20.8	С	20.8	С	0.0	0.002
		PM	03/27/07	11.8	В	11.8	В	0.0	0.002

Notes:

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.

Bold indicates a substandard level of service.









1700 Embarcadero Road







Existing Plus Project Freeway Ramp Capacity Analysis

The freeway ramp volumes under existing plus project conditions were estimated by adding to the existing ramp volumes the traffic generated by the project.

Definition of Significant Freeway Ramp Impacts

For the purpose of this study, the project is said to create a significant adverse impact on a freeway ramp if its implementation:

- 1. Causes the volume-to-capacity (V/C) ratio of the freeway ramp to exceed 1.0; or
- 2. Increases the amount of traffic on a freeway ramp that is already exceeding its capacity by more than one percent (1%) of the ramp's capacity.

The ramp analysis under existing plus project conditions shows that the selected ramps would continue to have sufficient capacity to serve the projected traffic volumes under existing plus project conditions. Each of the study ramps is expected to have a volume-to-capacity (V/C) ratio well below 1.0 (see Table 9). Therefore, the project is considered to cause an insignificant impact on the freeway ramps that provide access to the project site.

Existing Plus Project Freeway Segment Analysis

Due to the current construction along US 101, it is recommended that these ramps be reevaluated following the completion of these construction projects. With the completion of the construction, the freeway is expected to carry additional traffic, and the ramp should be analyzed to determine if ramp metering rates or signal timing at the ramp-arterial intersection should be adjusted to reduce potential on- and off-ramp queuing. The following analysis may be based off of counts that take into only ramp throughput, rather than actual ramp demand.

CMP Definition of Significant Freeway Segment Impacts

Santa Clara County

The CMP defines an acceptable level of service for freeway segments in Santa Clara County as LOS E or better. A project is said to create a significant adverse impact on traffic conditions on a CMP freeway segment if for either peak hour:

- 1. The level of service on the freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under project conditions, <u>or</u>
- 2. The level of service on the freeway segment is an unacceptable LOS F under project conditions <u>and</u> the number of project trips on that segment constitutes at least one percent of capacity on that segment.

Existing Plus Project Freeway Ramp V/C Analysis

				Existi	ing	Pr	Existing PI oject Condi	us tions
			Peak			Project	Total	
Ramp	Туре	Capacity	Hour	Volume ¹	V/C	Trips	Volume	V/C
SB US 101 to EB Embarcadero Rd.	Loop	1,800	AM	270	0.15	14	284	0.16
			PM	100	0.06	15	115	0.06
WB Embarcadero Rd. to SB US 101 ²	Loop	900	AM	290	0.32	23	313	0.35
			PM	560	0.62	45	605	0.67
NB US 101 to EB Embarcadero Rd.	Diagonal	2,000	AM	580	0.29	28	608	0.30
			PM	420	0.21	29	449	0.22
WB Embarcadero Rd. to NB US 101 ²	Diagonal	900	AM	115	0.13	11	126	0.14
			PM	370	0.41	23	393	0.44
¹ Existing AM and PM peak-hour ramp volumes	are based on	2009 and 2010 hc	ourly count	s provided by	Caltrans.			
² This ramp is controlled by a ramp meter during	the peak hou	ur. Capacity reflect	ts the max	imum ramp met	er rate.			

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to better than background conditions.

San Mateo County

The study freeway segment on US 101 between Embarcadero Road and University Avenue was operating at LOS F during the PM peak hour in 1991, when the CMP was first adopted. Therefore, this segment is subject to the LOS F standard.

Per CMP technical guidelines, an analysis of freeway segment level of service is required for all segments to which the project is projected to add one percent or more to the segment capacity. The traffic added by the project to each freeway segment is summarized in 10 and 11. Since the project trips represent less than one percent of the freeway segment capacity, an analysis of freeway segments is not required and the project is considered to have an insignificant impact on the study freeway segments.

Table 10 Existing Plus Project Freeway Segment Capacity Summary in Santa Clara County

						Existin	g Plus Proje	ect Trips					ļ	Project Trip	s	
					Mixed-Flow Lanes HOV Lane					Mixe	d-Flow	HOV	Lane			
			Peak	# of				# of				Total	Added	%	Added	%
Freeway	Segment	Direction	Hour	Lanes	Volume	LOS	Capacity	Lanes	Volume	LOS	Capacity	Volume	Volume	Capacity	Volume	Capacity
US 101	San Antonio to Oregon	NB	AM	3	5,968	F	6900	1	2,063	E	1800	11	8	0.1%	3	0.2%
			PM	3	6,059	Е	6900	1	2,453	D	1800	12	9	0.1%	3	0.2%
US 101	Oregon to Embarcardero	NB	AM	3	6,628	D	6900	1	2,213	D	1800	11	8	0.1%	3	0.2%
			PM	3	6,589	D	6900	1	2,523	D	1800	12	9	0.1%	3	0.2%
US 101	Embarcadero to Oregon	SB	AM	3	6,486	Е	6900	1	2,212	D	1800	8	6	0.1%	2	0.1%
			PM	3	5,330	F	6900	1	2,455	Е	1800	15	10	0.1%	5	0.3%
US 101	Oregon to San Antonio	SB	AM	3	6,306	Е	6900	1	2,222	D	1800	8	6	0.1%	2	0.1%
			PM	3	5,550	F	6900	1	2,445	F	1800	15	10	0.1%	5	0.3%

1. Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2012.



Table 11 Existing Plus Project Freeway Segment Capacity Summary in San Mateo County

Freeway	Segment	Direction	Peak Hour	Lanes ¹	Capacity	1% Capacity ²	LOS Standard	Existing LOS ³	Added Project Trips	% Capacity
110 404			A N A	25	0.050	04	F	-	-	0.404
05101	Embarcadero to University	NB	AIVI	3.5	8,050	81	F	F	1	0.1%
			PM	3.5	8,050	81	F	F	13	0.2%
US 101	University to Embarcadero	SB	AM	3.5	8,050	81	F	F	9	0.1%
			PM	3.5	8,050	81	F	F	10	0.1%
¹ Includes mi	xed-flow lanes and one auxi	arv lane (equ	uivalent to	0.5 lane) in	each directio	n on US 101.				

² A capacity of 2,300 vehicles per hour per lane (vphpl) was assumed for freeway segments six lanes or wider in both directions, as specified in the 2000 Highway Capacity Manual.

³ Reported levels of service were obtained from the 2013 San Mateo CMP Monitoring.

^{1.} Added project trips represent project traffic on the freeway segment.



4. Background Conditions

This chapter presents a summary of the traffic conditions that would occur under background conditions both with and without the proposed project.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the criteria used to determine significant impacts on signalized intersections are based on the City of Palo Alto's level of service standards.

City of Palo Alto Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of Palo Alto if for either peak hour:

- The level of service at the intersection degrades from an acceptable level (LOS D or better for non-CMP intersections and LOS E or better for CMP intersections) under background conditions to an unacceptable LOS E or F under background plus project conditions, <u>or</u>
- 2. The level of service at the intersection is an unacceptable level (LOS E or F at non-CMP intersections and LOS F at CMP intersections) under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four or more seconds *and* the demand-to-capacity ratio (V/C) to increase by .01 or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e. the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

Roadway Network and Traffic Volumes

The roadway network under background conditions is assumed to be the same as under existing conditions.

Background traffic volumes for the study intersections were estimated by adding to existing traffic volumes the trips generated by nearby approved projects that have not been completed or occupied, including the Palo Alto Golf Course Reconfiguration Project, Palo Alto Audi Expansion, and the Edgewood Plaza Shopping Center Project.

The project trip estimates were then added to the background traffic volumes to derive background plus project traffic volumes. Figures 8 and 9 show the intersection turning-movement volumes under background conditions without and with the project, respectively.



Intersection Level of Service Analysis

The results of the level of service analysis under background conditions are summarized in Table 12. The results show that, measured against the City of Palo Alto level of service standards, the intersection of E Bayshore Road and Embarcadero Road, during the PM peak hour, will operate at an unacceptable LOS F, both without and with the project. The project would increase the average delay at the E Bayshore Road and Embarcadero Road intersection by 2.8 seconds during the AM peak hour, and by 5.1 seconds during the PM peak hour. This increase in average delay of 5.1 seconds during the PM peak hour is primarily due to the northbound left-turn movements generated by the project, and would constitute a significant impact. The project would not change the average delay at the St Francis Drive and Embarcadero Road intersection. Intersection level of service calculation sheets are included in Appendix C.

Table 12Background Level of Service Summary

Study			Peak	<u>Backgr</u> Avg. Delay	ound	Ba Avg. Delay	<u>ckgrou</u>	und Plus Pro Incr. In Crit. Delay	oject
Number	Intersection		Hour	(sec.)	LOS	(sec.)	LOS	(sec.)	Crit. V/C
1	E Bayshore Dr/Embarcadero Rd1		AM	48.7	D	53.5	D	2.8	0.009
			PM	95.6	F	104.2	F	5.1	0.015
		With Mitigation				88.7	F		
2	St Francis Dr/Embarcadero Rd		AM	21.9	С	21.8	С	0.0	0.002
			PM	16.0	В	15.9	В	0.0	0.002

Notes:

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.

Bold indicates a substandard level of service.

Bold indicates a significant project impact.



E Bayshore Road and Embarcadero Road Operations

The following improvements are recommended at this intersection to mitigate the project impact. With these improvements, the intersection would continue to operate at LOS F, but the average delay would improve to 88.7 seconds. The project should make a fair-share contribution to the cost of the recommended improvements.

The recommended improvement at this intersection is to revise the eastbound leg on Embarcadero to include two left-turn pockets, a through lane, and a shared through/right-turn lane. The improvement also includes changing the east-west phasing from split phase timing to protected left turn phasing. There is a large volume of left turns and a large volume of through traffic on eastbound Embarcadero Road in the morning. Creating two separate dedicated left turn lanes and two through lanes will reduce delay for eastbound traffic. Also, the split phase signal operation is generally less efficient compared to protected left turn phasing. A change to protected left turn phasing means that the eastbound and westbound through traffic will be able to proceed simultaneously. This will reduce delays for the through traffic. In addition to the east/west Embarcadero improvements, the city should consider restriping the northbound approach to have one left turn lane and one shared left-through-right. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection. The project should make a fair-share contribution to the cost of the recommended improvements. This improvement can be seen in Figure 12.

1700 Embarcadero Road



C HEXAGON



1700 Embarcadero Road



C HEXAGON



5. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions with the proposed project. Cumulative conditions reflect a horizon year of 2020. This short-term cumulative analysis is done in accordance to VTA TIA Guidelines for the proposed scope and timeline of the proposed project.

Roadway Network and Traffic Volumes

The intersection lane configurations under cumulative conditions were assumed to be the same as described under background conditions.

Cumulative conditions for both intersections were estimated by applying a 1.4% annual growth rate to the existing traffic conditions. The growth rate, which has been approved by the City of Palo Alto, was applied to the study intersections through the year 2020. The cumulative volumes without project trips added can be seen in Figure 10. Project trips were added to the growth estimates to create the cumulative conditions volumes. Figure 11 shows the intersection turning-movement volumes under cumulative conditions with the project.

Intersection Levels of Service Analysis

The results of the level of service analysis under cumulative conditions are summarized in Table 13. The results show that, measured against the City of Palo Alto level of service standards, the intersection of St Francis Drive and Embarcadero Road will operate at acceptable levels of service during both the AM and PM peak hours. The intersection of E Bayshore Road and Embarcadero Road will operate at an unacceptable LOS E during the AM peak hour and an unacceptable LOS F during the PM peak hour under cumulative conditions. Compared to the Cumulative No Project scenario, the St Francis Drive and Embarcadero Road intersection would have a relatively minimal increase in critical delay with project trips added. The intersection of E Bayshore Road and Embarcadero Road would have an increase in critical delay of 10.3 seconds during the AM peak hour, and 19.4 seconds during the PM peak hour. Though the intersection is operating at an LOS F during the PM peak hour, this increase in critical delay during both peak hours constitutes a significant impact.

Recommended Improvement

With the recommended improvements, this intersection would continue to operate at LOS E during the AM peak hour, but would improve to an average delay to 61.1 seconds, and would continue to operate at a LOS F during the PM peak hour, but would improve to an average delay to 111.6 seconds.

The recommended improvement at this intersection is to revise the eastbound leg on Embarcadero to include two left-turn pockets, a through lane, and a shared through/right-turn lane. The improvement also includes changing the east-west phasing from split phase timing to protected left turn phasing. There is a large volume of left turns and a large volume of through traffic on eastbound Embarcadero Road in the morning. Creating two separate dedicated left turn lanes and two through lanes will reduce delay for eastbound traffic. Also, the split phase signal operation is generally less efficient compared to protected left turn phasing. A change to protected left turn phasing means that the eastbound and westbound through traffic will be able to proceed simultaneously. This will reduce delays for the through traffic. In addition to the east/west Embarcadero improvements, the city should consider restriping the northbound approach to have one left turn lane and one shared left-through-right. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection. The project should make a fair-share contribution to the cost of the recommended improvements.

Cumulative Level of Service Summary

			Cumulativ Projec	/e No ct		Cum	ulative	
Study Number	Intersection	Peak Hour	Ave. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	Incr. in Crit. Delay ²	Incr. Crit. V/C ²
1	E Bayshore Rd/Embarcadero Rd ¹ With Mitigation	AM	65.7	Е	73.0 61.1	E	10.3	0.028
	With Mitigation	PM	122.0	F	136.3 111.6	F F	19.4	0.048
2	St Francis Dr/Embarcadero Rd	AM PM	22.9 16.4	C B	23.0 16.4	C B	0.0 0.0	0.002 0.002

Notes:

¹ Intersection LOS calculations based on traffic counts conducted prior to construction along the US 101. Calculation adjustments made to represent observed intersection operations during PM peak hour of LOS F.

² Increase in Critical Delay and Increase in Critical V/C were calculated by comparing Cumulative with Cumulative No Project Conditions

Bold indicates substandard level of service

Bold indicates significant project impact



1700 Embarcadero Road







1700 Embarcadero Road







6. Other Transportation Issues

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

- Vehicle Queuing
- Site access and circulation
- Potential impacts to transit, bicycle and pedestrian facilities

Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgement in accordance with the standards and methods employed by the traffic engineering community.

Queuing Analysis

The operations analysis is based on vehicle queuing for high-demand movements at intersections (see Table 14). Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of "n" vehicles for a vehicle movement using the following formula:

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

n!

Where:

P (x=n) = probability of "n" vehicles in queue per lane

- n = number of vehicles in the queue per lane
- λ = average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. Poisson probability calculation sheets are provided in Appendix D.



Table 14Queuing Analysis Summary

	East Bayshore Rd & Embarcad Rd			
Movement: Peak Hour Period:	AM	PM		
<i>Existing</i> Cycle/Delay ¹ (sec) Volume (vphpl) Avg. Queue (veh/ln.) Avg. Queue ² (ft./ln) 50th %. Queue (veh/ln.) 95th %. Queue (veh/ln.) 95th %. Queue (ft./ln) Storage (ft./ ln.) Adequate (Y/N)	120 92 3.1 77 3 6 150 275 Y	120 332 11.1 277 11 17 425 275 N		
<i>Existing Plus Project</i> Cycle/Delay ¹ (sec) Volume (vphpl) Avg. Queue (veh/ln.) Avg. Queue ² (ft./ln) 50th %. Queue (veh/ln.) 95th %. Queue (veh/ln.) 95th %. Queue (ft./ln) Storage (ft./ ln.) Adequate (Y/N)	120 131 4.4 109 4 8 200 275 Y	120 409 13.6 341 13 20 500 275 N		
Background Cycle/Delay ¹ (sec) Volume (vphpl) Avg. Queue (veh/ln.) Avg. Queue ² (ft./ln) 50th %. Queue (veh/ln.) 95th %. Queue (veh/ln.) 95th %. Queue (ft./ln) Storage (ft./ ln.) Adequate (Y/N)	120 92 3.1 77 3 6 150 275 Y	120 332 11.1 277 11 17 425 275 N		
Background Plus Project Cycle/Delay ¹ (sec) Volume (vphpl) Avg. Queue (veh/ln.) Avg. Queue ² (ft./ln) 50th %. Queue (veh/ln.) 95th %. Queue (veh/ln.) 95th %. Queue (ft./ln) Storage (ft./ ln.) Adequate (Y/N)	120 131 4.4 109 4 8 200 275 Y	120 409 13.6 341 13 20 500 275 N		

Notes:

Vehicle queue calculations based on cycle length for signalized intersections .

²Assumes 25 feet per vehicle queued.



East Bayshore Rd and Embarcadero Rd

The existing storage capacity for the northbound left-turn lane from East Bayshore Road onto Embarcadero Road is up to 11 vehicles (275 feet) without interfering with other movements. The existing queue length is 425 feet during the PM peak hour. This queue length would remain the same under PM peak hour Background conditions. The project would add 77 vehicles to the left turn movement during the PM peak hour and would increase the 95th percentile queue length by 75 feet, or 3 vehicles. The roadway is not wide enough, between the striped center line and the curb, to allow for all vehicles going right or through at the intersection to make it around this queue.

Embarcadero Road is wide enough for the center line to be restriped to extend the left turn pocket should the City desire to do so.

Site Access and On-Site Circulation

A review of site access and on-site circulation was completed based on the site plan dated September 18th, 2015 and shown in Figure 2. The project proposes to make use of the existing site driveways, one of which is located on Embarcadero Road near Geng Road, and the other is located on E. Bayshore Road at the southern edge of the property. The Embarcadero Road driveway would be restricted to right turns only due to the median on Embarcadero Road. The driveway on E. Bayshore Road would allow full access.

Most vehicles entering the site will be heading eastbound on Embarcadero Road, either coming from the freeway or Palo Alto. These vehicles could enter the site either by making a left turn off of E. Bayshore Road or a right turn off of Embarcadero Road. Most vehicles exiting the site would desire to travel westbound on Embarcadero Road. They could do so by first turning right on E. Bayshore Road and then left on Embarcadero Road at the signal. Vehicles exiting the Embarcadero Road driveway would have a difficult time heading west on Embarcadero Road. There is a median preventing left turns, and the driveway is too close to Geng Road to allow access to the left turn pocket. Also, Embarcadero Road is not wide enough for U-turns, and U-turns are prohibited at the Geng Road intersection. Because of these difficulties, it is assumed that traffic heading west on Embarcadero Road would use the E. Bayshore Road driveway.

Based on the site description and field observations, adequate sight distance is available at the E Bayshore Road driveway to insure that exiting vehicles can see pedestrians on the sidewalk, as well as vehicles on East Bayshore Road. Vehicles making a left-turn, 30 AM vehicles and 31 PM vehicles, into the project driveway at this location may occasionally have to wait for a gap in northbound traffic. Based on the driveway LOS calculations, shown in Table 15, the average delay for vehicles turning right at the driveway is between 9.4 and 9.7 seconds during the AM peak periods, and between 13.9 and 15.4 seconds during the PM peak periods. The delay for vehicles turning left into the site ranges between 7.7 and 9.2 seconds for all time periods. There is currently no left turn pocket at the location of this driveway and with so few project trips a pocket would not be warranted. Level of service calculations for this driveway are shown in Table 15.

To reduce reliance on the E. Bayshore Road driveway, it would be desirable to develop the option to make left turns out of the Embarcadero Road driveway. The applicant should work with the Audi dealership next door to see if it would be possible to develop a full access driveway opposite Geng Road.

E Bayshore Road Driveway Level of Service Calculations

		E Bayshore Driveway			
Scenario		LOS	Inbound Left-Turn Delay	Outbound Right-Turn Delay	
Existing Plus Project	Δ N A	۸	77	0.4	
	PM	B	8.8	9.4 13.9	
Background Plus Project	AM	А	7.7	9.4	
	PM	В	8.8	13.9	
Cumulative	AM	А	7.7	9.7	
	PM	С	9.2	15.4	
NOTES:					
LOS calculations based on HCS 2000 Unsignalized Intersection Level of Service					

Transit, Pedestrian and Bicycle Analysis

Because the Embarcadero Shuttle that provides transit service in the site vicinity is limited to weekday commute hours, the project is not expected to generate a significant number of transit trips. It is unlikely that the project would by itself generate enough demand for transit service to justify the extension of shuttle hours.

The project is assumed to create no impacts or need for improvements to the pedestrian and bicycle facilities. Existing facilities provide adequate access to the project site. Also, as an automobile dealership the project is not expected to generate a large number of non-automobile trips.

7. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of Palo Alto and the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP). The study included the analysis of traffic conditions at two signalized intersections, three freeway segments, and four freeway ramps during the weekday AM and PM peak hours. The weekday peak hours are typically between 7:00 and 9:00 AM and between 4:00 and 6:00 PM.

Intersection Level of Service Analysis

The results of the intersection level of service analysis show that all study intersections are expected to operate at acceptable levels under all conditions according to standards set forth by the City of Palo Alto, and based on traffic counts conducted prior to construction projects occurring on US 101. Field observations show that the intersection of E Bayshore Road and Embarcadero Road currently operates at LOS F due to the construction activities.

E Bayshore Road and Embarcadero Road

The LOS calculations are based on traffic counts from May 2015. Based on field observations of this intersection during the AM and PM peak hours, the calculations using these volumes do not accurately reflect the current conditions. During the PM peak hour lengthy queues along the northbound segment of E Bayshore Road, between Clarke Avenue and Embarcadero Road, significantly hinder vehicles from completing movements onto the north leg of the intersection. This includes northbound through vehicles, eastbound left turns, and westbound right turns. The LOS calculations were adjusted to reflect these conditions, and the intersection is shown to operate at LOS F. As part of this analysis, adjustments were made to reflect these conditions. Under these conditions, it was determined that the project would have a significant impact at the intersection during the PM peak hour under the Background Plus Project scenario, and during both the AM and PM peak hours under the Cumulative scenario.

Improvements to the intersection of E. Bayshore Dr/Embarcadero Rd should be made. The recommended improvement at this intersection is to revise the eastbound leg on Embarcadero to include two left-turn pockets, a through lane, and a shared through/right-turn lane. The improvement also includes changing the east-west phasing from split phase timing to protected left turn phasing. There is a large volume of left turns and a large volume of through traffic on eastbound Embarcadero Road in the morning. Creating two separate dedicated left turn lanes and two through lanes will reduce delay for eastbound traffic. Also, the split phase signal operation is generally less efficient compared to protected left turn phasing. A change to protected left turn phasing means that the eastbound and westbound through traffic will be able to proceed simultaneously. This will reduce delays for the through traffic. In addition to the east/west Embarcadero improvements, the city should consider restriping the northbound approach to have one left turn lane and one shared left-through-right. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection. The project should make a fair-share contribution to the cost of the recommended improvements.

With these improvements, the significant project impacts would be mitigated.



Freeway Segment Analysis

The project would contribute trips equivalent to less than one percent of the segment capacity. Thus, the project would have an insignificant impact on nearby freeway segments.

Freeway Ramp Capacity Analysis

The analysis of freeway ramps showed that the US 101 ramps at Embarcadero Road that provide access to the project site would have sufficient capacity to serve the projected traffic volumes with the proposed project. The study ramps are expected to have volume-to-capacity (V/C) ratios below 1.0. Therefore, the project is considered to have an insignificant impact on the study freeway ramps. Based on field observations, the freeway ramps are congested during peak hours. This congestion is largely due to the congestion on the freeway itself due to the current construction project. Absent the construction project, the ramps themselves have adequate capacity to serve the volumes of vehicles that used them prior to the construction.

The project is considered to have an insignificant impact on the study freeway ramps. However, it is recommended that these ramps be reevaluated following the completion of these construction projects. With the completion of the construction, the freeway is expected to carry additional traffic, and the ramp should be analyzed to determine if ramp metering rates or signal timing at the ramp-arterial intersections should be adjusted to reduce potential on- and off-ramp queuing.

Other Transportation Issues

Queuing Analysis

The existing storage capacity for the northbound left-turn lane from East Bayshore Road onto Embarcadero Road is up to 11 vehicles (275 feet) without interfering with other movements. The number of left-turning vehicles already exceeds this capacity during the PM peak hour. The project will add 43 vehicles to this movement during the PM peak hour. The 95th percentile queue with the proposed project is projected to extend to 425 feet. The roadway is note wide enough, between the stripped yellow line and the curb, to allow for all vehicles going right or through at the intersection to make it around this queue.

Embarcadero Road is wide enough for the center line to be restriped to extend the left turn pocket should the City desire to do so.

Site Access and On-Site Circulation

Based on a review of the site description there will be no issues with site access along both Embarcadero Road and E Bayshore Road. No issues are expected to arise regarding on-site circulation. The final site plan should demonstrate conformance with the City of Palo Alto design guidelines and requirements.

It is recommended that the applicant work with the Audi dealership next door to explore the potential of creating a shared, full-access driveway opposite Geng Road.

Transit, Pedestrain, and Bicycle Analysis

The proposed project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the study area. Thus, no project sponsored improvements would be necessary



Summary of Mitigations and Recommendations

Below is a summary of the mitigations and recommendations described throughout this report for the proposed project.

- It is recommended that the applicant work with the Audi dealership next door to explore the potential of creating a shared, full-access driveway opposite Geng Road.
- The project should make a fair-share contribution to improvements at the intersection of E Bayshore Road and Embarcadero Road. Recommended improvements include geometry changes to the eastbound leg of the intersection to provide two left-turning lanes, a through lane, and a shared through/right-turn lane in the eastbound direction. The improvement also includes signal modifications to change the current split phase in the east-west directions to protected left-turn phasing. In addition to the east/west Embarcadero improvements, the city should consider restriping the northbound approach to have one left turn lane and one shared left-through-right. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection.
- It is recommended that the US 101/Embarcadero interchange be reevaluated following the completion of the construction projects. With the completion of the construction, the freeway is expected to carry additional traffic, and the ramp should be analyzed to determine if ramp metering rates or signal timing at the ramp-arterial intersections should be adjusted to reduce potential on- and off-ramp queuing.


Figure 12 East Bayshore Road and Embarcadero Improvement



1700 Embarcadero Road Mercedes Benz TIA Technical Appendices

February 8, 2016

Appendix A

Traffic Counts

> File Name : #1 EMBARCADERO&STFRANCISAM Site Code : Start Date : 5/27/2015 Page No : 1

							Groups	s Printe	d- Clas	s 1							
	S	T FRAM	ICIS D	R	EM	BARCA	DERO	RD	S	T FRAM	ICIS D	R	EM	BARCA	DERO	RD	
		South	bound			Westb	ound			North	bound			Eastb	ound		
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	9	0	41	0	12	219	1	0	1	0	0	0	0	124	7	1	415
07:15 AM	13	0	52	0	19	280	4	0	7	1	1	0	0	173	8	0	558
07:30 AM	15	2	96	2	20	295	2	2	3	3	1	0	1	190	7	4	643
07:45 AM	10	2	85	0	28	255	6	4	9	9	8	0	0	229	3	3	651
Total	47	4	274	2	79	1049	13	6	20	13	10	0	1	716	25	8	2267
08:00 AM	4	3	74	0	20	224	4	0	6	4	1	0	4	276	9	1	630
08:15 AM	15	4	92	0	22	223	3	4	7	1	0	0	1	298	13	5	688
08:30 AM	12	1	79	0	19	239	4	0	5	1	0	0	0	271	13	3	647
08:45 AM	6	0	73	1	17	244	4	0	11	2	3	0	0	242	7	2	612
Total	37	8	318	1	78	930	15	4	29	8	4	0	5	1087	42	11	2577
Grand Total	84	12	592	3	157	1979	28	10	49	21	14	0	6	1803	67	19	4844
Apprch %	12.2	1.7	85.7	0.4	7.2	91	1.3	0.5	58.3	25	16.7	0	0.3	95.1	3.5	1	
Total %	1.7	0.2	12.2	0.1	3.2	40.9	0.6	0.2	1	0.4	0.3	0	0.1	37.2	1.4	0.4	



File Name : #1 EMBARCADERO&STFRANCISAM Site Code : Start Date : 5/27/2015 Page No : 2

		ST F	RANC	CIS DR	2	E	MBA	RCAD	ERO	RD		ST F	RANC	IS DR	2	E	MBA	RCAD	ERO I	RD	
		So	uthbo	ound			w	estbo	und			No	orthbo	und			Ea	astbo	und		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour	Analys	sis Fro	om 07:	:00 AN	l to 08:4	45 AM	- Pea	k 1 of	1												
Peak Hour f	or Ent	ire Inte	ersect	ion Be	gins at	07:45	AM														
07:45 AM	10	2	85	0	97	28	255	6	4	293	9	9	8	0	26	0	229	3	3	235	651
08:00 AM	4	3	74	0	81	20	224	4	0	248	6	4	1	0	11	4	276	9	1	290	630
08:15 AM	15	4	92	0	111	22	223	3	4	252	7	1	0	0	8	1	298	13	5	317	688
08:30 AM	12	1	79	0	92	19	239	4	0	262	5	1	0	0	6	0	271	13	3	287	647
Total Volume	41	10	330	0	381	89	941	17	8	1055	27	15	9	0	51	5	1074	38	12	1129	2616
% App. Total	10.8	2.6	86.6	0		8.4	89.2	1.6	0.8		52.9	29.4	17.6	0		0.4	95.1	3.4	1.1		
PHF	.683	.625	.897	.000	.858	.795	.923	.708	.500	.900	.750	.417	.281	.000	.490	.313	.901	.731	.600	.890	.951



> File Name : #1 EMBARCADERO&STFRANCISPM Site Code : Start Date : 5/27/2015 Page No : 1

							Groups	s Printe	d- Clas	s 1							_
	S	T FRAN		R	EM	BARCA	DERO	RD	S			R	EM	BARCA	DERO	RD	
		South	Jouna			west	ouna			North	Jouna			Eastp	ouna		
Start	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
lime	_																
04:00 PM	3	4	45	0	20	181	5	1	4	0	3	0	1	307	14	1	589
04:15 PM	15	1	41	0	25	189	8	0	4	2	2	0	0	274	14	0	575
04:30 PM	7	2	44	1	22	192	3	1	2	1	0	0	0	296	8	1	580
04:45 PM	6	0	49	0	20	192	5	0	4	0	2	0	2	290	4	3	577
Total	31	7	179	1	87	754	21	2	14	3	7	0	3	1167	40	5	2321
05:00 PM	15	1	52	0	20	205	3	1	8	1	0	0	1	286	9	0	602
05:15 PM	4	1	37	0	19	199	9	0	8	1	0	2	2	300	11	0	593
05:30 PM	4	0	56	0	20	274	9	2	11	0	0	0	2	291	8	0	677
05:45 PM	3	1	44	2	28	230	9	0	4	2	5	0	4	256	11	0	599
Total	26	3	189	2	87	908	30	3	31	4	5	2	9	1133	39	0	2471
Grand Total	57	10	368	3	174	1662	51	5	45	7	12	2	12	2300	79	5	4792
Apprch %	13	2.3	84	0.7	9.2	87.8	2.7	0.3	68.2	10.6	18.2	3	0.5	96	3.3	0.2	
Total %	1.2	0.2	7.7	0.1	3.6	34.7	1.1	0.1	0.9	0.1	0.3	0	0.3	48	1.6	0.1	



File Name : #1 EMBARCADERO&STFRANCISPM Site Code : Start Date : 5/27/2015 Page No : 2

		ST F So	RANC	SIS DF	2	E	MBAI W	RCAD estbo	ERO I	RD		ST F No	RANC	IS DF	2	E	EMBAI Ea	RCAD astbo	ERO I und	RD	
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour	Analys	sis Fro	om 04:	:00 PN	l to 05:4	45 PM	- Pea	k 1 of	1												
Peak Hour f	or Ent	ire Inte	ersect	ion Be	gins at	05:00	PM														
05:00 PM	15	1	52	0	68	20	205	3	1	229	8	1	0	0	9	1	286	9	0	296	602
05:15 PM	4	1	37	0	42	19	199	9	0	227	8	1	0	2	11	2	300	11	0	313	593
05:30 PM	4	0	56	0	60	20	274	9	2	305	11	0	0	0	11	2	291	8	0	301	677
05:45 PM	3	1	44	2	50	28	230	9	0	267	4	2	5	0	11	4	256	11	0	271	599
Total Volume	26	3	189	2	220	87	908	30	3	1028	31	4	5	2	42	9	1133	39	0	1181	2471
% App. Total	11.8	1.4	85.9	0.9		8.5	88.3	2.9	0.3		73.8	9.5	11.9	4.8		0.8	95.9	3.3	0		
PHF	.433	.750	.844	.250	.809	.777	.828	.833	.375	.843	.705	.500	.250	.250	.955	.563	.944	.886	.000	.943	.912



File Name : #2 EMBARCADERO&BAYSHOREAM Site Code : Start Date : 5/27/2015 Page No : 1

							Groups	s Printe	d- Clas	s 1							
	E	BAYSH	IORE R	D	EM	BARCA	DERO	RD	E	BAYSH	IORE R	D	EM	BARCA	DERO	RD	
		South	oouna			west	ouna			North	oouna			Eastb	ouna		
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	133	15	13	0	1	14	3	0	5	5	8	0	25	110	63	0	395
07:15 AM	216	22	20	0	0	20	5	0	7	12	10	0	34	134	82	0	562
07:30 AM	218	23	9	0	4	21	0	0	9	6	16	0	63	98	117	0	584
07:45 AM	255	31	4	0	2	30	1	0	12	16	18	0	56	140	167	0	732
Total	822	91	46	0	7	85	9	0	33	39	52	0	178	482	429	0	2273
08:00 AM	222	34	10	0	1	33	4	0	9	12	19	1	70	138	154	0	707
08:15 AM	197	38	26	0	3	43	3	0	10	22	21	0	112	143	111	0	729
08:30 AM	187	66	15	1	0	38	7	0	9	13	34	0	91	145	89	0	695
08:45 AM	167	47	21	0	3	32	5	1	13	13	48	1	105	148	79	0	683
Total	773	185	72	1	7	146	19	1	41	60	122	2	378	574	433	0	2814
Grand Total	1595	276	118	1	14	231	28	1	74	99	174	2	556	1056	862	0	5087
Apprch %	80.2	13.9	5.9	0.1	5.1	84.3	10.2	0.4	21.2	28.4	49.9	0.6	22.5	42.7	34.8	0	
Total %	31.4	5.4	2.3	0	0.3	4.5	0.6	0	1.5	1.9	3.4	0	10.9	20.8	16.9	0	



File Name : #2 EMBARCADERO&BAYSHOREAM Site Code : Start Date : 5/27/2015 Page No : 2

		E BA	YSHO	RE R	D	E	MBA	RCAD	ERO I	RD		E BA	YSHO	RE R	D	E	MBA	RCAD	ERO I	RD	
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour	Analys	sis Fro	om 07:	00 AN	1 to 08:4	45 AM	- Pea	k 1 of	1												
Peak Hour f	or Ent	ire Inte	ersecti	ion Be	gins at	07:45	AM														
07:45 AM	255	31	4	0	290	2	30	1	0	33	12	16	18	0	46	56	140	167	0	363	732
08:00 AM	222	34	10	0	266	1	33	4	0	38	9	12	19	1	41	70	138	154	0	362	707
08:15 AM	197	38	26	0	261	3	43	3	0	49	10	22	21	0	53	112	143	111	0	366	729
08:30 AM	187	66	15	1	269	0	38	7	0	45	9	13	34	0	56	91	145	89	0	325	695
Total Volume	861	169	55	1	1086	6	144	15	0	165	40	63	92	1	196	329	566	521	0	1416	2863
% App. Total	79.3	15.6	5.1	0.1		3.6	87.3	9.1	0		20.4	32.1	46.9	0.5		23.2	40	36.8	0		
PHF	.844	.640	.529	.250	.936	.500	.837	.536	.000	.842	.833	.716	.676	.250	.875	.734	.976	.780	.000	.967	.978



File Name : #2 EMBARCADERO&BAYSHOREPM Site Code : Start Date : 5/27/2015 Page No : 1

							Groups	s Printe	d- Clas	s 1							
	E	BAYSH	IORE R	D	EM	BARCA	DERO	RD	E	BAYSH	IORE R	D	EM	BARCA	DERO	RD	
		South	bound			Westb	ound			North	oound			Eastb	ound		
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
04:00 PM	113	32	5	0	22	153	12	0	5	60	89	0	33	39	144	0	707
04:15 PM	124	23	2	1	27	121	8	1	4	50	47	0	25	42	180	0	655
04:30 PM	134	19	7	0	18	123	13	0	0	58	69	0	29	27	169	0	666
04:45 PM	130	31	5	0	14	132	16	1	6	52	74	0	25	40	144	0	670
Total	501	105	19	1	81	529	49	2	15	220	279	0	112	148	637	0	2698
05:00 PM	148	29	3	0	9	127	19	1	9	70	106	1	41	37	88	0	688
05:15 PM	100	18	3	0	17	150	19	0	6	79	84	1	33	52	144	0	706
05:30 PM	130	31	5	0	10	138	17	0	5	63	68	1	28	58	113	0	667
05:45 PM	97	23	2	0	9	94	15	0	11	73	76	0	42	39	133	0	614
Total	475	101	13	0	45	509	70	1	31	285	334	3	144	186	478	0	2675
Grand Total	976	206	32	1	126	1038	119	3	46	505	613	3	256	334	1115	0	5373
Apprch %	80.3	17	2.6	0.1	9.8	80.7	9.3	0.2	3.9	43.3	52.5	0.3	15	19.6	65.4	0	
Total %	18.2	3.8	0.6	0	2.3	19.3	2.2	0.1	0.9	9.4	11.4	0.1	4.8	6.2	20.8	0	



File Name : #2 EMBARCADERO&BAYSHOREPM Site Code : Start Date : 5/27/2015 Page No : 2

		EBA	YSHO	RER	D	E	MBA	RCAD	ERO I	RD		E BA	YSHO	RE R	D	E	MBA	RCAD	ERO I	RD	
		50	ατηρο	una				estbo	una			INC	oanmo	una			E	astbo	una		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour	Analys	sis Fro	om 04:	00 PN	l to 05:4	45 PM	- Pea	k 1 of	1												
Peak Hour f	or Ent	ire Inte	ersecti	ion Be	gins at	04:45	РМ														
04:45 PM	130	31	5	0	166	14	132	16	1	163	6	52	74	0	132	25	40	144	0	209	670
05:00 PM	148	29	3	0	180	9	127	19	1	156	9	70	106	1	186	41	37	88	0	166	688
05:15 PM	100	18	3	0	121	17	150	19	0	186	6	79	84	1	170	33	52	144	0	229	706
05:30 PM	130	31	5	0	166	10	138	17	0	165	5	63	68	1	137	28	58	113	0	199	667
Total Volume	508	109	16	0	633	50	547	71	2	670	26	264	332	3	625	127	187	489	0	803	2731
% App. Total	80.3	17.2	2.5	0		7.5	81.6	10.6	0.3		4.2	42.2	53.1	0.5		15.8	23.3	60.9	0		
PHF	.858	.879	.800	.000	.879	.735	.912	.934	.500	.901	.722	.835	.783	.750	.840	.774	.806	.849	.000	.877	.967





Volume Summary

Intersection Number:	31 21	311											
Intersection Name:	East E	avshor	e Roac&	Emba	ircadero	Road							
Peak Hour:	AM	ayono.	0110414	2		liouu			D	Date of An	alysis:	08/20/	15
Count Date:	05/27/	15											
Scenario:	Merce	des Be	nz Dealei	ship				Fut	Ire Grov	wth % Po	r Voar	1.400	
(SJ) Number of Months:								Num	per of Ye	ears to Bu	ildout:	5	
	<u></u>					Move	ments						-
Scenario:	RT	Approa TH		East /	Approac TH	n IT	RT	Approa TH	acn I T	RT	Approa TH	CN IT	Total
Existing Conditions	861	169	55	7	144	15	40	63	92	329	566	521	2862
Approved Project Trips	861	169	55	7	144	15	40	63	92	329	566	521	
Edgewood Plaza	3	0	0	0	0	0	0	0	0	0	1	2	6
Palo Alto Approved	0	0	0	0	8	0	0	0	0	0	7	0	15
Total Approved Trips	3	0	0	0	8	0	0	0	0	0	8	2	21
Background Conditions	864	169	55	7	152	15	40	63	92	329	574	523	2883
check	864	169	55	7	152	15	40	63	92	329	574	523	-
Broject Trips													
Mercedes Benz	0	1	1	0	0	6	0	2	39	24	24	0	97
Net Project Trips	0	1	1	0	0	6	0	2	39	24	24	0	97
Eviating / Draiget	001	170	FC	7	111	24	40	65	101	252	500	504	2050
Existing + Project Existing + Project Check	861	170	56	7	144	21	40	65 65	131	353	590 590	521	2959
													_
Background + Project	864	170	56	7	152	21	40	65	131	353	598	523	2980
Bkgra+Proj check	864	170	50		152	21	40	65	131	353	598	523	
Cumulative Project Trips													
2035 Growth	923	181	59	8	154	16	43	68	99	353	607	559	0
Cumulative	926	182	60	8	162	22	43	70	138	377	639	561	3186
Cumulative Check	926	182	60	8	162	22	43	70	138	377	639	561]
(CI) Crowth Factor								Finte		uth 0/ De	- Veer	1 400	
(SJ) Growth Factor: (SJ) Number of Months:								Numb	per of Ye	ears to Bu	r rear: ildout:	1.400	
Intersection Number:	36												
Intersection Name:	St. Fra	ancis D	rive &	Emba	rcadero	Road							
Peak Hour:	AM								D	Date of An	alysis:	08/20/	15
Count Date:	05/27/	15 1 D-	- De eles	l- 1									
Scenario.	werce	ues Be	nz Dealei	snip		Move	ments						
i	North	Approa	ich	East	Approac	h	South	Approa	ach	West	Approa	ch	-
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Conditions	41	10	330	80	0/1	17	27	15	0	5	1074	38	2506
	41	10	330	89	941	17	27	15	9	5	1074	38	2090
Approved Project Trips													
Edgewood Plaza	10	1	16	0	10	0	0	1	0	0	13	13	64
Total Approved Trips	10	1	16	0	11	0	0	1	0	0	15	13	67
				-			-			-			.
Background Conditions	51	11	346	89	952	17	27	16	9	5	1089	51	2663
CHECK	51		340	09	952	17	21	10	9	5	1069	51	
Project Trips													
Mercedes Benz	0	0	0	0	5	0	0	0	0	0	6	0	11
Net Project Trips	0	0	0	0	5	0	0	0	0	0	6	0	11
Existing + Project	41	10	330	89	946	17	27	15	9	5	1080	38	2607
Existing + Project Check	41	10	330	89	946	17	27	15	9	5	1080	38	
Background + Project	51	11	346	89	957	17	27	16	9	5	1095	51	2674
Bkgrd+Proj check	51	11	346	89	957	17	27	16	9	5	1095	51	2014
Cumulative Project Trips 2035 Growth	44	11	354	95	1009	18	29	16	10	5	1151	41	0
2000 0100001	-17		001		1.1.1.1.1					5			0
							20						_
Cumulative	54	12	370	95	1025	18	29	17	10	5	1172	54	2861

Cumulative Cireck 94 12 370 95 1025 18 29 17 10 5 1172 54

Intersection Number:	31												
Traffix Node Number:	31		- D 0	E		Deed							
Intersection Name:	East E	saysnor	e Roa(&	Emba	rcadero	Road				late of An	alveie:	08/20/	15
Count Date:	05/27/	15								Jale OI AII	aiysis.	00/20/	15
Scenario:	Merce	des Be	nz Dealer	ship									
(PA) Growth Factor:								Futu	Ire Gro	wth % Pe	r Year:	1.400	
(PA) Number of Years:						Movo	monto	Num	per of Y	ears to Bu	ildout:	5	
	North	Approa	ch	East	Approac	h	South	Approa	ach	West	Approa	ch	
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
				_									
Existing Conditions	508	109	16	50	547	71	26	264	332	127	187	489	2726
Approved Project Trips	506	109	10	50	547	71	20	204	332	127	107	409	
Edgewood Plaza	6	0	0	0	1	0	0	0	0	0	1	7	15
Palo Alto Approved	0	0	8	7	126	1	1	0	0	0	140	0	283
Total Approved Trips	6	0	8	7	127	1	1	0	0	0	141	7	298
Packground Conditions	514	100	24	57	674	70	27	264	222	107	220	406	2024
Background Conditions Background Check	514	109	24	57	674	72	27	264	332	127	328	490	3024
	014	100	24	01	014			204	002		020	400	
Project Trips													
Mercedes Benz	0	1	1	0	0	6	0	5	77	25	25	0	140
Net Project Trips	0	1	1	0	0	6	0	5	77	25	25	0	140
Existing + Project	508	110	17	50	547	77	26	269	409	152	212	489	2866
Existing + Project Check	508	110	17	50	547	77	26	269	409	152	212	489	2000
Background + Project	514	110	25	57	674	78	27	269	409	152	353	496	3164
Bkgrd+Proj check	514	110	25	57	674	78	27	269	409	152	353	496	
Cumulative Project Trips													
2035 Projection	545	117	17	54	586	76	28	283	356	136	200	524	2922
-													
Cumulative	551	118	26	61	713	83	29	288	433	161	366	531	3360
Cumulative Check	551	118	26	61	713	83	29	288	433	161	366	531	
Intersection Number:	00												
intersection number.	30												
Traffix Node Number:	36												
Traffix Node Number: Intersection Name:	36 36 St. Fra	ancis D	rive &	Emba	rcadero	Road			_				
Traffix Node Number: Intersection Name: Peak Hour:	36 36 St. Fra PM	ancis D	rive &	Emba	rcadero	Road			[Date of An	alysis:	08/20/	15
Traffix Node Number: Intersection Name: Peak Hour: Count Date: Scenario:	36 36 St. Fra PM 05/27/ Merce	ancis Di 15 des Be	rive & nz Dealei	Emba ship	rcadero	Road			Ľ	Date of An	alysis:	08/20/	15
Traffix Node Number: Intersection Name: Peak Hour: Count Date: Scenario: (SJ) Growth Factor:	36 36 St. Fra PM 05/27/ Merce	ancis D 15 des Be	rive & nz Dealer	Emba <u>ship</u>	rcadero	Road		Futu	[Ire Grov	Date of An	alysis:	08/20/	15
Traffix Node Number: Intersection Name: Peak Hour: Count Date: Scenario: (SJ) Growth Factor: (SJ) Number of Months:	36 36 St. Fra PM 05/27/ Merce	ancis D 15 des Be	rive & nz Dealer	Emba rship	rcadero	Road		Futu	re Grov	Date of An wth % Per ears to Bu	alysis: r Year: iildout:	08/20/ 1.400 5	15
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Traffix Node Number: Intersection Name: Peak Hour: Count Date: Scenario: (SJ) Growth Factor: (SJ) Number of Months: Scenario: Existing Conditions	36 36 St. Fra PM 05/27/ Merce North RT 26 26	Approa TH 3	rive & nz Dealer ch LT 189 189	Emba rship East / RT 87 87	Approac TH 908 908	Road Move h LT 30 30	ments South RT 31 31	Futu Numt Approa TH 4 4	Ire Grov ber of Y ach LT 5 5	Date of An wth % Pei ears to Bu <u>West 7</u> 9 9	alysis: Year: ildout: Approa TH 1133 1133	08/20/ 1.400 5 ch LT 39 39	15 <u>Total</u> 2464
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Traffix Node Number: Intersection Name: Peak Hour: Count Date: Scenario: (SJ) Growth Factor: (SJ) Number of Months: Scenario: Existing Conditions Approved Project Trips Edgewood Plaza Palo Alto Approved Total Approved Trips	36 36 St. Fra PM 05/27/ Merce North RT 26 26 26 40 0 40	Approa Approa TH 3 4 0 4	rive & nz Dealee ch LT 189 189 47 0 47	Emba <u>ship</u> <u>East /</u> <u>RT</u> 87 87 0 0 0	Approac TH 908 908 40 16 56	Road h LT 30 30 0 0 0	ments South RT 31 31 0 0 0	Futu Numb Approz TH 4 4 3 0 3	Ire Grov ber of Y ach LT 5 5 0 0 0	Date of An with % Pere ears to Bu <u>West /</u> RT 9 9 9 0 0 0 0	alysis: Year: iildout: TH 1133 1133 39 15 54	08/20/ 1.400 5 ch LT 39 39 39 0 39 39 0 39	15 <i>Total</i> 2464 212 31 243
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Appendix C

Level of Service Calculations

Traffix 8.0.0715

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		Signal-9	Solit				•	¥'			Signal-Split		
Final Vol: I	Lanes:	Rights=0	Dverlap			Vo	I Cnt D	ate:	5/27/	2015	Rights=Include	Lanes:	Final Vol:
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566	1					C	Critical V	V/C:	0.9	957		1	144
	0				Avg C	rit De	l (sec/v	eh):	54	1.4	-	0	
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329	1	★			Avg	Delay	/ (sec/v	en):	47	.7	Ý	1	15
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			Lanes: Final Vol:	1 92	0		0 63	1	0 40)***			
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Approach: Movement:	Nor L -	th Bound T - F	South B L - T	ound - R	Ea L -	st Bo	ound - R	We L	est Bo - T	ound - R			
Min. Green:	- 0	0	0 0 0		0	0	0	0	0	0			
Y+R: Volume Modul	4.0 -	4.0 4.	0 4.0 4.0 	4.0 15 cc 7	4.0 	4.0	4.0 8:45 DM	4.0 	4.0	4.0			
Base Vol: Growth Adj:	92 1.00	63 4 1.00 1.0	0 55 169 0 1.00 1.00	861 1.00	521 1.00	566 1.00	329 1.00	15 1.00	144 1.00	7 1.00			
Initial Bse: Added Vol:	: 92 0	63 4 0	0 55 169 0 0 0	861 0	521 0	566 0	329 0	15 0	144 0	7 0			
PasserByVol: Initial Fut:	: 0 : 92	63 4		861	521 1 00	566	329 1 00	15	144	0 7 1 00			
PHF Adj: PHF Volume:	1.00	1.00 1.0 1.00 1.0 63 4	1.00 1.00 1.00 1.00 10 55 169	1.00	1.00	1.00	1.00 329	1.00	1.00	1.00			
Reduct Vol: Reduced Vol:	0 92	0 63 4	0 0 0 0 55 169	0 861	0 521	0 566	0 329	0 15	0 144	0 7			
PCE Adj: MLF Adj: FinalVolume:	1.00	1.00 1.0 1.00 1.0 63 4	10 1.00 1.00 10 1.00 1.00	1.00	1.00	1.00	1.00 1.00 329	1.00	1.00	1.00			
Saturation F	- Flow Mo	dule:											
Sat/Lane: Adjustment:	1900	1900 190 0.41 0.9	1900 1900 14 0.84 0.74	1900	1900 0.41	1900 0.93	1900	1900	1900	1900			
Final Sat.:	1173	615 39	1 356 1094	1209	1552	1763	1615	1805	3082	150			
Capacity Ana Vol/Sat:	alysis 1 0.08	Module: 0.10 0.1	.0 0.15 0.15	0.71	0.34	0.32	0.20	0.01	0.05	0.05			
Crit Moves: Green/Cycle:	: 0.11	*** 0.11 0.1	1 0.39 0.39	****	****	0.35	0.46	0.05	0.05	****			
Uniform Del: IncremntDel:	51.9 19.8	53.3 53. 72.7 72.	3 26.1 26.1 7 0.4 0.4	13.6	38.1 17.3	37.2 10.9	0.44 22.1 0.4	54.7 0.9	56.9 58.6	56.9 58.6			
InitQueuDel: Delay Adj:	: 0.0 1.00	0.0 0. 1.00 1.0	0 0.0 0.0	0.0	0.0	0.0 1.00	0.0	0.0	0.0	0.0			
Delay/Veh: User DelAdj:	71.7	126 126. 1.00 1.0	0 26.6 26.6	33.9	55.4 1.00	48.2	22.6 1.00	55.7	116	115.5			
LOS by Move: HCM2kAvqQ:	; E 5	F 6 1	F C C 0 7 6	33.9 C 34	55.4 E 14	48.2 D 25	22.0 C 8	55.7 E 1	110 F 4	115.5 F 2			
Note: Queue	report	ed is the	number of c	ars per 	lane.								
HCM Ops Adju Lanes: Lane Group:	usted L 1 0 I.	ane Utili 0 1 C RT F	zation Modul 0 0 1 0 PT LT LT	e: 0 1 P	1 1 LT	. 1 LT	0 1 R	1 (T.) 1 RT	1 0 RT			
#LnsInGrps:	1	1		1 	3	3	1	1	2	2			
HCM Ops Inpu Lane Width:	ut Satu 12	ration Ad 12 1	lj Module: .2 12 12	12	12	12	12	12	12	12			
<pre>% Hev Veh: % Grade:</pre>		8 0 0%	8 0 0%			8 0 %			8 0 %				
Parking/Hr: Bus Stp/Hr:		No 0	No 0			No 0			No 0				
Area Type: Cnft Ped/Hr:	:	< < < < <		< < 0t	her >	> > 0	> > >	> > >	> > >	· > > >	· >		
% RT Prtct:	: I: -	nclude 0	Inclu 0	de 	I 	ncluc 0	ie 	: 	Incluc 0	ie 			
HCM Ops f(lt f(lt) Case:	t) Adj	Case Modu xxxx xxx	ule: x 4 4	xxxx	4	4	хххх	1	xxxx	xxxx			
HCM Ops Satu	uration	Adj Modu	 ile:	1 00	1 00	1 00	1 00	1	1 00	1 00			
Hev Veh Adj: Grade Adi:	1.00 1.00	1.00 1.0 1.00 1.0	1.00 1.00 1.00 1.00 1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Parking Adj: Bus Stp Adj:	: xxxx : xxxx	1.00 1.0 1.00 1.0	10 xxxx xxxx 10 xxxx xxxx	1.00	xxxx xxxx	XXXX XXXX	1.00	XXXX XXXX	1.00	1.00			
Area Adj: RT Adj:	1.00 xxxx	1.00 1.0 0.94 0.9	0 1.00 1.00 4 xxxx xxxx	1.00 0.85	1.00 xxxx	1.00 xxxx	1.00 0.85	1.00 xxxx	1.00 0.99	1.00 0.99			
PedBike Adj: HCM Sat Adj:	U.95 1.00 0.95	xxxx xxxx 1.00 1.0 0.94 n q	10 1.00 1.00 14 0.99 0 00	xxxxx 1.00 0.85	U.98 1.00 0.98	0.98 1.00 0,98	1.00 0.85	U.95 1.00 0.95	xxxx 1.00 0.99	1.00 0.99			
Usr Sat Adj: MLF Sat Adj:	: 0.65 : 1.00	0.44 1.0 1.00 1.0	0 0.85 0.75 0 1.00 1.00	0.75	0.44	1.00 0.95	1.00	1.00	0.95	0.44			
Fnl Sat Adj:	0.62	0.41 0.9	4 0.84 0.74	0.64	0.41	0.93	0.85	0.95	0.90	0.41			

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

Delay Adjustment Factor	Module:	
Coordinated: < < < < <	$<\ <\ <\ <\ <\ <\ <\ <\ <\ <\ <\ >\ >\ >\ >\ >\ >\ >\ >\ >\ >\ >\ >\ >\$	<pre>> > ></pre>
Signal Type: < < < < <	< < < < < < < < Actuated > > > >	<pre>> > ></pre>
DelAdjFctr: 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
Level Of Servic	Detailed Computation Report (Ped/Bike	Sat Adj)
	2000 HCM Operations Method	

Future Volume Alternative

*********	*******	*******	*******	*******	*******	*******	******	******	
Intersection	#31 E Bay	shore Dr/	Embarcad	ero Rd		*******			
Approach:	North B	ound	South B	ound	East B	ound	West B	ound	
	ь - т	- к -	ь - т	- к -	ь - т	- к -	ь - т	- R	
CrsswalkWid:	0.00	8.00	0.00	8.00	0.00	8.00	0.00	8.00	
CrsswalkLen:	0.00	60.00	0.00	72.00	0.00	36.00	0.00	36.00	
MinPedGrn:	0.00	18.22	0.00	21.21	0.00	12.20	0.00	12.21	
PedGrn:	0.00	18.22	0.00	21.21	0.00	12.20	0.00	12.21	
PedVolume:	0	2	0	1	0	0	0	1	
PedFlowRate:	0	13	0	6	0	0	0	10	
BikeVol:	0	0	0	0	0	0	0	0	
BikeFlwRate:	0	0	0	0	0	0	0	0	
PedOcc:	0.000	0.007	0.000	0.003	0.000	0.000	0.000	0.005	
BikeOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
PedAfterOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
r0cc:	0.000	0.007	0.000	0.003	0.000	0.000	0.000	0.005	
TurnVehAdj:	0.000	0.996	0.000	0.998	0.000	1.000	0.000	0.995	
Prt:	0.000	0.388	0.000	1.000	0.000	1.000	0.000	0.046	
Prta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Plt:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Plta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
PedBike Adj:	1.000	0.998	1.000	0.998	1.000	1.000	1.000	1.000	
Level C	f Service	Detailed	l Computa	tion Repo	ort (HCM2	000 Queue	e Method)		
2000 HCM Operations Method									
Future Volume Alternative									

Future Volume Alternative

Approach:	Noi	rth Bo	ound	Sou	ith Bo	ound	Ea	ast Bo	ound	We	est Bo	ound
Movement:	L ·	- т	- R	L ·	- Т	- R	L	- Т	- R	L	٠т	- R
Green/Cycle:	0 11	0 11	0 11	0 30	0 30	0 74	0 35	0 35	0.46	0.05	0 05	0.05
ArrivalType:	0.11	3	0.11	0.55	3	0.74	0.55	3	0.40	0.05	3	0.05
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	3.0	2.7	6.1	5.9	5.2	25.5	8.9	19.0	7.5	0.5	2.8	1.3
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.12
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.19	0.19	0.12
Q2:	1.9	3.0	4.3	0.6	0.6	8.2	5.1	5.8	0.8	0.0	1.2	0.7
HCM2KQueue:	4.9	5.6	10.4	6.5	5.8	33.7	14.1	24.8	8.3	0.5	4.0	1.9
70th%Eactor:	1 10	1 1 9	1 18	1 18	1 1 9	1 14	1 17	1 15	1 18	1 20	1 10	1 20
HCM2k70th0:	5 8	6 7	12 2	7 7	6 9	38 5	16 5	28 6	9 8	0 6	4 7	2 3
85th%Factor:	1.56	1.55	1.51	1.54	1.55	1.40	1.49	1.43	1.53	1.59	1.56	1.58
HCM2k85thQ:	7.6	8.7	15.7	10.1	9.0	47.1	20.9	35.5	12.6	0.8	6.2	3.1
90th%Factor:	1.71	1.70	1.64	1.69	1.70	1.47	1.60	1.52	1.66	1.79	1.73	1.76
HCM2k90thQ:	8.3	9.6	17.0	11.0	9.9	49.7	22.5	37.6	13.7	0.9	6.9	3.4
0552877-55	1 00	1 04	1 04	1 02	1 0 2	1 50	1 77	1 65	1 00		1 00	2.04
UCM2k95tb0:	1.90	10 94	10 0	12 5	11 3	1.59	25 0	41 0	15 5	2.08	7 9	2.04
							25.0					
98th%Factor:	2.39	2.35	2.15	2.30	2.34	1.77	2.04	1.85	2.23	2.66	2.44	2.56
HCM2k98thQ:	11.6	13.2	22.3	15.1	13.7	59.9	28.7	45.9	18.4	1.4	9.7	5.0
			Fuel	Consur	nption	and E	missio	ons				
			000		~							

2000 HCM Operations Method

Future Volume Alternative								
*****	*******	***************************************						
Intersection #31 E :	Bayshore I	Dr/Embarcadero Rd						
Approach: Nort: Movement: L - Run Speed: NumOfStops: 22.3 1	h Bound T - R 30 MPH 5.7 9.9	South Bound East Bound West Bound L - T - R L - T - R						
Name: year 1995 com	posite fle	eet						
Fuel Consumption:	130.939 21.212	pounds gallons						
Carbon Dioxide:	408.530	pounds						
Carbon Monoxide:	33.829	pounds						
Hydrocarbons:	6.753	pounds						
Nitrogen Oxides:	1.013	pounds						
Name: year 2000 com	posite fle	eet						
Fuel Consumption:	130.939	pounds						
	21.212	gallons						
Carbon Dioxide:	408.530	pounds						
Carbon Monoxide:	33.829	pounds						
Hydrocarbons:	6.753	pounds						
Nitrogen Oxides:	1.013	pounds						

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative)	
Background AM Intersection #31: E Bayshore Dr/Embarcadero Rd	
Final Vol: 864*** 169 55	
Lanes: 1 0 0 1 0	
< <↓ ↓ ↓> >	
Signal=Split Signal=Split Final Vol: Lanes: Rights=Overlap Vol Cnt Date: n/a Rights=Include Lane	s: Final Vol:
523*** 1 Cycle Time (sec): 120	7***
Loss Time (sec): 12	
1 1 574 1 Critical V/C: 0.961 1	152
329 1 Avg Delay (sec/veh): 48.7 1	15
LOS: D	
★ ★↑ ↑ ★> >	
Lanes: 1 0 0 1 0 Final Vol: 92 63 40***	
Signal=Split/Rights=Include	
Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R	
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	
Base Vol: 92 63 40 55 169 864 523 574 329 15 152 7 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
Initial Bse: 92 63 40 55 169 864 523 574 329 15 152 7 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
PasserbyVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 92 63 40 55 169 864 523 574 329 15 152 7 User Adi: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
Reduct Vol: 0 <th< td=""><td></td></th<>	
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
Adjustment: 0.62 0.41 0.94 0.84 0.74 0.64 0.41 0.93 0.85 0.95 0.90 0.42 Lanes: 1.00 0.78 0.22 0.22 0.78 1.00 2.00 1.00 1.00 1.00 1.00 1.82 0.18	
Final Sat.: 1173 616 391 356 1094 1211 1552 1763 1615 1805 3098 143	
Capacity Analysis Module: Vol/Sat: 0.08 0.10 0.10 0.15 0.15 0.71 0.34 0.33 0.20 0.01 0.05 0.05 Crit Moves: **** **** **** ****	
Green/Cycle: 0.11 0.11 0.11 0.39 0.39 0.74 0.35 0.35 0.46 0.05 0.05 0.05 Volume/Cap: 0.74 0.96 0.96 0.39 0.39 0.96 0.96 0.93 0.45 0.16 0.96 0.96	
Uniform Del: 52.0 53.4 55.4 26.3 26.3 13.9 38.1 37.5 22.2 54.5 56.8 56.8 IncremntDel: 20.3 74.1 74.1 0.5 0.5 21.0 18.0 12.5 0.4 0.8 58.2 58.2 InifOneuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
HCM2kAvgQ: 5 6 10 7 6 34 14 26 8 1 4 2 Note: Queue reported is the number of cars per lane.	
HCM Ops Adjusted Lane Utilization Module:	
Lanes: 100100100111110110110 Lane Group: L RT RT LT LT R LT LT R L RT RT #LnsInGros: 1 1 1 1 1 3 3 1 1 2 2	
HCM Ops Input Saturation Adj Module:	
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12 12 CrsswalkWid: 8 8 8 8 Hey Veb: 0 0 0	
Grade: 0% 0% 0% 0% Parking/Hr: No No No No	
Bus Stp/Hr: 0 0 0 Area Type: < < < < < < < < < < < < < < < < < < <	
ExclusiveRT: Include Include Include Include & RT Prtct: 0 0 0 0	
HCM Ops f(lt) Adj Case Module:	
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
чгаан жај, т., чо т. Parking Adj: хххх 1.00 1.00 хххх хххх 1.00 хххх хххх	
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
LT Adj: 0.45 XXXX XXXXX 0.99 0.99 XXXXX 0.98 XXXXX 0.98 XXXXX 0.95 XXXX XXXXX PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	

Traffix 8.0.0715

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Delay Adjustment Factor	Module:			
Coordinated: < < < < <	< < < < < < < <	< < No > > >	> > > > > > > > > >	> > > > > > >
Signal Type: < < < < <	< < < < < < <	Actuated	<pre>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>></pre>	> > > > > > >
DelAdjFctr: 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.	00 1.00 1.00 1.	00 1.00
Level Of Service	Detailed Computa	tion Report (HC	M2000 Queue Metho	d)
	2000 HCM Oper	ations Method		

**********	*********	Fu *****	ture '	/olume	Alter	native	e *****	*****	*****	*****	*****
Intersection	#31 E Bays	hore D	r/Emba	arcade	ro Rd	*****	*****	*****	*****	*****	*****
Approach: Movement:	North Bo L - T	und - R	Soi L	ith Bo - T	und - R	Ea L -	ast Bo - T	und - R	We L -	st Bo	und – R
Green/Cycle: ArrivalType: ProgFactor: Q1: UpstreamVC:	$\begin{array}{c} 0.11 & 0.11 \\ & 3 \\ 1.00 & 1.00 \\ 3.0 & 2.7 \\ 0.00 & 0.00 \\ 0.00 & 0.00 \end{array}$	 0.11 1.00 6.1 0.00	0.39 1.00 5.9 0.00	0.39 3 1.00 5.2 0.00	0.74 1.00 25.9 0.00	0.35 1.00 9.0 0.00	0.35 3 1.00 19.4 0.00	0.46 1.00 7.5 0.00	0.05 1.00 0.5 0.00	0.05 3 1.00 2.9 0.00	 0.05 1.00 1.4 0.00
UpstreamAdj: EarlyArrAdj: Q2: HCM2KQueue:	1.00 1.00 1.9 3.0 4.9 5.6	1.00 4.3 10.4	0.00 1.00 0.6 6.6	0.00 1.00 0.6 5.9	0.00 1.00 8.4 34.3	0.00 1.00 5.2 14.2	0.00 1.00 6.2 25.6	1.00 0.8 8.3	0.20	1.00 0.20 1.3 4.2	0.12 0.7 2.0
70th%Factor: HCM2k70thQ:	1.19 1.19 5.8 6.7	1.18 12.3	1.18	1.19 7.0	1.14 39.2	1.17 16.6	1.15 29.5	1.18 9.8	1.20	1.19 5.0	1.20 2.4
85th%Factor: HCM2k85thQ:	1.55 1.55 7.6 8.7	1.51 15.8	1.54	1.55 9.1	1.40 47.9	1.49	1.43 36.6	1.53	1.59	1.56 6.5	1.58
90th%Factor: HCM2k90thQ:	1.71 1.70 8.4 9.6	1.64	1.69	1.70 10.0	1.47	1.60	1.51 38.7	1.66	1.79	1.72 7.2	1.76 3.6
95th%Factor: HCM2k95thQ:	1.96 1.94 9.6 11.0	1.84 19.1	1.92	1.93 11.3	1.59 54.5	1.77	1.64 42.1	1.88	2.08	1.98 8.3	2.04 4.2
98th%Factor: HCM2k98thQ:	2.39 2.35 11.6 13.3	2.15 22.4 Fuel 200 Fu	2.30 15.1 Consu 0 HCM	2.34 13.7 nption Opera Volume	1.77 60.8 and E tions Alter	2.04 28.9 missio Methoo native	1.84 47.1 ons	2.23	2.66	2.42	2.55 5.2
Intersection	#31 E Bays	****** hore D ******	r/Emba	arcade	****** ro Rd ******	*****	*****	*****	*****	*****	******
Approach: Movement:	North Bo L - T	und - R	Soi L	uth Bo - T	und - R	Ea L -	ast Bo - T	und - R	We L -	st Bo	und - R
Run Speed: NumOfStops:	30 M 22.3 15.7	PH 10.0	9.9	30 M 30.4	PH 194.1	128.0	30 M 138	IPH 56.1	3.6	30 M 37.9	PH 1.7
Name: vear 19	95 composi	te fle	et.								

Name: year 1995 comp	osite fle	eet	
Fuel Consumption:	134.026	pounds	
	21.712	gallons	
Carbon Dioxide:	418.160	pounds	
Carbon Monoxide:	34.680	pounds	
Hydrocarbons:	6.940	pounds	
Nitrogen Oxides:	1.032	pounds	
Name: year 2000 comp	osite flo	eet	
Fuel Consumption:	134.026	pounds	
	21.712	gallons	
Carbon Dioxide:	418.160	pounds	
Carbon Monoxide:	34.680	pounds	
Hydrocarbons:	6.940	pounds	
Nitrogen Oxides:	1.032	pounds	
DISCLAIMER			

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.



Traffix 8.0.0715

	1.1	1.1	1.1	
Delay Adjustment Factor	Module:			
Coordinated: < < < < <	< < < < < < < <	< < No > > >	> > > > > > > > > >	> > > > > > >
Signal Type: < < < < <	< < < < < < <	Actuated	<pre>> > ></pre>	> > > > > > >
DelAdjFctr: 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.0	0 1.00 1.00 1.	00 1.00
Level Of Service	Detailed Computa	tion Report (HCM	12000 Queue Metho	od)
	2000 HCM Oper	ations Method		

Intersection #31 E Bayshore Dr/Embarcadero Rd Movement: L - T - R L - T - R L - T - R L - T - R Green/Cycle: 0.11 0.11 0.39 0.39 0.74 0.35 0.35 0.46 0.05 0.05 0.05 ArrivalType: 3 3 3 ProgRator: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	******	*****	*****	FU	ture \	/olume *****	* Alter	native	≘ *****	*****	*****	*****	*****
Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L T - R L T R L T R R T R C C C C C C C C C C C C C C	Intersection	#31 H	Bays	hore I	r/Emba	arcade	ro Rd	*****		*****	*****	*****	*****
Creen/Cycle: 0.11 0.11 0.11 0.39 0.39 0.74 0.35 0.35 0.46 0.05 0.05 0.05 ArrivalType: 3 3 3 3 3 3 3 3 ProgFactor: 1.00 0.00 </td <td>Approach: Movement:</td> <td>Noi L</td> <td>th Bo - T</td> <td>ound - R</td> <td>Sou L</td> <td>ith Bo - T</td> <td>und - R</td> <td>L</td> <td>ast Bo - T</td> <td>ound - R</td> <td>L</td> <td>est Bo - T</td> <td>und - R</td>	Approach: Movement:	Noi L	th Bo - T	ound - R	Sou L	ith Bo - T	und - R	L	ast Bo - T	ound - R	L	est Bo - T	und - R
ProgRator: 1.00 0.00 0.01 1.00	Green/Cycle: ArrivalType:	0.11	0.11	0.11	0.39	0.39	0.74	0.35	0.35	0.46	0.05	0.05	0.05
Joth%Factor: 1.18 1.19 1.18 1.19 1.14 1.17 1.15 1.18 1.20 1.19 1.19 HCM2K70thQ: 9.6 6.5 1.19 7.9 7.1 40.5 16.9 32.5 10.6 0.8 5.0 2.5 HCM2K70thQ: 9.6 6.5 1.19 7.9 7.1 40.5 16.9 32.5 10.6 0.8 5.0 2.5 HCM2K8FActor: 1.53 1.55 1.51 1.55 1.39 1.49 1.42 1.52 1.59 1.56 1.58 HCM2k8fthQ: 12.4 8.5 15.3 10.3 9.2 49.4 21.4 4.01 1.3 7.1 1.6 3.3 HCM2k96thQ: 1.46 1.59 1.50 1.66 1.79 1.72 1.76 HCM2k90thQ: 1.3.5 9.4 1.66 1.3 10.1 52.1 23.0 42.4 14.9 1.2 7.3 3.6	ProgFactor: 21: UpstreamVC: UpstreamAdj: EarlyArrAdj: 22: HCM2KQueue:	1.00 4.3 0.00 0.00 1.00 3.8 8.1	1.00 2.7 0.00 0.00 1.00 2.8 5.5	1.00 6.2 0.00 1.00 3.9 10.1	1.00 6.0 0.00 1.00 0.7 6.7	1.00 5.3 0.00 0.00 1.00 0.7 6.0	1.00 26.6 0.00 1.00 8.9 35.5	1.00 9.1 0.00 1.00 5.4 14.4	1.00 20.6 0.00 0.00 1.00 7.7 28.3	1.00 8.1 0.00 0.00 1.00 0.9 9.0	1.00 0.6 0.00 1.00 0.19 0.1 0.7	1.00 2.9 0.00 1.00 0.19 1.3 4.2	1.00 1.4 0.00 1.00 0.12 0.7 2.1
B5th%Factor: 1.53 1.55 1.51 1.54 1.55 1.39 1.49 1.42 1.52 1.59 1.56 1.58 HCM2k85thQ: 12.4 8.5 15.3 10.3 9.2 49.4 21.4 40.1 13.7 1.1 6.6 3.3	70th%Factor: HCM2k70thQ:	1.18 9.6	1.19 6.5	1.18 11.9	1.18 7.9	1.19 7.1	1.14 40.5	1.17 16.9	1.15 32.5	1.18 10.6	1.20	1.19 5.0	1.19 2.5
Joth§Pactor: 1.67 1.70 1.64 1.69 1.70 1.47 1.59 1.50 1.66 1.79 1.72 1.76 HCM2k90thQ: 13.5 9.4 16.6 11.3 10.1 52.1 23.0 42.4 14.9 1.2 7.3 3.6	85th%Factor: HCM2k85thQ:	1.53	1.55 8.5	1.51	1.54	1.55 9.2	1.39 49.4	1.49 21.4	1.42 40.1	1.52 13.7	1.59	1.56 6.6	1.58
95th%Factor: 1.88 1.94 1.84 1.91 1.93 1.58 1.77 1.62 1.86 2.08 1.97 2.03	90th%Factor: HCM2k90thQ:	1.67	1.70 9.4	1.64 16.6	1.69	1.70 10.1	1.47 52.1	1.59	1.50 42.4	1.66 14.9	1.79	1.72 7.3	1.76 3.6
HCM2k95thQ: 15.3 10.7 18.6 12.8 11.5 56.2 25.5 46.0 16.7 1.4 8.3 4.2	95th%Factor: HCM2k95thQ:	1.88	1.94 10.7	1.84 18.6	1.91	1.93 11.5	1.58	1.77	1.62 46.0	1.86	2.08	1.97 8.3	2.03
98th%Factor: 2.24 2.35 2.16 2.30 2.33 1.77 2.03 1.81 2.20 2.65 2.42 2.55 HCM2k98thQ: 18.1 13.0 21.8 15.4 13.9 62.6 29.3 51.3 19.8 1.8 10.2 5.3 FUEL Consumption and Emissions 2000 HCM Operations Method Future Volume Alternative	98th%Factor: HCM2k98thQ:	2.24 18.1	2.35 13.0	2.16 21.8 Fuel 200 Fu	2.30 15.4 Consur 0 HCM	2.33 13.9 nption Opera /olume	1.77 62.6 and E tions Alter	2.03 29.3 missio Methoo native	1.81 51.3 ons	2.20 19.8	2.65	2.42 10.2	2.55 5.3
**************************************	************** Intersection	***** #31 H	***** E Bays	hore I	***** r/Emba	****** arcade	****** ro Rd	*****	*****	*****	****	*****	*****
Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R	************** Approach: Movement:	Noi L -	th Bo - T	ound - R	***** Sou L -	1th Bo - T	****** und - R	***** Ea	****** ast Bo - T	ound - R	***** We L	****** est Bc - T	und - R
Run Speed: 30 MPH 30 MPH 30 MPH 30 MPH NumOfStops: 32.4 16.1 9.9 10.2 30.9 199.5 128.7 147 60.7 4.8 37.9 1.7	Run Speed: NumOfStops:	32.4	30 № 16.1	1PH 9.9	10.2	30 M 30.9	IPH 199.5	128.7	30 № 147	1PH 60.7	4.8	30 M 37.9	IPH 1.7
Name: year 1995 composite fleet Fuel Consumption: 148.282 pounds 24.022 gallons Carbon Dioxide: 462.639 pounds Carbon Morenido: 28.616 pounds	Name: year 19 Fuel Consumpt Carbon Dioxic	995 co tion: de:	omposi 14 2 46	te fle 8.282 4.022 2.639	et pounds gallor pounds	 3 15 3							

carbon browide.	402.055	pounda			
Carbon Monoxide:	38.616	pounds			
Hydrocarbons:	7.808	pounds			
Nitrogen Oxides:	1.118	pounds			
Name: year 2000 com	aposite fle	et	 	 	
Fuel Consumption:	148.282	pounds			
	24.022	gallons			
Carbon Dioxide:	462.639	pounds			
Carbon Monoxide:	38.616	pounds			
Hydrocarbons:	7.808	pounds			
Nitrogen Oxides:	1.118	pounds			
DISCLAIMER					

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements. -

Level Of Service Computation Report 2000 HCM Operations (alternative)									
Intersectio	n #31: E Bays	hore Dr/Emba	rcadero Rd	Cumulativ	e Aivi				
	F	inal Vol: 926*** Lanes: 1	Signal=Split/Rights 183 0 0	=Overlap 61 1 0					
Final Vol: 1	Signal=Spl anes: Rights=Ov	lit erlap	Vol Cnt D Cvcle Time (s	■ ate: n/a ec): 120	Signal=Split Rights=Include	Lanes:	Final Vol:		
561			Loss Time (s	ec): 12		0	8***		
654***			Critical	//C: 1.060	<u></u>	1 1	162		
	• 🔸		Avg Crit Del (sec/v	eh): 84.5	-	0			
392	1 式		Avg Delay (sec/v	eh): 73.0	¥	1	24		
	•		L.	OS: E	•				
		•	▲ 1	♠ ♦					
	F	Lanes: 1 ïnal Vol: 161***	0 0 71 Signal=Split/Rights	1 0 43 =Include					
Approach: Movement:	North Bound L - T - R	South Bound L - T - R	East Bound L - T - R	West Bound L - T - R					
Min. Green: Y+R:	0 0 0 0 4.0 4.0 4.0	0 0 0 0 4.0 4.0 4.0	0 0 0 0 4.0 4.0 4.0	0 0 0 0 4.0 4.0 4.0					
Volume Modul Base Vol: Growth Adj:	e: 123 69 43 1.00 1.00 1.00	60 182 926 1.00 1.00 1.00	561 630 368 1.00 1.00 1.00	19 162 8 1.00 1.00 1.00					
Initial Bse: Added Vol: PasserByVol:	123 69 43 38 2 0 0 0 0	60 182 926 1 1 0 0 0 0	561 630 368 0 24 24 0 0 0	19 162 8 5 0 0 0 0 0					
Initial Fut: User Adj: PHF Adj:	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	61 183 926 1.00 1.00 1.00 1.00 1.00 1.00	561 654 392 1.00 1.00 1.00 1.00 1.00 1.00	24 162 8 1.00 1.00 1.00 1.00 1.00 1.00 24 162					
Reduct Vol: Reduced Vol: PCE Adi:	101 71 43 0 0 0 161 71 43 1.00 1.00 1.00	0 0 0 61 183 926 1.00 1.00 1.00	0 0 0 561 654 392 1.00 1.00 1.00	0 0 0 24 162 8 1.00 1.00 1.00					
MLF Adj: FinalVolume:	1.00 1.00 1.00 161 71 43	1.00 1.00 1.00 61 183 926	1.00 1.00 1.00 561 654 392	1.00 1.00 1.00 24 162 8					
Saturation F Sat/Lane: Adjustment: Lanes:	low Module: 1900 1900 1900 0.62 0.41 0.94 1.00 0.79 0.21	1900 1900 1900 0.84 0.74 0.64 0.23 0.77 1.00	1900 1900 1900 0.41 0.93 0.85 1.98 1.02 1.00	1900 1900 1900 0.95 0.90 0.42 1.00 1.81 0.19					
Capacity Ana	1173 622 377	363 1088 1211	1539 1794 1615	1805 3077 152					
Vol/Sat: Crit Moves: Green/Cycle: Volume/Cap:	0.14 0.11 0.11 **** 0.13 0.13 0.13	0.17 0.17 0.76 **** 0.38 0.38 0.72 0.45 0.45 1.06	0.36 0.36 0.24	0.01 0.05 0.05 ****					
Uniform Del: IncremntDel: InitOueuDel:	52.2 51.3 51.3 90.0 45.3 45.3 0.0 0.0 0.0	28.0 28.0 16.7 0.6 0.6 47.8 0.0 0.0 0.0	39.4 39.4 22.0 44.2 44.2 0.6 0.0 0.0 0.0	54.9 57.0 57.0 1.6 88.0 88.0 0.0 0.0 0.0					
Delay Adj: Delay/Veh: User DelAdj:	1.00 1.00 1.00 142.3 96.7 96.7 1.00 1.00 1.00	1.00 1.00 1.00 28.6 28.6 64.5 1.00 1.00 1.00	1.00 1.00 1.00 83.5 83.5 22.6 1.00 1.00 1.00	1.00 1.00 1.00 56.5 145 145.1 1.00 1.00 1.00					
AdjDel/Veh: LOS by Move: HCM2kAvgQ:	142.3 96.7 96.7 F F F 10 6 10	28.6 28.6 64.5 C C E 7 7 45	83.5 83.5 22.6 F F C 17 34 10	56.5 145 145.1 E F F 1 5 2					
Note: Queue HCM Ops Adju	reported is the r sted Lane Utiliza	umber of cars per ution Module:							
Lanes: Lane Group: #LnsInGrps:	1 0 0 1 0 L RT RT 1 1 1	0 1 0 0 1 LT LT R 1 1 1	1 1 1 0 1 LT LT R 3 3 1	1 0 1 1 0 L RT RT 1 2 2					
HCM Ops Inpu Lane Width: CrsswalkWid:	t Saturation Adj 12 12 12 8	Module: 12 12 12 8	12 12 12 8	12 12 12 8					
<pre>% Hev Veh: Grade: Parking/Hr: Due Obs (Net)</pre>	0 0% No	0 0% No	0 0% No	0 0% No					
Area Type: Cnft Ped/Hr: ExclusiveRT:	0 < < < < < < < < 0 Include	: < < < < < < < < 0 0 Include	her >>>>>> 0 Include	0 > > > > > > > > > > > > > > > > > > >	>				
<pre>% RT Prtct: HCM Ops f(lt f(lt) Case:</pre>	0) Adj Case Module 1 xxxx xx××	0 : 4 4 xx××	0 4 4 xx××	0 1 xxxx xx××					
HCM Ops Satu Ln Wid Adj:	 ration Adj Module 1.00 1.00 1.00	 : 1.00 1.00 1.00	 1.00 1.00 1.00	 1.00 1.00 1.00					
Hev Veh Adj: Grade Adj: Parking Adj:	1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 xxxx xxxx 1.00	1.00 1.00 1.00 1.00 1.00 1.00 xxxx xxxx 1.00	1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00					
Bus Stp Adj: Area Adj: RT Adj:	xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 0.94 0.94	xxxx xxxx 1.00 1.00 1.00 1.00 xxxx xxxx 0.85	xxxx xxxx 1.00 1.00 1.00 1.00 xxxx xxxx 0.85	xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 0.99 0.99					
LT Adj: PedBike Adj: HCM Sat Adj: Usr Sat Adj:	0.95 XXXX XXXXX 1.00 1.00 1.00 0.95 0.94 0.94 0.65 0.44 1.00	0.99 0.99 XXXXX 1.00 1.00 1.00 0.99 0.99 0.85 0.85 0.75 0.75	0.98 0.98 XXXX 1.00 1.00 1.00 0.98 0.98 0.85 0.44 1.00 1.00	0.95 XXXX XXXXX 1.00 1.00 1.00 0.95 0.99 0.99 1.00 0.95 0.44					
MLF Sat Adj: Fnl Sat Adj:	1.00 1.00 1.00 0.62 0.41 0.94	0.85 0.75 0.75 1.00 1.00 1.00 0.84 0.74 0.64	0.95 0.95 1.00 0.41 0.93 0.85	1.00 0.95 0.44 1.00 0.95 0.95 0.95 0.90 0.42					

Traffix 8.0.0715

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	1.1	1.1	1.1	
Delay Adjustment Factor	Module:			
Coordinated: < < < < <	< < < < < < < <	< < No > > >	> > > > > > > > > >	> > > > > > >
Signal Type: < < < < <	< < < < < < <	Actuated	<pre>> > ></pre>	> > > > > > >
DelAdjFctr: 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.0	0 1.00 1.00 1.	00 1.00
Level Of Service	Detailed Computa	tion Report (HCM	12000 Queue Metho	od)
	2000 HCM Oper	ations Method		

			Fi	iture V	Volume	Alter	nativ	e				
*****	* * * * * *	*****	*****	*****	* * * * * *	*****	*****	*****	*****	****	* * * * * *	*****
Intersection	#31 #	E Bays	shore I	0r/Emba	arcade	ero Rd	*****	*****	******	*****	*****	*****
Approach:	Noi	th Bo	ound	Soi	uth Bo	ound	E	ast Bo	ound	W	est Bo	ound
Movement:	L ·	- т	- R	L ·	- т	- R	L	- т	- R	L	- т	- R
Green/Cycle:	0.13	0.13	0.13	0.38	0.38	0.72	0.34	0.34	0.47	0.05	0.05	0.05
ArrivalType:	1 00	3	1 00	1 00	3	1 00	1 00	3	1 00		3	1 00
Progractor: 01:	5.4	2.9	6.7	6.7	5.9	30.9	9.9	22.6	9.1	1.00	3.1	1.00
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
EarlvArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.19	0.19	0.12
02:	5.1	2.7	3.6	0.8	0.8	14.5	7.3	11.9	1.0	0.1	1.9	1.0
HCM2KQueue:	10.5	5.6	10.3	7.5	6.7	45.4	17.2	34.5	10.1	0.8	5.0	2.4
70th%Factor:	1 18	1 10	1 18	1 18	1 1 8	1 13	1 17	1 14	1 18	1 20	1 10	1 19
UCM2h70+b0:	12 2	6 7	12 1	1.10	7 0	E1 4	20 0	20 4	11 0	1.20	£ 0	2 0
							20.0					
85th%Factor:	1.51	1.55	1.51	1.53	1.54	1.37	1.47	1.40	1.51	1.59	1.55	1.58
HCM2k85thQ:	15.8	8.7	15.6	11.5	10.3	62.0	25.2	48.1	15.3	1.3	7.8	3.8
Onth&Factor:	1 64	1 70	1 64	1 68	1 69	1 44	1 57	1 47	1 64	1 78	1 71	1 75
HCM2k90thQ:	17.1	9.6	16.9	12.5	11.3	65.5	27.0	50.7	16.6	1.5	8.6	4.3
95th%Factor:	1.84	1.94	1.84	1.90	1.91	1.55	1.73	1.59	1.84	2.07	1.95	2.02
HCM2k95thQ:	19.2	10.9	19.0	14.2	12.8	70.3	29.7	54.8	18.6	1.7	9.8	4.9
98th%Factor:	2.15	2.35	2.15	2.26	2.30	1.73	1.97	1.77	2.16	2.64	2.38	2.53
HCM2k98thQ:	22.5	13.2	22.2	16.9	15.4	78.6	33.8	61.0	21.8	2.2	12.0	6.2
			Fuel	Consur	nptior	n and H	Emissi	ons				
			200	0 HCM	Opera	tions	Metho	d				
*********	*****	*****	۲۱ *****	1LUI'e \	******	* AILer	*****	e *****	******	****	*****	*****
Intersection	#31 H	Bays	shore I	Dr/Emba	arcade	ero Rd					*****	
Approach:	Noi	th Bo	ound	Sou	uth Bo	ound	E	ast Bo	ound	W	est Bo	ound
Movement:	L ·	- т	- R	L	- т	- R	L	- т	- R	L	- т	- R
Bun Crood:		20 1			20 1			20 1	 4DU		20 1	
NumOfStops:	40.6	17.4	10.6	11.4	34.3	274.3	144.8	169	68.2	5.8	40.6	2.0
Name: vear 1	995 00	mpogi	to fle									
Fuel Consumpt	tion:	20	06.249	pounds	5							
		3	33.412	gallor	ns							
Carbon Dioxid	de:	64	13.496	pounds	5							
Carbon Monox:	ide:	5	54.743	pounds	5							
Hydrocarbons	:	1	1.391	pounds	5							
Nitrogen Oxio	des:		1.463	pounds	3							
Name: vear 2	000 00	mnogi	te fle	et								
Fuel Consumpt	tion:	2021	16.249	nounds	-							
combump			22 412	gollos	-							

Fuel Consumption:	206.249	pounds
	33.412	gallons
Carbon Dioxide:	643.496	pounds
Carbon Monoxide:	54.743	pounds
Hydrocarbons:	11.391	pounds
Nitrogen Oxides:	1.463	pounds
DISCLAIMER		
mlas first second second second	and omit	aciona monauroa abould be used with

The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements. -

Le 2	2000 HCM Operatic Existing	AM				
Intersection #36: St Francis Dr/Embarcadero Rd						
Signal=Permit/Right: Final Vol: 41 10*** Lanes: 0 0 1!	s=Include 330 0 0					
Signal=Permit Final Vol: Lanes: Rights=Include Vol Cnt Da	ate: 5/27/2015	Signal=Permit Rights=Include	Lanes: Fir	nal Vol:		
38 1 - Cycle Time (sr	ec): 120		0	89		
0 Loss Time (so	ec): 0		1			
	//C: 0.582		- 1	941		
Avg Cht Dei (sec/ve	en): 21.4	T T	- 0			
5 0 Avg Delay (sec/va	eh): 20.8	. €	1	17		
	T (*					
Lanes: 0 0 1! Final Vol: 9 15 Signal=Permit/Right	0 0 27 s=Include					
Approach: North Bound South Bound East Bound	West Bound					
MOVEMENT: L T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R L - T R L - T - R L T - R L T R L	L - T - R 0 0 0					
Int. 4.0 <td>4.0 4.0 4.0 </td> <td></td> <td></td> <td></td> <td></td> <td></td>	4.0 4.0 4.0 					
Base V01: 9 10 10 100 10 100 <td>1,00 1.00 1.00 17 941 89</td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,00 1.00 1.00 17 941 89					
PasserByVol: 0 0 0 0 0 0 0 0 0 0 Initial Fut: 9 15 27 330 10 41 38 1074 5 User 4di: 1 00 100 100 100 100 100 100 100 100	0 0 0 0 17 941 89					
PHF Adj: 1.00	1.00 1.00 1.00 17 941 89 0 0 0					
Reduced Vol: 9 15 27 330 10 41 38 1074 5 PCE Adj: 1.00 <td>17 941 89 1.00 1.00 1.00 1.00 1.00 1.00</td> <td></td> <td></td> <td></td> <td></td> <td></td>	17 941 89 1.00 1.00 1.00 1.00 1.00 1.00					
FinalVolume: 9 15 27 330 10 41 38 1074 5 	17 941 89					
Sat/Lane: 1900	1900 1900 1900 0.15 0.94 0.94 1.00 1.83 0.17					
Final Sat.: 293 489 879 1165 35 145 313 3590 17 	282 3255 308					
Vol:Sat: 0.03 0.03 0.03 0.08 0.28 0.28 0.12 0.30 0.30 Crit Moves: **** **** Green/Cycle: 0.49 0.49 0.49 0.49 0.49 0.51 0.51 0.51	0.51 0.51 0.51					
Volume/Cap: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	0.12 0.56 0.56 15.1 20.0 20.0 0.4 0.4 0.4					
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 1.00 15.5 20.4 20.4					
AdjDel/Veh: 16.4 16.4 23.4 23.4 23.4 26.9 20.7 20.7 LOS by Move: B B C C C B C<	15.5 20.4 20.4 B C C 0 14 14					
Note: Queue reported is the number of cars per lane.						
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1 0 1 1 0 L RT RT 1 2 2					
	12 12 12					
CrsswalkWld: 8 8 8 % Hev Veh: 0 0 0 Grade: 0% 0% 0%	8 0 0%					
Parking/HF: NO NO NO Bus Stp/HF: 0 0 0 Area Type: < < < < < < < < < < < < < < < < < < <	NO 0 > > > > > > > > > > >	>				
Chilt PEC/HI. 3 19 ExclusiveRT: Include Include % RT Prtct: 0 0	Include 0					
HCM Ops f(lt) Adj Case Module: f(lt) Case: 5 5 5 5 5 2 xxxx xxxx 	2 xxxx xxxx					
HCM Ops Saturation Adj Module: Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 1.00 1.00 1.00 1.00					
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00					
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 1.00 xxxx 0.99 0.99 0.15 xxxx xxxx					
PROBLE AGJ: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 1.00 0.15 0.99 0.99 1.00 1.00 1.00					
Traffix 8.0.0715 Conv	right (c) 2008 Dowl	ling Associates. Inc		Lic	ensed to Hexadon Tra	ins., San Jose

Future Volume Alte:	rnative			
***************************************	*******	******	* * * * * * * * * *	* * * * * * * *
Intersection #36 St Francis Dr/Embarcadero Rd	*******	******	*******	******
Approach:	North	South	East	West
Cycle Length, C:	120	120	120	120
Actual Green Time Per Lane Group, G:	54.35	54.35	57.65	57.65
Effective Green Time Per Lane Group, g:	58.35	58.35	61.65	61.65
Opposing Effective Green Time, go:	58.35	58.35	61.65	61.65
Number Of Opposing Lanes, No:	1	1	2	2
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	9	330	38	17
Proportion of Left Turns in Lane Group, Plt:	0.18	0.87	1.00	1.00
Proportion of Left Turns in Opp Flow, Plto:	0.87	0.18	XXXXXX	XXXXXX
Left Turns Per Cycle, LTC:	0.30	11.00	1.27	0.57
Adjusted Opposing Flow Rate, Vo:	381	51	1030	1079
Opposing Flow Per Lane Per Cycle, Volc:	12.70	1.70	18.07	18.93
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00
Eff grn until arrival of left-turn car, gf:	36.31	1.12	0.00	0.00
Opposing Queue Ratio, qro:	0.51	0.51	0.49	0.49
Eff grn blocked by opposing queue, gq:	16.91	3.65	25.15	26.90
Eff grn while left turns filter thru, gu:	22.04	54.70	36.50	34.75
Max opposing cars arriving during gq-gf, n:	0.00	1.26	XXXXXX	XXXXXX
Proportion of Opposing Thru & RT cars, ptho:	0.13	0.82	XXXXXX	XXXXXX
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.23	0.20
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00
Through-car Equivalents, ell:	2.06	1.48	3.59	3.78
Single Lane Through-car Equivalents, el2:	1.00	1.23	XXXXXX	XXXXXX
Minimum Left Turn Adjustment Factor, fmin:	0.04	0.06	0.06	0.06
Single Lane Left Turn Adjustment Factor, fm:	0.94	0.72	0.16	0.15
Left Turn Adjustment Factor, flt:	0.94	0.72	0.16	0.15
Level Of Service Detailed Computation	Report (Ped/Bike	Sat Adj)	
2000 HCM Operations	Method			
Future Volume Alte:	rnative			
***************************************	*******	*******	*******	*******

		*******	********	*******	*********	******	********	
Intersection	#36 St H	rancis l	Dr/Embarca	adero Rd				
*********	*******	******	********	******	*******	******	********	******
Approach:	North	Bound	South	Bound	East H	Bound	West B	Bound
Movement:	_ L - 1	? – R	L - 1	r – R	L - T	- R	L - T	- R
CrsswalkWid:	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
CrsswalkLen:	60.00	60.00	60.00	60.00	24.00	24.00	24.00	24.00
MinPeagrn:	18.23	18.20	18.20	18.23	9.29	9.37	9.37	9.29
Peagrn:	58.35	58.35	58.35	58.35	61.65	61.65	61.65	61.65
Peavolume:	3	0	U	5	10	19	19	10
PedFlowRate:	6	0	0	6	19	37	37	19
BikeVol:	0	0	0	0	0	0	0	0
BikeFlwRate:	0	0	0	0	0	0	0	0
Peauce:	0.003	0.000	0.000	0.003	0.010	0.018	0.018	0.010
BikeOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedAfterOcc:	0.003	0.000	0.000	0.000	0.008	0.000	0.014	0.000
rocc:	0.002	0.000	0.000	0.003	0.002	0.018	0.003	0.010
TurnVehAdj:	0.999	1.000	1.000	0.998	0.998	0.982	0.997	0.990
Prt:	0.000	0.529	0.000	0.108	0.000	0.005	0.000	0.086
Prta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plt:	0.176	0.000	0.866	0.000	1.000	0.000	1.000	0.000
Plta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedBike Adj:	1.000	1.000	1.000	1.000	0.998	1.000	0.997	0.999
Level	Of Servio	e Detai	led Comput	ation Re	eport (HCM2	2000 Que	ue Method)	
		20	DO HCM Ope	erations	Method			
		Fi	uture Volu	ume Alter	rnative			
*******	*******	******	********	******	*******	******	********	******
Intersection	#36 St H	rancis 1	Dr/Embarca	adero Rd				
*******	******	******	********	******	********	******	********	******
Approach:	North	Bound	South	Bound	East H	Bound	West B	Bound
Movement:	L - 1	2 – R	L - 1	r – R	L - T	- R	L - T	- R
							1	
Green/Cycle:	0.49 0.4	19 0.49	0.49 0.4	19 0.49	0.51 0.53	0.51	0.51 0.51	0.51
ArrivalType:		3		3	1	3	3	3
ProgFactor:	1.00 1.0	0 1.00	1.00 1.0	00 1.00	1.00 1.00	1.00	1.00 1.00	1.00
Q1:	0.9 0.	.9 0.9	9.1 9.	1 9.1	0.7 13.3	13.1	0.3 12.4	12.3
UpstreamVC:	0.00 0.0	0.00	0.00 0.0	0.00	0.00 0.00	0.00	0.00 0.00	0.00
UpstreamAdj:	0.00 0.0	0.00	0.00 0.0	0.00	0.00 0.00	0.00	0.00 0.00	0.00
EarlyArrAdj:	1.00 1.0	0 1.00	1.00 1.0	00 1.00	1.00 1.00	1.00	1.00 1.00	1.00
Q2:	0.1 0	.1 0.1	1.3 1.	3 1.3	0.3 1.4	1.4	0.1 1.3	3 1.3
HCM2KQueue:	1.0 1	.0 1.0	10.4 10.	4 10.4	1.0 14.5	5 14.5	0.4 13.6	5 13.6
70th%Factor:	1.20 1.2	20 1.20	1.18 1.1	.8 1.18	1.20 1.1	1.17	1.20 1.17	1.17
HCM2k70thQ:	1.2 1	.2 1.2	12.3 12.	3 12.3	1.2 16.9	16.9	0.5 15.9	15.9
85th%Factor:	1.59 1.5	59 1.59	1.51 1.5	51 1.51	1.59 1.49	1.49	1.60 1.49	1.49
HCM2k85thQ:	1.5 1	.5 1.5	15.8 15.	8 15.8	1.6 21.5	5 21.5	0.7 20.3	3 20.3
90th%Factor:	1.78 1.1	78 1.78	1.64 1.6	54 1.64	1.78 1.59	1.59	1.79 1.60	1.60
HCM2k90thQ:	1.7 1	.7 1.7	17.1 17.	1 17.1	1.8 23.3	23.1	0.8 21.8	3 21.8
95th%Factor:	2.07 2.0	07 2.07	1.84 1.8	34 1.84	2.07 1.7	1.77	2.09 1.78	3 1.78
HCM2k95thQ:	2.0 2	.0 2.0	19.2 19.	2 19.2	2.1 25.6	5 25.6	0.9 24.3	3 24.2
98th%Factor:	2.63 2.6	53 2.63	2.15 2.1	5 2.15	2.63 2.03	3 2.03	2.67 2.05	5 2.05
HCM2k98thQ:	2.5 2	.5 2.5	22.4 22.	4 22.4	2.6 29.4	29.4	1.1 27.9	27.9
		Fuel	Consumpti	on and H	Emissions			
		20	00 HCM Ope	erations	Method			
		F	uture Volu	ume Alter	native			
*****	******	******	********	******	*******	******	*******	******
Intersection	#36 St H	francis 1	Dr/Embarca	adero Rd				
******	******	******	*******	******	******	******	*******	******
Approach:	North	Bound	South	Bound	East H	Bound	West H	Bound
Movement:	L - 1	г – R	L - 1	- R	L - T	- R	L - T	- R
Run Speed:	30) MPH	30	MPH	30	MPH	30	MPH
NumOfStops:	1.2 2	0 3.6	59.1 1.	8 7.3	5.3 186	5 0.9	2.2 161	15.2
Name: vear 1	995 compo	site fl	eet					
Fuel Consump	tion:	69.024	pounds					
		11.182	gallons					
	- o f	215.356	pounds					
Carbon Dioxi	4 Y T 1 Y	16 610	pounds					
Carbon Dioxi	ide:		- Junus					
Carbon Dioxi Carbon Monox	ide:	2 04=	nounde					
Carbon Dioxi Carbon Monox Hydrocarbons	ide: :	2.945	pounds					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxid	ide: : des:	2.945	pounds pounds					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxi Name: year 2	ide: : des:	2.945 0.628	pounds pounds 					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxi Name: year 2 Fuel Concurrent	ide: : des: 	2.945 0.628	pounds pounds eet					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxi Name: year 2 Fuel Consump	ide: : des: D00 compo tion:	2.945 0.628 osite flo	pounds pounds eet pounds					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxi 	ide: : des: 	2.945 0.628 osite flo 69.024 11.182	pounds pounds eet pounds gallons					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxi 	de: : des: 000 compo tion: de:	2.945 0.628 osite flo 69.024 11.182 215.356	pounds pounds eet pounds gallons pounds					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxi 	ide: : des: D00 compo tion: de: ide:	2.945 0.628 0.628 0.628 0.628 0.628 0.628 0.024 11.182 215.356 16.610	pounds pounds eet pounds gallons pounds pounds					
Carbon Dioxi Carbon Monox Hydrocarbons Nitrogen Oxi 	ide: : des: 000 compo tion: de: ide: :	2.945 0.628 0.628 0.628 11.182 215.356 16.610 2.945	pounds pounds eet pounds gallons pounds pounds pounds					

Page 21-10

DISCLAIMER The fuel consumption and emissions measures should be used with Mon Feb 08 caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

-

Level Of Service C 2000 HCM Opera Backarc	omputation Report tions (alternative) und AM
Intersection #36: St Francis Dr/Embarcadero Rd	
Signal=Permit/Rights=Include	
Final Vol: 51 11*** 346 Lanes: 0 0 1! 0 0	
< +↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	•
Signal=Permit Final Vol: Lanes: Rights=Include Vol Cnt Date: n/a	Signal=Permit Rights=Include Lanes: Final Vol:
51 1 Cycle Time (sec): 120	0 89
Loss Time (sec): 0	▲
1089*** 1 Critical V/C: 0.606	1 952
1 Avg Crit Del (sec/veh): 22.4	٥
5 0 Avg Delay (sec/veh): 21.9	1 17
▼ LOS: C	•
< +↑ ↑ ↓	
ا ا ا ۲ Lanes: 0 0 1! 0 0	
Final Vol: 9 16 27 Signal=Permit/Rights=Include	
Approach: North Bound South Bound East Bound West Bound Movement: I T R. I T R. I T R. I T R.	
Min. Green: 0 <td< td=""><td>- 0</td></td<>	- 0
Volume Module:	~- _
Base vol. 9 16 27 346 11 51 1009 5 17 952 6 Growth Adj: 1.00	9 0 9
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 9
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 0 9
Reduct Vol: 0 <th< td=""><td>0 9 0</td></th<>	0 9 0
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 9 - 1
Saturation Flow Module:	0
Lanes: 0.17 0.31 0.52 0.85 0.03 0.12 1.00 1.99 0.01 1.00 1.83 0.1 Final Sat.: 287 511 862 1142 36 168 295 3590 16 262 3258 30	7 5
Capacity Analysis Module: Vol/Sat: 0.03 0.03 0.03 0.30 0.30 0.30 0.17 0.30 0.30 0.06 0.29 0.2	9
Crit Moves: Green/Cycle: 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5	0
Uniform Del: 15.5 15.5 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 18.1 21.5 21.5 21.5 18.1 21.5 21.5 21.5 21.5 21.5 21.5 21.5	2 5 0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 7 0
AdjDel/Veh: 15.5 15.5 23.1 23.1 19.5 22.1 24.1 16.5 21.7 21. LOS by Move: B B C C C B C C B C C B C C A D <	7 C 4
Note: Queue reported is the number of cars per lane.	-
Lanes: 0 0 1! 0 0 0 1! 0 0 1 0 1 0 1 0 1 0 1 0	Ţ
HCM Ops Input Saturation Adj Module:	
Lane width: 12 12 12 12 12 12 12 12 12 12 12 12 12	2
Grade: 0% 0% 0% Parking/Hr: No No No Bus Stp/Hr: 0 0 0	
Area Type: < < < < < < < < < < < < < < < < < < <	>>
<pre>% RT Prtct: 0 0 0 0 </pre>	-1
Image: 5 5 5 2 XXXX 2 XXXXX 2 XXXX 2 XXXX <	x -
Lew Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	U 0 0
Area Adj: 1.00	0 9 ×
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	
usr sat Aaj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	u 5 4
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 Delay Adjustment Factor Module:
 Incorrect Conditional Condite Conditional Conditional Conditional Condite Cond

Future Volume Alte:	rnative				
***************************************	*******	*******	*******	******	
Intersection #36 St Francis Dr/Embarcadero Rd	* * * * * * * * * *	******	* * * * * * * * * *	* * * * * * * *	
Approach:	North	South	East	West	
Cycle Length, C:	120	120	120	120	
Actual Green Time Per Lane Group, G:	55.96	55.96	56.04	56.04	
Effective Green Time Per Lane Group, g:	59.96	59.96	60.04	60.04	
Opposing Effective Green Time, go:	59.96	59.96	60.04	60.04	
Number Of Opposing Lanes, No:	1	1	2	2	
Number Of Lanes In Lane Group, N:	1	1	1	1	
Adjusted Left-Turn Flow Rate, Vlt:	9	346	51	17	
Proportion of Left Turns in Lane Group, Plt:	0.17	0.85	1.00	1.00	
Proportion of Left Turns in Opp Flow, Plto:	0.85	0.17	XXXXXX	XXXXXX	
Left Turns Per Cycle, LTC:	0.30	11.53	1.70	0.57	
Adjusted Opposing Flow Rate, Vo:	408	52	1041	1094	
Opposing Flow Per Lane Per Cycle, Volc:	13.60	1.73	18.26	19.19	
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00	
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00	
Eff grn until arrival of left-turn car, gf:	37.39	1.02	0.00	0.00	
Opposing Queue Ratio, qro:	0.50	0.50	0.50	0.50	
Eff grn blocked by opposing queue, gq:	17.32	3.61	26.24	28.20	
Eff grn while left turns filter thru, gu:	22.57	56.35	33.80	31.84	
Max opposing cars arriving during gq-gf, n:	0.00	1.30	XXXXXX	XXXXXX	
Proportion of Opposing Thru & RT cars, ptho:	0.15	0.83	XXXXXX	XXXXXX	
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.22	0.19	
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00	
Through-car Equivalents, ell:	2.12	1.48	3.64	3.83	
Single Lane Through-car Equivalents, el2:	1.00	1.26	XXXXXX	XXXXXX	
Minimum Left Turn Adjustment Factor, fmin:	0.04	0.06	0.07	0.07	
Single Lane Left Turn Adjustment Factor, fm:	0.94	0.72	0.15	0.14	
Left Turn Adjustment Factor, flt:	0.94	0.72	0.15	0.14	
Level Of Service Detailed Computation Re	eport (HCM	12000 Quei	ue Method)	
2000 HCM Operations	Method				
Future Volume Alte:	rnative				
***************************************	* * * * * * * * * *	*******	* * * * * * * * * *	*******	

Intersection	#36 8	St Fra	ncis D	r/Emba	arcade	co Rd	*****	*****	*****	*********	*****
Approach:	Noi	th Bo	und	Sou	ith Bo	ind	Ea	ast Bo	und	West Bo	und
Movement:	L ·	- т	- R	L -	- т	R	L -	- т	- R	L - T	- R
Green/Cycle:	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50 0.50	0.50
ArrivalType:	1 00	3	1 00	1 00	3	1 00	1 00	3	1 00	3	1 00
Progractor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12 0	12 0	1.00 1.00	12.00
UnstreamVC:	0.9	0.9	0.9	0 00	0 00	0 00	0 00	0 00	0 00	0.0 12.9	0 00
UpstreamAdi:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00 1.00	1.00
Q2:	0.1	0.1	0.1	1.5	1.5	1.5	0.5	1.5	1.5	0.1 1.4	1.4
HCM2KQueue:	1.0	1.0	1.0	11.2	11.2	11.2	1.5	15.3	15.3	0.5 14.3	14.3
70th%Factor:	1.20	1.20	1.20	1.18	1.18	1.18	1.20	1.17	1.17	1.20 1.17	1.17
	1.2	1.2		13.2	13.2		1	17.0			
85th%Factor:	1.59	1.59	1.59	1.51	1.51	1.51	1.59	1.48	1.48	1.60 1.49	1.49
HCM2k85thQ:	1.5	1.5	1.5	16.9	16.9	16.9	2.4	22.6	22.6	0.7 21.2	21.2
90th%Factor:	1.78	1.78	1.78	1.63	1.63	1.63	1.77	1.59	1.59	1.79 1.60	1.60
HCM2k90thQ:	1.7	1.7	1.7	18.3	18.3	18.3	2.7	24.2	24.2	0.8 22.8	22.8
0Eth%Eastor:	2 07	2 07	2 07	1 02	1 0 2	1 0 2	2 05	1 76	1 76	2 00 1 77	1 77
HCM2k95th0:	2.07	2.07	2.07	20 5	20 5	20 5	3 1	26 8	26 8	0 9 25 3	25 3
98th%Factor:	2.63	2.63	2.63	2.12	2.12	2.12	2.59	2.01	2.01	2.67 2.03	2.03
HCM2k98thQ:	2.5	2.5	2.5	23.8	23.8	23.8	4.0	30.7	30.7	1.2 29.0	29.0
			Fuel	Consur	nption	and E	missio	ons			
			200	0 HCM	Operat	ions	Method	1			
*****	*****	*****	Fu *****	*****	/01ume *****	AILEE	*****	= * * * * * * *	*****	******	*****
Intersection	#36 \$	St Fra	ncis D	r/Emba	arcade	co Rd					
*********	*****	*****	*****	****	*****	*****	* * * * * *	*****	* * * * * *	* * * * * * * * * *	*****
Approach:	Noi	th Bo	und	Sou	ith Bo	ind	Ea	ast Bo	und	West Bo	ound
Movement:	L -	- T	- R	L -	- T -	- R	L -	- T -	- R	L - T	- R
					20 M			20 M			
NumOfStong:	1 2	30 M	2 5	62 1	2 0	2H 0.2	7 7	105	PH 0 0	2 2 160	1F 7
		2.1 			2.0			195		2.3 108	
Name: year 19	995 co	omposi	te fle	et							
Fuel Consumpt	ion:	7	2.946	pounds	3						
		1	1.817	gallor	ıs						
Carbon Dioxic	ie:	22	7.593	pounds	3						

	2
227.593	pounds
17.641	pounds
3.153	pounds
0.659	pounds
posite fle	eet
72.946	pounds
11 017	callone
11.01/	garrons
227.593	pounds
227.593 17.641	pounds pounds
227.593 17.641 3.153	pounds pounds pounds
227.593 17.641 3.153 0.659	pounds pounds pounds pounds
227.593 17.641 3.153 0.659	pounds pounds pounds pounds
	227.593 17.641 3.153 0.659 posite flo 72.946

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Background + Project AM								
Intersection #36: St Francis Dr/Embarcadero Rd								
Signal=Permit/Rights=Include								
Final Vol: 51 11*** 346 Lanes: 0 0 1! 0 0								
Signal=Permit Signal=Permit								
Final Vol: Lanes: Rights=Include Vol Cht Date: n/a Rights=Include Lanes: Final Vol: Cycle Time (sec): 120								
51 1 0 89								
0 1 1095*** 1 Critical V/C: 0.608 1 957								
1 Avg Crit Del (sec/veh): 22.4 0								
5 0 Ava Delay (sec/veh): 21.8 1 17								
↑ ↑ T P* C								
Lanes: 0 0 1! 0 0 Final Vol: 9 16 27								
Signal=Permit/Rights=Include								
Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R								
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
Aulter VII: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
Reduct Vol: 0 0 0 0 0 0 0 Reduced Vol: 9 16 27 346 11 51 1095 5 17 957 89 PCE Adi: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00								
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
Saturation Flow Module: Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190								
Acjustment: 0.87 0.87 0.71 0.71 0.71 0.71 0.75 0.95 0.95 0.14 0.94 0.94 Lanes: 0.17 0.31 0.52 0.85 0.03 0.12 1.00 1.99 0.01 1.00 1.83 0.17 Final Sat.: 287 511 862 1142 36 168 293 3590 16 260 3260 303								
Crit Moves: **** **** Green/Cycle: 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.5								
Uniform Del: 15.6 15.6 15.6 21.7 21.7 21.7 18.0 21.4 21.4 15.9 21.1 21.1 IncrementDel: 0.0 0.0 0.0 1.6 1.6 1.6 1.4 0.6 0.6 0.5 0.5 0.5								
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
HCM2kAvgQ: 1 1 1 11 11 11 2 15 15 0 14 14 Note: Queue reported is the number of cars per lane.								
HCM Ops Adjusted Lane Utilization Module: Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 0 1 0 1 0 1								
HansInGross: 1 1 1 1 1 1 2 2 1 2 2 								
HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12 12								
% Hev Veh: 0 0 0 Grade: 0% 0% 0% Parking/Hr: No No No								
Bus Stp/Hr: 0 0 0 Area Type: < < < < < < < < < < < < < < < < < < <								
ExclusiveRT: Include Include Include % RT Prtct: 0 0 0 0 0								
Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00								
RI RAJ. 0.95 0.95 0.95 0.95 0.96 0.96 0.96 XXXX 1.00 1.00 XXXX 0.99 0.99 IT Adj: 0.94 0.94 0.94 0.72 0.72 0.72 0.75 XXXX XXXXXX 0.14 XXXX XXXXX PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
HCM Sat Adj: 0.87 0.87 0.87 0.71 0.71 0.71 0.71 0.15 1.00 1.00 0.14 0.99 0.99 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0								
Fnl Sat Adj: 0.87 0.87 0.71 0.71 0.15 0.95 0.14 0.94 Traffix 8.0.0715 Copyright (c) 2008 Dowling Associates, Inc.	Licensed to Hexagon Trans., San Jose							

Future Volume Alternative								
*****	*******	*******	********	******				
Intersection #36 St Francis Dr/Embarcadero Rd								
***********	********	*******	********	******				
Approach:	North	South	East	West				
Cycle Length, C:	120	120	120	120				
Actual Green Time Per Lane Group, G:	55.80	55.80	56.20	56.20				
Effective Green Time Per Lane Group, g:	59.80	59.80	60.20	60.20				
Opposing Effective Green Time, go:	59.80	59.80	60.20	60.20				
Number Of Opposing Lanes, No:	1	1	2	2				
Number Of Lanes In Lane Group, N:	1	1	1	1				
Adjusted Left-Turn Flow Rate, Vlt:	9	346	51	17				
Proportion of Left Turns in Lane Group, Plt:	0.17	0.85	1.00	1.00				
Proportion of Left Turns in Opp Flow, Plto:	0.85	0.17	XXXXXX	XXXXXX				
Left Turns Per Cycle, LTC:	0.30	11.53	1.70	0.57				
Adjusted Opposing Flow Rate, Vo:	408	52	1046	1100				
Opposing Flow Per Lane Per Cycle, Volc:	13.60	1.73	18.35	19.30				
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00				
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00				
Eff grn until arrival of left-turn car, gf:	37.28	1.02	0.00	0.00				
Opposing Queue Ratio, gro:	0.50	0.50	0.50	0.50				
Eff grn blocked by opposing gueue, gg:	17.37	3.62	26.35	28.35				
Eff grn while left turns filter thru, gu:	22.52	56.18	33.85	31.85				
Max opposing cars arriving during gg-gf, n:	0.00	1.30	XXXXXX	XXXXXX				
Proportion of Opposing Thru & RT cars, ptho:	0.15	0.83	XXXXXX	XXXXXX				
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.22	0.19				
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00				
Through-car Equivalents, ell:	2.12	1.48	3.65	3.85				
Single Lane Through-car Equivalents, el2:	1.00	1.26	XXXXXX	XXXXXX				
Minimum Left Turn Adjustment Factor, fmin:	0.04	0.06	0.07	0.07				
Single Lane Left Turn Adjustment Factor, fm:	0.94	0.72	0.15	0.14				
Left Turn Adjustment Factor, flt:	0.94	0.72	0.15	0.14				
Level Of Service Detailed Computation Re	eport (HCM	12000 Quei	ue Method))				
2000 HCM Operations	Method	_						
Future Volume Alter	native							
***************************************	*******	*******	*******	******				

Intersection	#36 St Fr	ancis I ******	Dr/Emba	arcade *****	ro Rd *****	*****	*****	*****	******	******
Approach: Movement:	North B L - T	ound - R	Sou L -	uth Bo - T	und - R	Ea L -	ast Bo - T	und - R	West L L - T	3ound - R
Green/Cycle: ArrivalType: ProgFactor: Q1: UpstreamVC: UpstreamAdj: EarlyArrAdj: Q2: HCM2KQueue:	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.50 1.00 0.9 0.00 0.00 1.00 0.1 1.0	0.50 1.00 9.8 0.00 0.00 1.00 1.5 11.3	0.50 3 1.00 9.8 0.00 0.00 1.00 1.5 11.3	0.50 1.00 9.8 0.00 0.00 1.00 1.5 11.3	0.50 1.00 1.0 0.00 0.00 1.00 0.5 1.5	0.50 3 1.00 13.8 0.00 0.00 1.00 1.5 15.3	0.50 1.00 13.8 0.00 0.00 1.00 1.5 15.3	0.50 0.50 1.00 1.00 0.3 12.9 0.00 0.00 0.00 0.00 1.00 1.00 0.1 1.0 0.5 14.5) 0.50) 1.00) 12.9) 0.00) 0.00) 1.00 4 1.4 3 14.3
70th%Factor: HCM2k70thQ:	1.20 1.20 1.20 1.2	1.20	1.18	1.18 13.3	1.18 13.3	1.20	1.17 17.9	1.17 17.9	1.20 1.1	/ 1.17 / 16.7
85th%Factor: HCM2k85thQ:	1.59 1.59 1.5 1.5	1.59	1.51	1.51 17.0	1.51	1.59	1.48 22.7	1.48	1.60 1.4) 1.49 3 21.3
90th%Factor: HCM2k90thQ:	1.78 1.78 1.78 1.7	1.78	1.63	1.63 18.3	1.63	1.77	1.59 24.3	1.59 24.3	1.79 1.6) 1.60
95th%Factor: HCM2k95thQ:	2.07 2.07 2.0 2.0	2.07	1.82	1.82 20.5	1.82	2.05	1.76 26.9	1.76 26.9	2.09 1.7	/ 1.77 1 25.4
98th%Factor: HCM2k98thQ:	2.63 2.63 2.5 2.5	2.63 2.5 Fuel 200 Fu	2.12 23.9 Consur 0 HCM	2.12 23.9 nption Opera Volume	2.12 23.9 and E tions Alter	2.59 4.0 missic Method native	2.01 30.8 ons	2.01 30.8	2.67 2.0	3 2.03 L 29.1
<pre>************************************</pre>	#36 St Fr *********** North B L - T	****** ancis I ******* ound - R	Dr/Emba Sou	****** arcade ****** uth Bo - T	****** ****** und - R	****** ****** Ea	****** ****** ast Bo - T	****** ****** und - R	**************************************	******** 3ound – R
Run Speed: NumOfStops:	30 1.2 2.1	MPH 3.5	62.3	30 M 2.0	PH 9.2	7.7	30 M 196	0.9	30 2.3 16	MPH 3 15.7
Name: year 19 Fuel Consumpt	995 compos tion:	ite fle 73.193 11.857 28 362	et pounds gallor	5 15						

	11.007	garrono
Carbon Dioxide:	228.362	pounds
Carbon Monoxide:	17.698	pounds
Hydrocarbons:	3.163	pounds
Nitrogen Oxides:	0.662	pounds
Name: year 2000 com	mposite fle	et
Fuel Consumption:	73.193	pounds
	11.857	gallons
Carbon Dioxide:	228.362	pounds
Carbon Monoxide:	17.698	pounds
Hydrocarbons:	3.163	pounds
Nitrogen Oxides:	0.662	pounds
DTOOL & THED		

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

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		L	evel Of Service Cor 2000 HCM Operatio Cumulativ	nputation Report ons (alternative) re AM			
Intersection #36: St Fr	ancis Dr/Embar	cadero Rd	Cumulati	6 7 M			
		Signal=Permit/Righ	ts=Include				
	Lanes: 0	0 1!	0 0				
			.↓				
Signal= Final Vol: Lanes: Rights=	Permit Include	Vol Cnt E	• Date: n/a	Signal=Permit Rights=Include	Lanes:	Final Vol:	
54 1 🎐		Cycle Time (sec): 120	♦	0	95	
。 🙏		Loss Time (sec): 0	₹_	1		
1176*** 1		Critical	V/C: 0.654		1	1028	
1 🛨		Avg Crit Del (sec/	/eh): 23.6	★	0		
5 0 🥆		Avg Delay (sec/	/eh): 23.0	¥	1	18	
•		l	LOS: C	•			
	•		♠ ♦				
	Lanes: 0	0 1!	0 0				
	Final Vol: 10	17 Signal=Permit/Righ	29 ts=Include				
Approach: North Bound Movement: L - T -	South Bound R L - T - R	East Bound L - T - R	West Bound L - T - R				
Min. Green: 0 0 Y+R: 4.0 4.0 4		0 0 0 4.0 4.0	0 0 0 4.0 4.0 4.0				
Volume Module:		[
Growth Adj: 1.00 1.00 1. Initial Bse: 10 17	29 370 12 54 00 1.00 1.00 1.00 29 370 12 54	54 1170 5 1.00 1.00 1.00 54 1170 5	18 1023 95 1.00 1.00 1.00 18 1023 95				
Added Vol: 0 0 PasserByVol: 0 0 Initial Fut: 10 17	0 0 0 0 0 0 0 0 29 370 12 54	0 6 0 0 0 0 54 1176 5	0 5 0 0 0 0 18 1028 95				
User Adj: 1.00 1.00 1. PHF Adj: 1.00 1.00 1. PHF Volume: 10 17	00 1.00 1.00 1.00 00 1.00 1.00 1.00 29 370 12 54	1.00 1.00 1.00 1.00 1.00 1.00 54 1176 5	1.00 1.00 1.00 1.00 1.00 1.00 18 1028 95				
Reduct Vol: 0 0 Reduced Vol: 10 17 PCE Adj: 1.00 1.00 1.	0 0 0 0 29 370 12 54 00 1.00 1.00 1.00	0 0 0 54 1176 5 1.00 1.00 1.00	0 0 0 18 1028 95 1.00 1.00 1.00				
MLF Adj: 1.00 1.00 1. FinalVolume: 10 17	00 1.00 1.00 1.00 29 370 12 54	1.00 1.00 1.00 54 1176 5	1.00 1.00 1.00 18 1028 95				
Saturation Flow Module: Sat/Lane: 1900 1900 19 Adjustment: 0.87 0.87 0	00 1900 1900 1900 87 0 70 0 70 0 70	1900 1900 1900	1900 1900 1900				
Lanes: 0.18 0.30 0. Final Sat.: 294 500 8	52 0.85 0.03 0.12 53 1132 37 165	1.00 1.99 0.01 247 3591 15	1.00 1.83 0.17 215 3262 301				
Capacity Analysis Module: Vol/Sat: 0.03 0.03 0.	03 0.33 0.33 0.33	0.22 0.33 0.33	0.08 0.32 0.32				
Crit Moves: Green/Cycle: 0.50 0.50 0. Volume/Cap: 0.07 0.07 0.	50 0.50 0.50 0.50 07 0.65 0.65 0.65	0.50 0.50 0.50 0.44 0.65 0.65	0.50 0.50 0.50 0.17 0.63 0.63				
Uniform Del: 15.6 15.6 15 IncremntDel: 0.0 0.0 0 InitQueuDel: 0.0 0.0 0	.6 22.3 22.3 22.3 .0 2.4 2.4 2.4 .0 0.0 0.0 0.0	19.2 22.3 22.3 2.5 0.9 0.9 0.0 0.0 0.0	16.3 21.9 21.9 0.7 0.7 0.7 0.0 0.0 0.0				
Delay Adj: 1.00 1.00 1. Delay/Veh: 15.6 15.6 15 User DelAdj: 1.00 1.00 1.	00 1.00 1.00 1.00 .6 24.7 24.7 24.7 00 1.00 1.00 1.00	1.00 1.00 1.00 21.6 23.1 23.1 1.00 1.00 1.00	1.00 1.00 1.00 17.1 22.6 22.6 1.00 1.00 1.00				
AdjDel/Veh: 15.6 15.6 15 LOS by Move: B B HCM2kAvgO: 1 1	.6 24.7 24.7 24.7 B C C C 1 13 13 13	21.6 23.1 23.1 C C C 2 17 17	17.1 22.6 22.6 B C C 1 16 16				
Note: Queue reported is th	e number of cars pe	r lane.					
Lanes: 0 0 1! 0 Lane Group: LTR LTR L #LnsInGrps: 1 1	0 0 0 1! 0 0 TR LTR LTR LTR 1 1 1 1	1 0 1 1 0 L RT RT 1 2 2	1 0 1 1 0 L RT RT 1 2 2				
HCM Ops Input Saturation A Lane Width: 12 12	 dj Module: 12 12 12 12 12	12 12 12	12 12 12				
CrsswalkWid: 8 % Hev Veh: 0 Grade: 0%	 8 0	 8 0	8 0				
Parking/Hr: No Bus Stp/Hr: 0	No 0	No 0	No 0				
Area Type: < < < < < < < < < < < < < < < < < < <	< < < < < < < < < < < < < < 0 Include	Include	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	>			
6 KT PTCCT: 0 	0 ule:	U 	U 				
HCM Ops Saturation Adj Mod	> 5 5 5 ule:	2 XXXX XXXX	2 xxxx xxxx				
Ln Wid Adj: 1.00 1.00 1. Hev Veh Adj: 1.00 1.00 1. Grade Adj: 1.00 1.00 1.	00 1.00 1.00 1.00 00 1.00 1.00 1.00 00 1.00 1.	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00				
Parking Adj: 1.00 1.00 1. Bus Stp Adj: 1.00 1.00 1. Area Adj: 1.00 1.00 1	00 1.00 1.00 1.00 00 1.00 1.00 1.00 00 1.00 1.	xxxx 1.00 1.00 xxxx 1.00 1.00 1.00 1.00 1.00	xxxx 1.00 1.00 xxxx 1.00 1.00 1.00 1.00 1.00				
RT Adj: 0.93 0.93 0. LT Adj: 0.93 0.93 0. DedBike Adj: 1.00 1.00 1.00	93 0.98 0.98 0.98 93 0.71 0.71 0.71	xxxx 1.00 1.00 0.13 xxxx xxxxx	xxxx 0.99 0.99 0.11 xxxx xxxxx				
HCM Sat Adj: 0.87 0.87 0. USR Sat Adj: 1.00 1.00 1.	87 0.70 1.00 1.00 00 1.00 1.00 1.00	1.00 1.00 1.00 0.13 1.00 1.00 1.00 1.00 1.00	0.11 0.99 0.99 1.00 1.00 1.00				
MLF Sat Adj: 1.00 1.00 1. Fnl Sat Adj: 0.87 0.87 0.	00 1.00 1.00 1.00 87 0.70 0.70 0.70	1.00 0.95 0.95 0.13 0.95 0.95	1.00 0.95 0.95 0.11 0.94 0.94				

Euture Volume Alter	native			
***************************************	********	******	*******	******
Intersection #36 St Francis Dr/Embarcadero Rd	* * * * * * * * *	*******	*******	******
Approach:	North	South	East	West
Cycle Length, C:	120	120	120	120
Actual Green Time Per Lane Group, G:	55.93	55.93	56.07	56.07
Effective Green Time Per Lane Group, g:	59.93	59.93	60.07	60.07
Opposing Effective Green Time, go:	59.93	59.93	60.07	60.07
Number Of Opposing Lanes, No:	1	1	2	2
Number Of Lanes In Lane Group, N:	1	1	1	1
Adjusted Left-Turn Flow Rate, Vlt:	10	370	54	18
Proportion of Left Turns in Lane Group, Plt:	0.18	0.85	1.00	1.00
Proportion of Left Turns in Opp Flow, Plto:	0.85	0.18	XXXXXX	XXXXXX
Left Turns Per Cycle, LTC:	0.33	12.33	1.80	0.60
Adjusted Opposing Flow Rate, Vo:	436	56	1123	1181
Opposing Flow Per Lane Per Cycle, Volc:	14.53	1.87	19.70	20.72
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00
Eff grn until arrival of left-turn car, gf:	36.35	0.86	0.00	0.00
Opposing Queue Ratio, qro:	0.50	0.50	0.50	0.50
Eff grn blocked by opposing queue, gq:	18.23	3.82	29.30	31.61
Eff grn while left turns filter thru, gu:	23.58	56.11	30.77	28.46
Max opposing cars arriving during gq-gf, n:	0.00	1.48	XXXXXX	XXXXXX
Proportion of Opposing Thru & RT cars, ptho:	0.15	0.82	XXXXXX	XXXXXX
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.17	0.14
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00
Through-car Equivalents, ell:	2.17	1.48	3.94	4.18
Single Lane Through-car Equivalents, el2:	1.00	1.41	XXXXXX	XXXXXX
Minimum Left Turn Adjustment Factor, fmin:	0.04	0.06	0.07	0.07
Single Lane Left Turn Adjustment Factor, fm:	0.93	0.71	0.13	0.11
Left Turn Adjustment Factor, flt:	0.93	0.71	0.13	0.11
Level Of Service Detailed Computation Re	port (HCM	12000 Quei	ue Method)	1
2000 HCM Operations	Method			
Future Volume Alter	native			
***************************************	*******	*******	********	******

Intersection	#36 8	St Fra	ncis I *****)r/Emba	arcade *****	ro Rd *****	*****	*****	*****	*****	****	*****
Approach:	Noi	th Bo	und	Sou	uth Bo	und	Ea	ast Bo	und	We	st Bo	und
Movement:	L ·	- т	- R	L ·	- т	- R	L ·	- т	- R	L -	т	- R
Green/Cycle:	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	1.0	1.0	1.0	10.8	10.8	10.8	1.2	15.4	15.4	0.3	14.4	14.4
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.1	0.1	0.1	1.8	1.8	1.8	0.7	1.8	1.8	0.2	1.6	1.6
HCM2KQueue:	1.0	1.0	1.0	12.6	12.6	12.6	1.9	17.2	17.2	0.5	16.0	16.0
70th%Eactor:	1 20	1 20	1 20	1 17	1 17	1 17	1 20	1 17	1 17	1 20	1 17	1 17
UCM2h70th0:	1.20	1.20	1.20	1/ 0	1/ 0	1/ 0	2.20	20 0	20 0	1.20	10 7	10 7
HCM2K/0tlig.	±.2	1.2		14.0	14.0			20.0	20.0	1	10.7	
85th%Factor:	1.59	1.59	1.59	1.50	1.50	1.50	1.58	1.47	1.47	1.59	1.48	1.48
HCM2k85th0;	1.7	1.7	1.7	18.8	18.8	18.8	3.0	25.3	25.3	0.8	23.6	23.6
90th%Factor:	1.78	1.78	1.78	1.61	1.61	1.61	1.76	1.57	1.57	1.79	1.58	1.58
HCM2k90thQ:	1.9	1.9	1.9	20.3	20.3	20.3	3.3	27.0	27.0	0.9	25.3	25.3
95th%Factor:	2.07	2.07	2.07	1.80	1.80	1.80	2.04	1.73	1.73	2.08	1.75	1.75
HCM2k95thQ:	2.1	2.1	2.1	22.6	22.6	22.6	3.8	29.8	29.8	1.1	28.0	28.0
98th%Factor:	2.62	2.62	2.62	2.08	2.08	2.08	2.57	1.97	1.97	2.66	1.99	1.99
HCM2k98thQ:	2.7	2.7	2.7	26.2	26.2	26.2	4.8	33.8	33.8	1.4	31.9	31.9
			Fuel	Consur	nption	and E	missio	ons				
			200	00 HCM	Opera	tions	Method	1				
**********	*****	*****	F1	1ture \	volume	Alter	native	≘ ******	*****	*****	*****	*****
Intersection	#36 9	St Fra	ncis T	r/Emba	arcade	ro Rd						
**********	*****	******	******	******	******	******	*****	*****	*****	*****	****	* * * * * *
Approach:	Not	th Bo	und	Sol	ith Bo	und	E	ast Bo	und	We	st Bo	und
Movement:	T	- т	- R	T	- Т	- R	т	- т	- R	T. =	т.	- R
Run Speed:		30 M	PH		30 M	PH		30 M	PH		30 M	PH
NumOfStops:	1.3	2.2	3.8	68.8	2.2	10.0	8.6	218	0.9	2.5	187	17.3
Name: year 19	995 co	omposi	te fle	et								
Fuel Consumpt	ion:	8	0.904	pounds	3							
		1	3.106	gallor	ns							
Carbon Dioxic	ie:	25	2.420	pounds	5							
Carbon Monox:	Lde:	1	9.654	pounds	5							
Hydrocarbons			3.539	pounds	3							
Nitrogen Oxic	ies:		0.728	pounas	5							
Name: uppy 2000 generation floot												
Fuel Consumpt	ion:	8	0.904	pounds	-							
		1	3.106	gallor	ns							
Carbon Dioxid	le:	25	2.420	pounds	3							
Carbon Monox:	ide:	1	9.654	pounds	5							
Hydrocarbons			3.539	pounds	3							

19.654 pounds 3.539 pounds 0.728 pounds Nitrogen Oxides: DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Traffix 8.0.0715

	Existing	PM
Intersection #31: E Bayshore Dr/Em	barcadero Rd	
	Signal-Split/Pighta-Overlap	
Final Vol: 508	*** 109 16	
Lanes:	1 0 0 1 0	
-		
Signal=Split Final Vol: Lanes: Rights=Overlap	Vol Cnt Date: 5/27/2015	Signal=Split Rights=Include Lanes: Final Vol:
	Cycle Time (sec): 120	
489*** 1		0 50
1 📌	Loss Time (sec): 12	1
187 1	Critical V/C: 1.053	1 547***
		-
° 🔽	Avg Crit Del (sec/veh): 97.1	▲ 0
127 1	Avg Delay (sec/veb): 83.5	1 71
· · · · · · · · · · · · · · · · · · ·		▼ 1 1
	LOS: F	
•		
Lanaa		
Final Vol: 3	32 264 26***	
	Signal=Split/Rights=Include	
Approach: North Bound South Bound	East Bound West Bound	
Movement: L - T - R L - T -	R L - T - R L - T - R	
Min. Green: 0 0 0 0 0 Y+R: 4.0 4.0 4.0 4.0 4.0		
Base Vol: 332 264 26 16 109 1 Growth Adi: 100 100 100 100 100 1	608 489 187 127 71 547 50 00 1	
Initial Bse: 332 264 26 16 109 1	608 489 187 127 71 547 50	
Added Vol. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
User Adj: 1.00 1.00 1.00 1.00 1.00 1	08 489 187 127 71 547 50 00 1.00 1.00 1.00 1.00 1.00 1.00	
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1 PHF Volume: 332 264 26 16 109 !	00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 08 489 187 127 71 547 50	
Reduct Vol: 0 0 0 0 0 Reduced Vol: 332 264 26 16 109	0 0 0 0 0 0 0 0 08 489 187 127 71 547 50	
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1	00 1.00 1.00 1.00 1.00 1.00 1.00 00 1.00 1.	
FinalVolume: 332 264 26 16 109	08 489 187 127 71 547 50	
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1	00 1900 1900 1900 1900 1900 1900	
Adjustment: 0.62 0.43 0.99 0.84 0.75 0	64 0.40 0.92 0.85 0.95 0.89 0.41 00 2.00 1.00 1.00 1.67 0.33	
Final Sat.: 1173 791 78 184 1254 1	209 1533 1742 1615 1805 2826 258	
Capacity Analysis Module:	42 0 22 0 11 0 08 0 04 0 19 0 19	
Crit Moves: ***** ******************************	*** ****	
Volume/Cap: 0.89 1.05 1.05 0.91 0.91 1	40 0.30 0.30 0.62 0.18 0.18 0.18 05 1.05 0.35 0.13 0.21 1.05 1.05	
Uniform Del: 39.0 41.0 41.0 53.7 53.7 3 IncremntDel: 22.6 68.8 68.8 49.1 49.1 5	5.1 41.8 32.7 9.4 41.6 49.0 49.0 5.5 50.2 0.1 0.1 0.3 52.4 52.4	
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
Delay/Veh: 61.7 110 109.7 102.8 103 9. User DelAdj: 1.00 1.00 1.00 1.00 1.00 1	6 92.0 32.8 9.5 41.9 101 101.4 00 1.00 1.00 1.00 1.00 1.00 1.00	
AdjDel/Veh: 61.7 110 109.7 102.8 103 9 LOS by Move: E F F F F F	6 92.0 32.8 9.5 41.9 101 101.4 F F C A D F F	
HCM2kAvgQ: 15 16 32 8 7 Note: Queue reported is the number of cars	27 15 6 2 2 17 8 per lane.	
HCM Ops Adjusted Lane Utilization Module:		
Lanes: 1 0 0 1 0 0 1 0 0 Lane Group: L RT RT LT LT	1 1 1 1 0 1 1 0 1 1 0 R LT LT R L RT RT	
#LnsInGrps: 1 1 1 1 1	1 3 3 1 1 2 2	
HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 12	12 12 12 12 12 12 12	
CrsswalkWid: 8 8	8 8	
Grade: 0% 0%	0% 0%	
Bus Stp/Hr: 0 0		
Cnft Ped/Hr: 3 1		
EXCLUSIVERT: Include Include % RT Prtct: 0 0	Include Include 0 0	
HCM Ops f(lt) Adj Case Module:		
f(lt) Case: 1 xxxx xxxx 4 4 xx	xx 4 4 xxxx 1 xxxx xxxx	
HCM Ops Saturation Adj Module: Ln Wid 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	
Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 1 Grade 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 00 1.00 1.	
Parking Adj: xxxx 1.00 1.00 xxxx xxxx 1 Bus Stp Adj: xxxx 1.00 1.00 xxxx xxxx 1	00 XXXX XXXX 1.00 XXXX 1.00 1.00 00 XXXX XXXX 1.00 xXXX 1.00 1.00	
Area Adj: 1.00 1.00 1.00 1.00 1.00 1 RT Adi: yyyy 0.00 0.00 1.00 1.00 1	00 1.00 1.00 1.00 1.00 1.00 1.00 85 YYYY 0.85 YYYY 0.80 0.00	
LT Adj: 0.95 XXXX XXXX 0.99 0.99 XXX Dadkie Adj: 0.95 XXXX XXXX 0.99 0.99 XX	xx 0.97 0.97 xxxxx 0.95 xxxx xxxxx	
HCM Sat Adj: 0.95 0.99 0.99 0.99 0.99 0.99	85 0.97 0.97 0.85 0.95 0.99 0.99 60 44 1 00 1.00 1.00 1.00 1.00 1.00	
USF SAT AGJ: 0.65 0.44 1.00 0.85 0.75 0 MLF SAT Adj: 1.00 1.00 1.00 1.00 1.00 1	15 0.44 1.00 1.00 0.95 0.44 00 0.95 0.95 1.00 1.00 0.95 0.95	
Fnl Sat Adj: 0.62 0.43 0.99 0.84 0.75 0	64 0.40 0.92 0.85 0.95 0.89 0.41	

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

Delay Adjustment Factor	Module:					
Coordinated: < < < < <	< < < < < < < < < < NO > > > > > > > > > > > > > > > > > >	> > > > > > > > > > > > > > > > > > > >				
Signal Type: < < < < <	< < < < < < < < Actuated > > > >	> > > > > > > > > > > > > > > > > > > >				
DelAdjFctr: 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00				
Level Of Service	Detailed Computation Report (Ped/Bike	Sat Adj)				
2000 HCM Operations Method						

Future Volume Alternative

Intersection #31 E Bayshore Dr/Embarcadero Rd								
Approach: Movement:	North B L - T	ound – R	South I L - T	Bound – R	East L - T	Bound - R	West	Bound - R
CrsswalkWid:	0.00	- 8.00	0.00	8.00	0.00	8.00	0.00	8.00
CrsswalkLen;	0.00	60.00	0.00	72.00	0.00	36.00	0.00	36.00
MinPedGrn:	0.00	18.23	0.00	21.21	0.00	12.20	0.00	12.23
PedGrn:	0.00	18.23	0.00	21.21	0.00	12.20	0.00	12.23
PedVolume:	0	3	0	1	0	0	0	3
PedFlowRate:	0	20	0	6	0	0	0	29
BikeVol:	0	0	0	0	0	0	0	0
BikeFlwRate:	0	0	0	0	0	0	0	0
PedOcc:	0.000	0.010	0.000	0.003	0.000	0.000	0.000	0.015
BikeOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedAfterOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
r0cc:	0.000	0.010	0.000	0.003	0.000	0.000	0.000	0.015
TurnVehAdj:	0.000	0.994	0.000	0.998	0.000	1.000	0.000	0.985
Prt:	0.000	0.090	0.000	1.000	0.000	1.000	0.000	0.084
Prta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plt:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedBike Adj:	1.000	0.999	1.000	0.998	1.000	1.000	1.000	0.999
Level O	f Service	Detailed	l Computa	ation Repo	ort (HCM	2000 Queu	a Method)
		2000	HCM Oper	rations Me	ethod			
		Futi	ire Volu	me Alterna	ative			

Future Volume Alternative

***********	1 ⊥C ⊞ *****	5 Bays *****	*****	* * * * * * 1	******	******	*****	*****	*****	*****	*****	*****
Approach:	Noi	th Bo	ound	Sou	ith Bo	und	Ea	ast Bo	ound	We	est Bo	ound
Movement:	L ·	- Т	- R	L ·	т	- R	L ·	- Т	- R	L ·	·Т	- R
Green/Cycle: ArrivalType:	0.32	0.32	0.32	0.10	0.10	0.40	0.30	0.30	0.62	0.18	0.18	0.18
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	10.5	9.2	20.9	4.6	4.1	16.9	8.6	5.1	1.7	2.0	11.5	5.3
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38	0.38
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.93
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.39	0.39	0.25
Q2:	4.4	6.8	11.0	3.4	3.2	9.7	6.5	0.5	0.1	0.1	5.3	2.8
HCM2KQueue:	14.9	16.0	31.9	8.0	7.3	26.6	15.1	5.7	1.9	2.1	16.8	8.1
70th%Factor: HCM2k70thQ:	1.17	1.17 18.6	1.15 36.5	1.18 9.4	1.18 8.6	1.15 30.7	1.17 17.7	1.19 6.7	1.20	1.19 2.5	1.17 19.6	1.18 9.6
85th%Factor: HCM2k85thQ:	1.48	1.48 23.6	1.40 44.7	1.53	1.54 11.2	1.42 37.9	1.48	1.55 8.8	1.58	1.58	1.47 24.7	1.53
90th%Factor: HCM2k90thQ:	1.59	1.58 25.2	1.48 47.2	1.67	1.68 12.2	1.51 40.1	1.59	1.70 9.6	1.76	1.76	1.57 26.4	1.67
95th%Factor: HCM2k95thQ:	1.76	1.75 27.9	1.60	1.89	1.90 13.8	1.64 43.6	1.76	1.94 11.0	2.04 3.9	2.03	1.74 29.2	1.88
98th%Factor: HCM2k98thQ:	2.02 30.1	1.99 31.8	1.79 56.9 Fuel (2.24 17.9 Consur	2.27 16.5 nption	1.83 48.7 and E	2.01 30.4 missio	2.35 13.3 ons	2.56 4.8	2.55	1.97 33.2	2.24 18.1
	Entry Volume Alternative											

Fi	uture Volume Alternative							
******	***************************************							
Intersection #31 E Bayshore Dr/Embarcadero Rd								
Approach: North Bound Movement: L - T - R	South Bound East Bound West Bound L - T - R L - T - R							
Name: year 1995 composite fl Fuel Consumption: 192.396 31 168	eet pounds gallone							
Carbon Dioxide: 600.277 Carbon Monoxide: 51.454 Hydrocarbons: 10.847 Nitrogen Oxides: 1.309	pounds pounds pounds pounds							
Name: year 2000 composite fle Fuel Consumption: 192.396 31.168 Carbon Dioxide: 600.277	eet pounds gallons pounds							
Carbon Monoxide: 51.454 Hydrocarbons: 10.847 Nitrogen Oxides: 1.309	pounds pounds							

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

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

Background PM Intersection #31: E Bayshore Dr/Embarcadero Rd Signal=Split/Rights=Overlap 514*** 24 Final Vol: 109 0 0 Lanes: 1 Signal=Split Signal=Split Final Vol: Lanes: Rights=Overlap Vol Cnt Date: n/a Rights=Include Lanes: Final Vol: Cycle Time (sec): 120 57*** 496*** 0 Loss Time (sec): 12 1 328 Critical V/C: 1.105 1 674 Avg Crit Del (sec/veh): 0 113.0 0 127 Avg Delay (sec/veh): 95.6 1 72 LOS: F 0 Lanes: 1 0 0 1 264*** Final Vol: 332 27 Signal=Split/Rights=Include South Bound R L - T - R Approach: North Bound East Bound West Bound East Bound L - T - R west Bound L - T - R L - T - R Movement: Min. Green: Y+R: 0 0 0 0 0 0 0 0 0 0 0 n 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Volume Module: Volume Module. Base Vol: 332 264 27 24 109 Growth Adj: 1.00 1.00 1.00 1.00 1.00 Initial Bse: 332 264 27 24 109 Added Vol: 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 127 514 496 328 72 674 57 1.00 1.00 1.00 496 328 1.00 1.00 1.00 1.00 72 72 0 514 127 674 57 127 0 127 332 264 27 109 514 496 328 72 674 Initial Fut: 24 57 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: -PHF Adj: 1.00 1.00 PHF Volume: 332 264 Reduct Vol: 0 0 Reduced Vol: 322 264 PCE Adj: 1.00 1.00 MLF Adj: 1.00 1.00 User Adi: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 27 0 27 1.00 514 496 328 127 674 57 496 328 0 0 496 328 1.00 1.00 127 0 127 1.00 0 72 0 514 0 674 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 27 24 109 514 496 328 127 72 674 57 Saturation Flow Module: Sat/Lane: 1900 1900 Adjustment: 0.62 0.43 Lanes: 1.00 0.96 Final Sat.: 1173 789 -----Capacity Analysis Module: Vol/Sat: 0.28 0.33 0.33 0.09 0.09 0.42 0.32 0.19 0.08 0.04 0.24 0.24 Crit Moves: **** **** **** Green/Cycle: 0.30 0.30 0.30 0.09 0.09 0.38 0.29 0.29 0.59 0.21 0.21 0.21 $\begin{array}{c} \mbox{Green}(2ycle: 0.30 \ 0.30 \ 0.30 \ 0.99 \ 0.99 \ 0.38 \ 0.29 \ 0.29 \ 0.59 \ 0.51 \ 0.21 \ 0.$ 2 0 2T LT 1 1 1 1 0 1 1 0 0 I RT LT 0 0 1 1 0 1 1 0 Lanes: 1 0 0 1 R 1 ---||----L RT LT LT L RT 1 2 Lane Group: R 1 RT HLnsInGrps: 1 1 1 1 HCM Ops Input Saturation Adj Module: 3 2 12 12 12 12 Lane Width: 12 12 12 12 12 12 12 12 CrsswalkWid: 8 8 8 % Hev Veh: Grade: Parking/Hr: n 0 0 n ∩≋ ∩ % ∩≋ ∩ % 0 Bus Stp/Hr: Area Type: > > > > > > > > > > Cnft Ped/Hr: 0 Include ExclusiveRT: Include <t 0 f(lt) Case: 1 xxxx xxxx HCM Ops Saturation Adj Module: HCM Ops Saturation Adj Ln Wid Adj: 1.00 1.00 Hev Veh Adj: 1.00 1.00 Grade Adj: 1.00 1.00 Parking Adj: xxxx 1.00 Bus Stp Adj: xxxx 1.00 Module: 1.00 xxxx xxxx 1.00 1.00 xxxx xxxx xxxx xxxx 1.00 1.00 Bus Stp Adj: Area Adj: RT Adj: LT Adj: PedBike Adj: HCM Sat Adj: xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 0.99 0.99 0.95 xxxx xxxxx 1.00 1.00 1.00 0.95 0.99 0.99 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 xxxx xxxx 0.85 0.97 0.97 xxxxx 1.00 1.00 1.00 0.97 0.97 0.85 0 85 xxx 0 99 0 99 xxxx xxxx 0.99 0.99 1.00 1.00 0.99 0.99 xxxx 0.99 0.99 0.95 xxxx xxxxx 1.00 1.00 1.00 0.95 0.99 0.99 1.00 0.85 Usr Sat Adj: 0.65 0.44 1.00 0.85 0.75 0.75 0.44 1.00 1.00 1.00 0.95 0.44 MLF Sat Adi: 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 1.00 0.95 Fnl Sat Adj: 0.62 0.43 0.99 0.84 0.74 0.64 0.41 0.92 0.85 0.95 0.89 0.41

Traffix 8.0.0715
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < < < < No >>>>>>>>>>
Signal Type: < < < < < < < < < < < < Actuated >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Enture Volume Alternative

**********	*********	FU ******	*******) _ uiiie * * * * * * *	AILEI:	******	= * * * * * *	*****	*****	*****	*****	
Intersection	#31 E Bays	hore [*****	r/Embai	cader	o Rd	*****	*****	*****	*****	*****	*****	
Approach: Movement:	North Bo L - T	und - R	Sout L -	h Bou T -	ind R	Ea L -	ast Bo - T	und - R	We L -	est Bo - T	und - R	
Green/Cycle:	0.30 0.30	0.30	0.09 0	 0.09 3	0.38	0.29	0.29	0.59	0.21	0.21	0.21	
ProgFactor: Q1: UpstreamVC:	1.00 1.00 10.8 9.2 0.00 0.00	1.00 20.9 0.00	1.00 1 4.9	4.3	1.00 17.1 0.00	1.00 8.7	1.00	1.00 1.9	1.00 2.0 0.00	1.00 14.0 0.00	1.00 6.5	
UpstreamAdj: EarlyArrAdj: Q2: HCM2KQueue:	0.00 0.00 1.00 1.00 5.1 7.7 15.9 16.9	0.00 1.00 13.3 34.2	0.00 0 1.00 1 4.2 9.1	0.00 L.00 4.0 8.3	0.00 1.00 11.6 28.8	0.00 1.00 7.5 16.2	0.00 1.00 1.7 11.7	0.00 1.00 0.2 2.0	1.00 0.46 0.1 2.1	1.00 0.46 8.0 22.0	1.00 0.29 4.0 10.5	
70th%Factor: HCM2k70thQ:	1.17 1.17 18.6 19.7	1.14 39.1	1.18 1	L.18 9.8	1.15 33.0	1.17 18.9	1.17 13.8	1.20 2.4	1.19 2.5	1.16 25.4	1.18 12.4	
85th%Factor: HCM2k85thQ:	1.48 1.47 23.5 24.9	1.40 47.8	1.52 1	L.53 L2.7	1.42 40.7	1.48	1.50 17.6	1.58 3.2	1.58	1.44 31.7	1.51 15.9	
90th%Factor: HCM2k90thQ;	1.58 1.57 25.1 26.6	1.47	1.65 1	L.66 L3.8	1.49 43.0	1.58	1.62 19.0	1.76 3.6	1.76	1.53 33.7	1.64 17.2	
95th%Factor: HCM2k95thQ:	1.75 1.73 27.8 29.4	1.59	1.86 1	L.88 L5.6	1.62 46.6	1.74 28.2	1.81 21.2	2.04 4.1	2.03	1.68 36.8	1.83	
98th%Factor: HCM2k98thQ:	1.99 1.97 31.7 33.4	1.77 60.6	2.20 2	2.23 18.5	1.81 52.0	1.99 32.1	2.11 24.7	2.56	2.55	1.88 41.4	2.15 22.6	
*****		200 Fu	0 HCM (perat	Alter:	Method native	1 2 2		*****		*****	
Intersection	#31 E Bays	hore [r/Embai	cader	o Rd	*****	*****	*****	*****	*****	*****	

**********	************	**************	***************	************
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Run Speed:	30 MPH	30 MPH	30 MPH	30 MPH
NumOfStops: 8	30.7 69.1 7.1	6.0 27.2 137.5	129.6 71.5 14.0	14.8 173 14.7
Name: year 199	95 composite fl	et		
Fuel Consumpt:	ion: 238.867	pounds		
	38.696	gallons		
Carbon Dioxide	e: 745.265	pounds		
Carbon Monoxid	le: 64.308	pounds		
Hydrocarbons:	13.694	pounds		
Nitrogen Oxide	es: 1.581	pounds		
Name: year 200	00 composite fl	et		
Fuel Consumpt:	ion: 238.867	pounds		
	38.696	gallons		
Carbon Dioxide	e: 745.265	pounds		
Carbon Monoxid	le: 64.308	pounds		
Hydrocarbons:	13.694	pounds		
Nitrogen Oxide	es: 1.581	pounds		

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Traffix 8.0.0715

1		11		
Delay Adjustment Factor	Module:			
Coordinated: < < < < <	< < < < < < < <	< < < No > > >	> > > > > > > > > >	> > > > > > >
Signal Type: < < < <	< < < < < < <	Actuated	» » » » » » » » »	> > > > > > >
DelAdjFctr: 1.00 1.00	1.00 1.00 1.0	0 1.00 1.00 1.	00 1.00 1.00 1.	.00 1.00
Level Of Service	Detailed Comput	ation Report (HCM	M2000 Queue Metho	od)
	2000 HCM Ope:	rations Method		
	The bound of the loss			

*******	*******	۲u ******	*****	*****	AILEE	11.4LIV6 *****	: : * * * * *	*****	*****	****	*****	
Intersection	#31 E Bays	shore D	r/Emba *****	rcade:	co Rd	*****	****	*****	*****	****	*****	
Approach:	North Bo	ound	Sou	th Bou	ind	Ea	ast Bo	und	We	st Bo	und	
Movement:	L - T	- R	L -	Т	- R	L -	т	- R	L -	т	- R	
Green/Cycle: ArrivalType: ProgFactor: Q1: UpstreamVC:	0.31 0.31 3 1.00 1.00 13.6 9.4 0.00 0.00	0.31	0.09	0.09 3 1.00 4.4 0.00	0.38 1.00 17.1 0.00	0.29 1.00 8.7 0.00	0.29 3 1.00 11.1 0.00	0.60	0.21	0.21 3 1.00 14.0 0.00	0.21 1.00 6.5 0.00	
EarlyArrAdj: Q2: HCM2KQueue:	1.00 1.00 10.4 7.6 24.0 17.0	1.00 13.0 34.3	1.00 4.5 9.5	1.00 4.2 8.6	1.00 12.2 29.3	1.00 7.7 16.4	1.00 2.1 13.2	1.00 0.2 2.4	0.46	0.45 8.4 22.4	0.29 4.2 10.7	
70th%Factor: HCM2k70thQ:	1.15 1.17 27.8 19.8	1.14 39.2	1.18	1.18 10.2	1.15	1.17 19.2	1.17 15.4	1.19 2.9	1.19	1.16 26.0	1.18 12.6	
85th%Factor: HCM2k85thQ:	1.43 1.47 34.5 25.0	1.40 47.9	1.52	1.53 13.1	1.41	1.47 24.2	1.49 19.7	1.58	1.58	1.44 32.3	1.51 16.2	
90th%Factor: HCM2k90thQ:	1.52 1.57 36.5 26.7	1.47 50.5	1.65	1.66 14.3	1.49 43.7	1.58 25.9	1.61 21.2	1.75	1.76	1.53 34.3	1.63 17.5	
95th%Factor: HCM2k95thQ:	1.66 1.73 39.8 29.5	1.59 54.5	1.85	1.87 16.1	1.62 47.4	1.74 28.6	1.79 23.6	2.02	2.03	1.67 37.5	1.83 19.6	
98th%Factor: HCM2k98thQ:	1.86 1.97 44.6 33.5	1.77 60.8	2.18 20.7	2.22 19.1	1.80 52.9	1.98 32.6	2.06 27.2	2.53 6.2	2.54	1.88 42.1	2.14 22.9	
****	*******	200 Fu	0 HCM ture V	Operat Operat	Alter	Method native	115 2 2 2 * * * * * *	*****	* * * * * * *	* * * * *	* * * * * *	
Intersection	#31 E Bays	shore D	r/Emba	rcade	ro Rd							
**************************************	North P	*******	****** Sou	+++++	***** md	***** 50	*****	****** und	***** Wo	*****	****** und	

 Approach:
 North Bound
 South Bound
 East Bound
 West Bound

 Movement:
 L
 T
 R
 L
 T
 R
 L
 T
 R
 L
 T
 R
 T
 R
 R
 Approach: Movement:
 Run Speed:
 30 MPH
 30 MPH
 30 MPH
 30 MPH

 NumOfStops:
 108.1
 70.3
 7.1
 6.3
 27.5
 138.7
 130.3
 78.8
 16.9
 15.9
 174
 14.7

 Name:
 year
 1995
 composite
 fleet

 Fuel
 Consumption:
 268.626
 pounds

 43.517
 gallons
 2
 2

 Carbon Dioxide:
 838.112
 pounds

 Hydrocarbons:
 15.551
 15.551
 9

 Nitrogen Oxides:
 1.747
 pounds
 Name: year 2000 composite fleet Fuel Consumption: 268.626 por posite fleet 268.626 pounds 43.517 gallons 838.112 pounds 72.603 pounds 15.551 pounds 1.747 pounds Carbon Dioxide: Carbon Monoxide: Hydrocarbons: Nitrogen Oxides: ------

DISCLAIMER

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elemente elements.

Traffix 8.0.0715

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			Le	evel Of Service Cor 2000 HCM Operatio Cumulativ	mputation Report ons (alternative) ve PM			
Intersectio	on #31: E Bays	hore Dr/Emba	rcadero Rd		-			
	F	inal Vol: 551*** Lanes: 1	Signal=Split/Rights 119 0 0	=Overlap 27 1 0				
Final Vol:	Signal=Sp Lanes: Rights=Ov	lit erlap	Vol Cnt D Cycle Time (s	ate: n/a ec): 120	Signal=Split Rights=Include	Lanes:	Final Vol:	
531***			Loss Time (s	ec): 12		0	61	
383			Critical	//C: 1.233	Ê	. 1 . 1	713***	
	• 🔶		Avg Crit Del (sec/v	eh): 162.9		• 0		
178	1 J		Avg Delay (sec/v	eh): 136.3	<u> </u>	1	86	
	•		L	OS: F	•			
		•		* ~				
	F	Lanes: 1 Tinal Vol: 476***	I I 0 0 291 Signal-Split/Rights	1 0 29				
Approach:	North Bound	South Bound	East Bound	West Bound				
Movement: Min. Green:	L - T - R - 0 0 0	L - T - R 0 0 0	L - T - R 0 0 0	L - T - R 0 0 0				
V+R: Volume Modul	4.0 4.0 4.0 - Le:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0				
Base Vol: Growth Adj: Initial Bse:	399 286 29 1.00 1.00 1.00 399 286 29	26 118 551 1.00 1.00 1.00 26 118 551	531 358 153 1.00 1.00 1.00 531 358 153	81 713 61 1.00 1.00 1.00 81 713 61				
PasserByVol: Initial Fut:	: 0 0 0 : 476 291 29	0 0 0 0 27 119 551	0 0 0 531 383 178	0 0 0 0 86 713 61				
PHF Adj: PHF Volume:	1.00 1.00 1.00 1.00 1.00 1.00 476 291 29	1.00 1.00 1.00 1.00 1.00 1.00 27 119 551	1.00 1.00 1.00 1.00 1.00 1.00 531 383 178	1.00 1.00 1.00 1.00 1.00 1.00 86 713 61				
Reduced Vol: PCE Adj:	476 291 29 1.00 1.00 1.00	27 119 551 1.00 1.00 1.00	531 383 178 1.00 1.00 1.00	86 713 61 1.00 1.00 1.00				
FinalVolume:	476 291 29	27 119 551	531 383 178	86 713 61				
Sat/Lane: Adjustment: Lanes: Final Sat.:	1900 1900 1900 0.62 0.43 0.99 1.00 0.96 0.04 1173 790 79	1900 1900 1900 0.84 0.74 0.64 0.17 0.83 1.00 267 1177 1211	1900 1900 1900 0.41 0.92 0.85 2.00 1.00 1.00 1544 1754 1615	1900 1900 1900 0.95 0.89 0.41 1.00 1.69 0.31 1805 2860 245				
Capacity Ana Vol/Sat: Crit Moves:	alysis Module: 0.41 0.37 0.37	0.10 0.10 0.45	0.34 0.22 0.11	0.05 0.25 0.25				
Green/Cycle: Volume/Cap:	0.33 0.33 0.33 1.23 1.12 1.12	0.09 0.09 0.37 1.12 1.12 1.23	0.28 0.28 0.61 1.23 0.78 0.18	0.20 0.20 0.20 0.24 1.23 1.23				
IncremntDel: InitQueuDel:	125.6 89.5 89.5 0.0 0.0 0.0	54.6 54.6 37.9 116.1 116 123.1 0.0 0.0 0.0	43.3 39.9 10.4 116.5 3.5 0.1 0.0 0.0 0.0	40.1 47.9 47.9 0.3 118 118.4 0.0 0.0 0.0				
Delay Adj. Delay/Veh: User DelAdj:	1.00 1.00 1.00 165.8 130 129.8 1.00 1.00 1.00	1.00 1.00 1.00 170.7 171 161.0 1.00 1.00 1.00	1.00 1.00 1.00 159.8 43.4 10.5 1.00 1.00 1.00	40.4 166 166.3 1.00 1.00 1.00				
LOS by Move: HCM2kAvgQ: Note: Oueue	F F F F 31 19 38	F F F 11 10 35	F D B 19 15 3	D F F 3 27 13				
HCM Ops Adju	 usted Lane Utiliza	 tion Module: 0 1 0 0 1	 1 1 1 0 1					
Lane Group: #LnsInGrps:	L RT RT 1 1 1	LT LT R 1 1 1	LT LT R 3 3 1	L RT RT 1 2 2				
HCM Ops Inpu Lane Width: CrsswalkWid:	ut Saturation Adj 12 12 12 8	Module: 12 12 12 8	12 12 12 8	12 12 12 8				
% Hev Veh: Grade: Parking/Hr:	0 0% No	0 0% No	0 0% No	0 0% No				
Bus Stp/Hr: Area Type: Cnft Ped/Hr:	0 < < < < < < < < 0	0 < < < < < < < < 0 0	ther > > > > > > > > > > > 0	0 > > > > > > > > > > > > > > > > > > >	• >			
% RT Prtct:	Include 0	Include 0	Include 0 	Include 0				
HCM Ops f(lt f(lt) Case:) Aaj Case Module 1 xxxx xxxx	4 4 xxxx	4 4 xxxx	1 xxxx xxxx				
HCM Ups Satu Ln Wid Adj: Hev Veh 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	1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00				
Grade Adj: Parking Adj: Bus Stp Adj:	1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00	1.00 1.00 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00	1.00 1.00 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00	1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00				
Area Adj: RT Adj: LT Adj:	1.00 1.00 1.00 xxxx 0.99 0.99 0.95 xxxx xxxxx	1.00 1.00 1.00 xxxx xxxx 0.85 0.99 0.99 xxxxx	1.00 1.00 1.00 xxxx xxxx 0.85 0.97 0.97 xxxxx	1.00 1.00 1.00 xxxx 0.99 0.99 0.95 xxxx xxxxx				
PedBike Adj: HCM Sat Adj: Usr Sat Adj:	: 1.00 1.00 1.00 : 0.95 0.99 0.99 : 0.65 0.44 1.00	1.00 1.00 1.00 0.99 0.99 0.85 0.85 0.75 0.75	1.00 1.00 1.00 0.97 0.97 0.85 0.44 1.00 1.00	1.00 1.00 1.00 0.95 0.99 0.99 1.00 0.95 0.44				
MLF Sat Adj Fnl Sat Adj	1.00 1.00 1.00 0.62 0.43 0.99	1.00 1.00 1.00 0.84 0.74 0.64	0.95 0.95 1.00 0.41 0.92 0.85	1.00 0.95 0.95 0.95 0.89 0.41				

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/
Delay Adjustment Factor Module:
Coordinated: < < < < < < < < < < < < < < No >>>>>>>>>>
Signal Type: < < < < < < < < < < < Actuated >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method

	Fu	ture Volume Alter	native	
Intersection	#31 E Bayshore I)r/Embarcadero Rd	*****	****
Approach: Movement:	North Bound L - T - R	South Bound L - T - R	East Bound L - T - R	West Bound L - T - R
Green/Cycle: ArrivalType: ProgFactor: Q1: UpstreamVC: UpstreamAdj: EarlyArrAdj:	$\begin{vmatrix} \\ 0.33 & 0.33 \\ 3 \\ 1.00 & 1.00 \\ 15.9 & 10.1 & 23.0 \\ 0.00 & 0.00 & 0.00 \\ 0.00 & 0.00 & 1.00 \\ 1.00 & 1.00 & 1.00 \end{vmatrix}$	$\begin{vmatrix} \\ 0.09 & 0.09 \\ 3 \\ 1.00 & 1.00 \\ 5.4 & 4.8 \\ 18.4 \\ 0.00 & 0.00 \\ 0.00 & 0.00 \\ 1.00 & 1.00 \\ 1$	$\begin{vmatrix} \\ 0.28 & 0.28 \\ 3 \\ 1.00 & 1.00 \\ 9.3 & 12.4 \\ 2.6 \\ 0.00 & 0.00 \\ 0.00 \\ 0.00 & 0.00 \\ 1.00 & 1.00 \\ 1$	$ \begin{vmatrix} \\ 0.20 & 0.20 \\ 3 \\ 1.00 & 1.00 \\ 2.4 & 14.8 \\ 6.9 \\ 0.00 & 0.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 1.00 \\ 0.45 \\ 0.44 \\ 0.28 \end{vmatrix} $
Q2: HCM2KQueue:	15.2 8.5 15.0 31.0 18.7 38.0	5.7 5.3 17.1 11.1 10.1 35.4	10.1 3.0 0.2 19.4 15.4 2.8	0.1 12.5 6.1 2.5 27.3 12.9
70th%Factor: HCM2k70thQ:	1.15 1.16 1.14 35.6 21.7 43.3	1.18 1.18 1.14 13.1 11.9 40.4	1.16 1.17 1.19 22.5 18.0 3.4	1.19 1.15 1.17 3.0 31.4 15.1
85th%Factor: HCM2k85thQ:	1.41 1.46 1.38 43.7 27.3 52.6	1.51 1.51 1.39 16.8 15.3 49.3	1.46 1.48 1.57 28.3 22.7 4.5	1.58 1.42 1.50 4.0 38.8 19.3
90th%Factor: HCM2k90thQ:	1.48 1.56 1.46 46.1 29.0 55.5	1.63 1.64 1.47 18.2 16.6 52.0	1.55 1.59 1.75 30.1 24.4 5.0	1.75 1.50 1.61 4.4 41.0 20.8
95th%Factor: HCM2k95thQ:	1.61 1.71 1.57 49.9 31.9 59.8	1.82 1.84 1.58 20.3 18.6 56.1	1.70 1.76 2.01 33.0 27.0 5.7	2.02 1.63 1.79 5.1 44.6 23.2
98th%Factor: HCM2k98thQ:	1.79 1.94 1.75 55.6 36.1 66.7 Fuel 200 Fv	2.12 2.16 1.77 23.7 21.8 62.6 Consumption and E 00 HCM Operations ature Volume Alter	1.93 2.01 2.50 37.3 30.8 7.1 missions Method native	2.52 1.82 2.07 6.4 49.8 26.7
************* Intersection	*********************** #31 E Bavshore D	**************************************	*******	*******
************** Approach: Movement:	North Bound L - T - R	**************************************	East Bound L - T - R	**************************************
Run Speed:	30 MPH	30 MPH	30 MPH	30 MPH

NumOfStops: 134.4	77.3 7.7	6.8 30.	1 159.5	145.9	88.3	19.6	18.0	189	16.2
Name: year 1995 cc	mposite fle	eet							
Fuel Consumption:	369.217 59.813	pounds gallons							
Carbon Dioxide:	1151.957	pounds							
Carbon Monoxide:	100.868	pounds							
Hydrocarbons:	21.951	pounds							
Nitrogen Oxides:	2.285	pounds							
Name: year 2000 cc	mposite fle	eet							
Fuel Consumption:	369.217	pounds							
	59.813	gallons							
Carbon Dioxide:	1151.957	pounds							
Carbon Monoxide:	100.868	pounds							
Hydrocarbons:	21.951	pounds							
Nitrogen Oxides:	2.285	pounds							
DISCLAIMER									

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

	Level Of Service Computation Report 2000 HCM Operations (alternative)	
Intersection #36: St Francis Dr/Embard	cadero Rd	
	Signal=Permit/Rights=Include	
Final Vol: 26	3*** 189	
Lanes: 0		
•		
Signal=Permit Final Vol: Lanes: Rights=Include	Signal=Permit Vol Cnt Date: 5/27/2015 Rights=Include Lanes: Final Vol:	
39 1 🍠	Cycle Time (sec): 120	
。 🙏	Loss Time (sec): 0	
1133*** 1	Critical V/C: 0.474 1 908	
1 🔸	Avg Crit Del (sec/veh): 13.4 0	
9 0 _ 🔻	Ava Delay (sec/veh): 11.8	
v v ▼		
▲	↑ ↑ ↑ ↑	
Lanes: 0	0 1! 0 0	
Final Vol: 5	4 31 Sianal=Permit/Rights=Include	
Approach: North Bound South Bound	East Bound West Bound	
Movement: L - T - R L - T - R	L - T - R L - T - R	
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 4.0 4.0 4.0 4.0 4.0 4.0	
Volume Module: >> Count Date: 27 May 2015 << 7 Base Vol: 5 4 31 189 3 26	7:00 AM to 8:45 AM 39 1133 9 30 908 87	
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 5 4 31 189 3 26 Added Vol: 0 0 0 0 0 0	1.00 1.00 1.00 1.00 1.00 1.00 39 1133 9 30 908 87 0 0 0 0 0 0	
PasserByVol: 0 0 0 0 0 0 Initial Fut: 5 4 31 189 3 26	0 0 0 0 0 0 39 1133 9 30 908 87	
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 PHF Volume: 5 4 31 189 3 26	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	
Reduct Vol: 0 <th< td=""><td>0 0 0 0 0 0 39 1133 9 30 908 87</td><td></td></th<>	0 0 0 0 0 0 39 1133 9 30 908 87	
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 FinalVolume: 5 4 31 189 3 26	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	
Saturation Flow Module:		
Sat/Lane: 1900 1900 1900 1900 1900 1900 Adjustment: 0.87 0.87 0.87 0.73 0.73 0.73 Lanes: 0.12 0.10 0.78 0.87 0.01 0.12	1900 1900 1900 1900 1900 1900 0.23 0.95 0.95 0.19 0.94 0.94 1.00 198 0.02 1.00 183 0.17	
Final Sat.: 207 165 1281 1204 19 166 	437 3578 28 355 3251 312	
Capacity Analysis Module: Vol/Sat: 0.02 0.02 0.02 0.16 0.16 0.16 Crit Moves: ****	0.09 0.32 0.32 0.08 0.28 0.28	
Green/Cycle: 0.33 0.33 0.33 0.33 0.33 0.33 Volume/Cap: 0.07 0.07 0.07 0.47 0.47	0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.13 0.47 0.47 0.13 0.42 0.42	
Uniform Del: 27.5 27.5 27.5 31.8 31.8 31.8 IncremntDel: 0.1 0.1 0.1 0.8 0.8 0.8 InitOueuDel: 0.0 0.0 0.0 0.0 0.0 0.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Delay/Veh: 27.5 27.5 27.5 32.6 32.6 32.6	1.00 1.00 1.00 1.00 1.00 1.00 7.4 9.8 9.8 7.4 9.3 9.3	
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 27.5 27.5 27.5 32.6 32.6 32.6 LOS by Move: C C C C C C C C	1.00 1.00 1.00 1.00 1.00 7.4 9.8 9.8 7.4 9.3 9.3	
HCM2kAvgQ: 1 1 1 7 7 7 7 Note: Queue reported is the number of cars per	1 11 11 1 9 9 r lane.	
HCM Ops Adjusted Lane Utilization Module: Lanes: 0 0 11 0 0 0 0 11 0 0		
Lane Group: LTR LTR LTR LTR LTR LTR #LnsInGrps: 1 1 1 1 1 1	L RT RT L RT RT 1 2 2 1 2 2	
HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 12 12 12	12 12 12 12 12 12 12	
CrsswalkWid: 8 8 % Hev Veh: 0 0		
Grade: 0% 0% Parking/Hr: No No Bus Stp/Hr: 0 0	0% 0% No No 0 0	
Area Type: < < < < < < < < < < < < < < < < < < <	ther >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	
ExclusiveRT: Include Include % RT Prtct: 0 0 0	Include Include 0 0 0	
HCM Ops f(lt) Adj Case Module: f(lt) Case: 5 5 5 5 5 5	2 XXXX XXXX 2 XXXX XXXX	
	1.00 1.00 1.00 1.00 1.00 1.00	
Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Grade 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 1.00 1.00	
Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 brea Adj: 1.00 1.00 1.00 1.00 1.00 1.00	xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00	
RT Adj: 0.90 0.90 0.90 0.98 0.98 0.98 LT Adj: 0.97 0.97 0.97 0.74 0.74	XXXX 1.00 1.00 XXXX 0.99 0.99 0.23 XXXX XXXX 0.19 XXXX XXXXX	
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 HCM Sat Adj: 0.87 0.87 0.87 0.73 0.73 0.73 Hcm Sat Adj: 0.0 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 0.23 1.00 1.00 0.19 0.99 1.00 1.00 1.00 1.00 1.00 1.00	
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Fnl Sat Adj: 0.87 0.87 0.87 0.73 0.73	1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95 0.23 0.95 0.95 0.19 0.94 0.94	
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2000 HCM Operations Future Volume Alter	2000 HCM Operations Method								

Intersection #36 St Francis Dr/Embarcadero Rd	* * * * * * * * * *	*******	*******	*******					
Approach:	North	South	East	West					
Cycle Length, C:	120	120	120	120					
Actual Green Time Per Lane Group, G:	35.78	35.78	76.22	76.22					
Effective Green Time Per Lane Group, g:	39.78	39.78	80.22	80.22					
Opposing Effective Green Time, go:	39.78	39.78	80.22	80.22					
Number Of Opposing Lanes, No:	1	1	2	2					
Number Of Lanes In Lane Group, N:	1	1	1	1					
Adjusted Left-Turn Flow Rate, Vlt:	5	189	39	30					
Proportion of Left Turns in Lane Group, Plt:	0.13	0.87	1.00	1.00					
Proportion of Left Turns in Opp Flow, Plto:	0.87	0.13	XXXXXX	XXXXXX					
Left Turns Per Cycle, LTC:	0.17	6.30	1.30	1.00					
Adjusted Opposing Flow Rate, Vo:	218	40	995	1142					
Opposing Flow Per Lane Per Cycle, Volc:	7.27	1.33	17.46	20.04					
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00					
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00					
Eff grn until arrival of left-turn car, gf:	27.08	2.32	0.00	0.00					
Opposing Queue Ratio, qro:	0.67	0.67	0.33	0.33					
Eff grn blocked by opposing queue, gq:	14.61	4.01	16.32	19.94					
Eff grn while left turns filter thru, gu:	12.70	35.77	63.90	60.28					
Max opposing cars arriving during gq-gf, n:	0.00	0.85	XXXXXX	XXXXXX					
Proportion of Opposing Thru & RT cars, ptho:	0.13	0.88	XXXXXX	XXXXXX					
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.25	0.16					
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00					
Through-car Equivalents, ell:	1.74	1.46	3.46	4.02					
Single Lane Through-car Equivalents, el2:	1.00	1.00	XXXXXX	XXXXXX					
Minimum Left Turn Adjustment Factor, fmin:	0.06	0.09	0.05	0.05					
Single Lane Left Turn Adjustment Factor, fm:	0.97	0.74	0.23	0.19					
Left Turn Adjustment Factor, flt:	0.97	0.74	0.23	0.19					
Level Of Service Detailed Computation	Report ((Ped/Bike	Sat Adj)						
2000 HCM Operations	Method								
Future Volume Alte:	rnative								
***************************************	* * * * * * * * *	*******	********	******					

*******	*******	*******	******	****	****	*****	*****	* * * * * * *	*****	* * * * 1	*****
Intersection	#36 St E	rancis I	Dr/Embar	cader	o Rd						
**************************************	Novth		**************************************	*****	*****	*****	*****	*******	******	****	******
Movement:	T 7	Bound - R	T	т –	R	T	авсь - Т	- R	T	T	- R
CrsswalkWid:	8.00	8.00	8.00	8	.00	8.0	C	8.00	8.00		8.00
CrsswalkLen:	60.00	60.00	60.00	60	.00	24.0	D :	24.00	24.00	1	24.00
MinPedGrn:	18.23	18.22	18.22	18	.23	9.2	4	9.24	9.24		9.24
PedGrn:	39.78	39.78	39.78	39	.78	80.2	2 1	80.22	80.22	8	30.22
PedVolume:	3	2	2		3		5	5	!	5	5
PedFlowRate:	9	6	6		9		7	7		7	7
BikeVol:	0	0	0		0		0	0		0	0
Bikeriwkate:	0 005	0 003	0 003		0.05	0.00	0	0 004	0 00	4	0 004
Pedoce:	0.005	0.003	0.003	0	.005	0.0		0.004	0.00	94 N	0.004
PedAfterOcc:	0.000	0.000	0.000	0	000	0.0	13	0.000	0.00	3	0.000
r0cc;	0.003	0.003	0.003	0	.005	0.0	01	0.004	0.00	1	0.004
TurnVehAdj:	0.998	0.998	0.998	0	.997	0.9	99	0.996	0.99	9	0.996
Prt:	0.000	0.775	0.000	0	.119	0.0	00	0.008	0.00	0	0.087
Prta:	0.000	0.000	0.000	0	.000	0.0	00	0.000	0.00	0	0.000
Plt:	0.125	0.000	0.867	0	.000	1.0	00	0.000	1.00	0	0.000
Plta:	0.000	0.000	0.000	0	.000	0.0	00	0.000	0.00	0	0.000
PedBike Adj:	1.000	0.999	0.999	1	.000	0.9	99	1.000	0.99	9	1.000
Level (JI Servio	e Detail	Led Comp	utati	on Re	port	(HCM2)	JUU Que	ue Metl	nod)	
		200	JU HCM O	perat	10ns	Metho	2				
*****	*******	Fl *******		⊥ume *****	AITE1	:::atlv:	≓ * * * * * *	******	*****	* * * * *	*****
Intersection	#36 St 1	rancie)r/Embar	cader	o Rd						
**********	#30 BL E	*******	*******	*****	*****	*****	****	******	*****	****	*****
Approach:	North	Bound	Sout	h Bou	nd	F	ast R	ound	We	st R	ound
Movement:	L - 1	r – R	L -	T -	R	L	- T	- R	L -	T	- R
Green/Cycle:	0.33 0.3	3 0.33	0.33 0	.33	0.33	0.67	0.67	0.67	0.67	0.67	0.67
ArrivalType:		3		3			3			3	
ProgFactor:	1.00 1.0	0 1.00	1.00 1	.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.9 0.	9 0.9	5.8	5.8	5.8	0.5	9.7	9.7	0.4	8.0	8.0
UpstreamVC:	0.00 0.0	0.00	0.00 0	.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00 0.0	0.00	0.00 0	.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00 1.0	0 1.00	1.00 1	.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.1 0.	1 0.1	0.9	0.9	0.9	0.2	0.9	0.9	0.1	0.7	0.7
HCM2KQueue:	1.0 1.	0 1.0	6.6	6.6	6.6	0.6	10.6	10.6	0.5	8./	8.7
70th%Factor:	1 20 1 2	20 1 20	1 18 1	1.8	1 18	1 20	1 18	1 18	1 20	1 1 8	1 18
HCM2k70thO:	1 2 1	2 1 2	7 9	7 9	7 9	0.8	12 5	12 5	0.6	10 3	10 3
85th%Factor:	1.59 1.5	59 1.59	1.54 1	.54	1.54	1.59	1.51	1.51	1.59	1.52	1.52
HCM2k85thQ:	1.6 1.	6 1.6	10.2 1	0.2	10.2	1.0	16.0	16.0	0.8	13.3	13.3
90th%Factor:	1.78 1.7	78 1.78	1.69 1	.69	1.69	1.79	1.64	1.64	1.79	1.66	1.66
HCM2k90thQ:	1.8 1.	8 1.8	11.2 1	1.2	11.2	1.1	17.3	17.3	0.9	14.5	14.5
95th%Factor:	2.07 2.0	07 2.07	1.91 1	.91	1.91	2.08	1.83	1.83	2.08	1.87	1.87
HCM2k95thQ:	2.1 2.	1 2.1	12.7 1	2.7	12.7	1.3	19.4	19.4	1.1.	16.3	16.3
O@th%Eastor:	2 62 2 6	2 2 62	2 20 2	20	2 20	2 65	2 14	2 14	2 66	2 21	2 21
UCM2k08+b0.	2.03 2.0	6 2.03	15 3 1	5 3	15 3	2.05	2.14	2.14	2.00	10 3	10 3
nem2k50eng.	2.0 2.	Fuel	Consump	tion	and F	missi/	22.7	22.7	1.5	10.0	10.5
		200	0 HCM 0	perat	ions	Metho	1				
		Fi	uture Vo	lume	Alter	native	•				
*******	* * * * * * * * *	******	******	****	****	****	****	* * * * * *	*****	* * * * *	*****
Intersection	#36 St B	rancis I	Dr/Embar	cader	o Rd						
*******	*******	******	******	****	****	*****	****	******	*****	* * * * 1	*****
Approach:	North	Bound	Sout	h Bou	nd	Ea	ast Bo	ound	We	st Bo	ound
Movement:	L - 1	r – R	L -	т –	R	L ·	- T	- R	L -	т	- R
Run Speed:	30) MPH		30 MP	H		30 1	MPH		30 1	1PH
NumOfStops:	0.9 0.	.7 5.3	37.5	0.6	5.2	3.5	137	1.1	2.7	104	10.0
Namo: waar 1	0.5 0.0000	aito fla									
Fuel Consumpt	tion:	48 824	nounde								
Fuer consump		7 909	gallons								
Carbon Dioxid	le:	152.330	pounds								
Carbon Monox	ide:	11.087	pounds								
Hydrocarbons	:	1.774	pounds								
Nitrogen Oxid	des:	0.471	pounds								
Name: year 2	000 compo	site fle	eet								
Fuel Consumpt	tion:	48.824	pounds								
		7.909	gallons								
Carbon Dioxio	ie:	152.330	pounds								
Carbon Monox:	ide:	1 .087	pounds								
Hydrocarbons	dogʻ	1.774	pounds								
Microgen OX10	Jes.	0.4/1	pounds								

DISCLAIMER The fuel consumption and emissions measures should be used with

Traffix 8.0.0715

Level Of Service Computation Report 2000 HCM Operations (alternative)								
Intersection #36: St Francis Dr/Embarc	Intersection #36: St Francis Dr/Embarcadero Rd							
	Signal=Permit/Rights=Include							
Final Vol: 66	7*** 236							
Lanes: 0								
•	◆ ↓ ↓ ↓ ▶							
Signal=Permit Final Vol: Lanes: Rights=Include	Signal=Permit Vol Cnt Date: n/a Rights=Include Lan	es: Final Vol:						
78 1 🍠	Cycle Time (sec): 120	87						
o 🛧	Loss Time (sec): 0							
1187*** 1	Critical V/C: 0.552 1	964						
1 🚽	Avg Crit Del (sec/veh): 17.6 0							
9 0 -	Avg Delay (sec/veh): 16.0	30						
•	LOS: B							
•								
Lanes: 0	0 1! 0 0							
	7 31 Signal=Permit/Rights=Include							
Approach: North Bound South Bound	East Bound West Bound							
Min. Green: 0 0 0 0 0 0								
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 	4.0 4.0 4.0 4.0 4.0 4.0 4.0 							
Base Vol: 5 7 31 236 7 66 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00	78 1187 9 30 964 87 1.00 1.00 1.00 1.00 1.00 1.00							
Initial Bse: 5 7 31 236 7 66 Added Vol: 0 0 0 0 0 0 PasserBvVol: 0 0 0 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
Initial Fut: 5 7 31 236 7 66 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00	78 1187 9 30 964 87 1.00 1.00 1.00 1.00 1.00 1.00							
PHF Adj: 1.00 1.00 1.00 1.00 1.00 PHF Volume: 5 7 31 236 7 66 Reduct Vol: 0 0 0 0 0 0	1.00 1.00 1.00 1.00 1.00 1.00 78 1187 9 30 964 87 0 0 0 0 0 0 0							
Reduced Vol: 5 7 31 236 7 66 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00	78 1187 9 30 964 87 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00							
FinalVolume: 5 7 31 236 7 66	78 1187 9 30 964 87							
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 Adjustment: 0.88 0.88 0.88 0.74 0.74 0.74	1900 1900 1900 1900 1900 1900 0.19 0.95 0.95 0.15 0.94 0.94							
Lanes: 0.12 0.16 0.72 0.77 0.02 0.21 Final Sat.: 194 271 1201 1069 32 299	1.00 1.98 0.02 1.00 1.83 0.17 365 3579 27 287 3271 295							
	0.21 0.33 0.33 0.10 0.29 0.29							
Crit Moves: **** Green/Cycle: 0.40 0.40 0.40 0.40 0.40 0.40 0.40	**** 0.60 0.60 0.60 0.60 0.60 0.60							
Uniform Del: 22.2 22.2 22.2 27.8 27.8 27.8 IncremntDel: 0.0 0.0 0.0 1.2 1.2 1.2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 0.00 Delay (Math.	0.0 0.0 0.0 0.0 0.0 0.0 1.00 1.00 1.00 1							
User DelAdj: 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 22.2 22.2 22.2 29.0 29.0 29.0	1.00 1.00 1.00 1.00 1.00 1.00 1.00 13.2 14.6 14.6 11.2 13.8 13.8							
LOS by Move: C C C C C C C HCM2kAvgQ: 1 1 1 9 9 9 Note: Oueue reported is the number of cars per	B B B B B B 2 14 14 1 11 11							
HCM Ops Adjusted Lane Utilization Module:								
Lanes: 0 0 1! 0 0 0 0 1! 0 0 Lane Group: LTR LTR LTR LTR LTR LTR #LnsInGrps: 1 1 1 1 1	1 0 1 1 0 1 0 1 1 0 L RT RT L RT RT 1 2 2 1 2 2							
HCM Ops Input Saturation Adj Module:								
Lane Width: 12 12 12 12 12 12 CrsswalkWid: 8 8 % Hev Veh: 0 0	12 12 12 12 12 12 8 8 0 0							
Grade: 0% 0% Parking/Hr: No No Data Obs (Ust) 0 0	0% 0% No No							
Area Type: < < < < < < < < < < < < < < < < < < <	ther $>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>$							
ExclusiveRT: Include Include % RT Prtct: 0 0 	Include Include 0 0							
HCM Ops f(lt) Adj Case Module: f(lt) Case: 5 5 5 5 5 5 5								
HCM Ops Saturation Adj Module: Ln Wid 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							
Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Grade 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 1.00 1.00							
Parking Adj: 1.00 1.00 1.00 1.00 1.00 Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00	xxxx 1.00 1.00 XXXX 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00							
RT Adj: 0.90 0.90 0.90 0.97 0.97 0.97 LT Adj: 0.97 0.97 0.97 0.76 0.76 0.76	XXXX 1.00 1.00 XXXX 0.99 0.99 0.19 XXXX XXXXX 0.15 XXXX XXXXX							
HCM Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0.19 1.00 1.00 1.00 1.00 1.00 0.19 1.00 1.00 0.15 0.99 0.99 1.00 1.00 1.00 1.00 1.00 1.00							
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Fnl Sat Adj: 0.88 0.88 0.88 0.74 0.74 0.74	1.00 0.95 0.95 1.00 0.95 0.95 0.19 0.95 0.95 0.15 0.94 0.94							
Traffix 8.0.0715	Copyright (c) 2008 Dowling Associates, Inc.	Licensed to Hexagon Trans., San Jose						

Enture Volume Alternative								

Intersection #36 St Francis Dr/Embarcadero Rd	*******	*******	*******	*******				
Approach:	North	South	East	West				
Cycle Length, C:	120	120	120	120				
Actual Green Time Per Lane Group, G:	43.96	43.96	68.04	68.04				
Effective Green Time Per Lane Group, g:	47.96	47.96	72.04	72.04				
Opposing Effective Green Time, go:	47.96	47.96	72.04	72.04				
Number Of Opposing Lanes, No:	1	1	2	2				
Number Of Lanes In Lane Group, N:	1	1	1	1				
Adjusted Left-Turn Flow Rate, Vlt:	5	236	78	30				
Proportion of Left Turns in Lane Group, Plt:	0.12	0.76	1.00	1.00				
Proportion of Left Turns in Opp Flow, Plto:	0.76	0.12	XXXXXX	XXXXXX				
Left Turns Per Cycle, LTC:	0.17	7.87	2.60	1.00				
Adjusted Opposing Flow Rate, Vo:	309	43	1051	1196				
Opposing Flow Per Lane Per Cycle, Volc:	10.30	1.43	18.44	20.98				
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00				
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00				
Eff grn until arrival of left-turn car, gf:	33.27	1.89	0.00	0.00				
Opposing Queue Ratio, qro:	0.60	0.60	0.40	0.40				
Eff grn blocked by opposing queue, gq:	17.01	3.78	21.28	25.79				
Eff grn while left turns filter thru, gu:	14.69	44.18	50.76	46.25				
Max opposing cars arriving during gq-gf, n:	0.00	0.95	XXXXXX	XXXXXX				
Proportion of Opposing Thru & RT cars, ptho:	0.24	0.88	XXXXXX	XXXXXX				
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXXX	0.22	0.13				
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00				
Through-car Equivalents, ell:	1.92	1.46	3.67	4.24				
Single Lane Through-car Equivalents, el2:	1.00	1.00	XXXXXX	XXXXXX				
Minimum Left Turn Adjustment Factor, fmin:	0.05	0.07	0.06	0.06				
Single Lane Left Turn Adjustment Factor, fm:	0.97	0.76	0.19	0.15				
Left Turn Adjustment Factor, flt:	0.97	0.76	0.19	0.15				
Level Of Service Detailed Computation Re	port (HCM	12000 Quei	ue Method					
2000 HCM Operations	Method							
Future volume Alter	11aL1Ve	********	********	******				
Intersection #36 St Francis Dr/Embarcadero Rd								

**********	#30 SC FIG	******	*********	*******	*******	*****	******	*****
Approach: Movement:	North Bo L - T	ound - R	South B L - T	ound - R	East Bo L - T	und - R	West Bo L - T	und - R
Green/Cycle: ArrivalType: ProgFactor: Q1: UpstreamVC: UpstreamAdj: EarlyArrAdj: Q2: HCM2KQueue:	$\begin{array}{cccccccc} 0.40 & 0.40 & & & & & & & \\ & & & & & & & & & \\ 1.00 & 1.00 & 0.9 & & & & & & \\ 0.00 & 0.00 & 0.00 & & & & & & \\ 1.00 & 1.00 & 1.00 & & & & & \\ 0.1 & 0.1 & 0.1 & & & & \\ 1.0 & 1.0 & & & & & & \\ \end{array}$	0.40 1.00 0.9 0.00 0.00 1.00 0.1 1.0	0.40 0.40 3 1.00 1.00 7.9 7.9 0.00 0.00 0.00 0.00 1.00 1.00 1.2 1.2 9.1 9.1	0.40 1.00 7.9 0.00 0.00 1.00 1.2 9.1	0.60 0.60 3 1.00 1.00 1.3 12.5 0.00 0.00 0.00 0.00 1.00 1.00 0.5 1.2 1.9 13.8	0.60 1.00 12.5 0.00 0.00 1.00 1.2 13.8	$\begin{array}{ccccccc} 0.60 & 0.60 & & & & & & \\ 3 \\ 1.00 & 1.00 & & & & \\ 0.4 & 10.4 & & & & \\ 0.00 & 0.00 & & & & & \\ 0.00 & 0.00 & 1.00 & & & \\ 0.2 & 1.0 & & & & \\ 0.7 & 11.4 \end{array}$	0.60 1.00 10.4 0.00 0.00 1.00 1.0 11.4
70th%Factor: HCM2k70thQ:	1.20 1.20 1.1	1.20	1.18 1.18 10.8 10.8	1.18	1.20 1.17 2.2 16.1	1.17 16.1	1.20 1.18 0.8 13.4	1.18 13.4
85th%Factor: HCM2k85thQ:	1.59 1.59 1.5 1.5	1.59 1.5	1.52 1.52 13.9 13.9	1.52 13.9	1.58 1.49 2.9 20.5	1.49 20.5	1.59 1.51 1.0 17.2	1.51
90th%Factor: HCM2k90thQ:	1.78 1.78 1.7 1.7	1.78	1.65 1.65 15.1 15.1	1.65	1.76 1.60 3.3 22.0	1.60 22.0	1.79 1.63 1.2 18.5	1.63
95th%Factor: HCM2k95thQ:	2.07 2.07 2.0 2.0	2.07 2.0	1.86 1.86 17.0	1.86 17.0	2.04 1.78 3.8 24.5	1.78 24.5	2.08 1.82 1.4 20.7	1.82 20.7
98th%Factor: HCM2k98thQ:	2.63 2.63 2.5 2.5	2.63 2.5 Fuel 200 Fu	2.20 2.20 20.0 20.0 Consumptic 0 HCM Oper ture Volum	2.20 20.0 n and E ations we Alter	2.57 2.05 4.8 28.2 missions Method mative	2.05 28.2	2.65 2.12 1.7 24.1	2.12 24.1
**************** Intersection	#36 St Fra	ncis D	********** r/Embarcad	****** ero Rd	*******	*****	********	*****
Approach: Movement: Run Speed: NumOfStops:	North Bo L - T 	ound - R 1PH 4.8	South E L - T 	******** - R MPH 12.7	East Bo L - T 	ound - R IPH 1.3	West Bo L - T 30 M 3.3 137	****** - R PH 12.3
Name: year 1	995 compos:	te fle	et					

nume. Jear 1999 com	poblec 11	
Fuel Consumption:	62.248	pounds
	10.084	gallons
Carbon Dioxide:	194.215	pounds
Carbon Monoxide:	14.588	pounds
Hydrocarbons:	2.470	pounds
Nitrogen Oxides:	0.585	pounds
Name: year 2000 com	posite fle	eet
Fuel Consumption:	62.248	pounds
	10.084	gallons
Carbon Dioxide:	194.215	pounds
Carbon Monoxide:	14.588	pounds
Hydrocarbons:	2.470	pounds
Nitrogen Oxides:	0.585	pounds
DISCLAIMER		
The fuel consumptio	n and emi	ssions measures should be used with

The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

	Level Of Service Computa 2000 HCM Operations (Future V Background + Project	ation Report olume Alternative) ct PM
Intersection #36: St Francis Dr/Embarca	dero Rd	
- Sic	anal-Permit/Rights-Include	
Final Vol: 66	7*** 236	
Lanes: 0		
▲ ◆	▝₄ ⋠⋟⋟⋟⋗	
Signal=Permit Final Vol: Lanes: Rights=Include	Sigr Vol Cnt Date: n/a Righ	nal=Permit hts=Include Lanes: Final Vol:
78 1	Cycle Time (sec): 120	♦ 0 87
×	Loss Time (sec): 0	▲ ⁰ ⁸ ′
		4
	vg Crit Del (sec/ven): 17.6	
9 O 🏹	Avg Delay (sec/veh): 15.9	1 30
•	LOS: B	•
Lanes: 0	0 1! 0 0	
Final Vol: 5 Sio	7 31 gnal=Permit/Rights=Include	
Approach: North Bound South Bound	East Bound West Bound	
Movement: L - T - R L - T - R 	L - T - R L - T - R	
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Volume Module: Base Vol: 5 7 31 236 7 66	78 1187 9 30 964 87	
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1 Initial Bse: 5 7 31 236 7 66	.00 1.00 1.00 1.00 1.00 1.00 78 1187 9 30 964 87	
PasserByVol: 0 0 0 0 0 0 Initial Fut: 5 7 31 236 7 66	0 0 0 0 0 0 78 1193 9 30 973 87	
User Adj: 1.00 1.00 1.00 1.00 1.00 1 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1	00 1.00 1.00 1.00 1.00 1.00 00 1.00 1	
PHF Volume: 5 7 31 236 7 66 Reduct Vol: 0 0 0 0 0 0 Peduced Vol: 5 7 31 236 7 66	78 1193 9 30 973 87 0 0 0 0 0 0 78 1193 9 30 973 87	
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1	00 1.00 1.00 1.00 1.00 1.00 00 1.00 1	
FinalVolume: 5 7 31 236 7 66	78 1193 9 30 973 87	
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1 Adjustment: 0.88 0.88 0.74 0.74 0.74 0	.900 1900 1900 1900 1900 1900 1.19 0.95 0.95 0.15 0.94 0.94	
Lanes: 0.12 0.16 0.72 0.77 0.02 0.21 1 Final Sat.: 194 271 1200 1069 32 299	.00 1.99 0.01 1.00 1.84 0.16 361 3579 27 285 3274 293	
Capacity Analysis Module:		
Crit Moves: Green/Cycle: 0.40 0.40 0.40 0.40 0.40 0.40 0.40 0	**** .60 0.60 0.60 0.60 0.60 0.60 0.60	
Volume/Cap: 0.06 0.06 0.06 0.55 0.55 0.55 0 Uniform Del: 22.3 22.3 22.3 27.9 27.9 1	0.36 0.55 0.55 0.17 0.49 0.49 2.1 14.3 14.3 10.6 13.5 13.5	
IncremntDel: 0.0 0.0 0.0 1.2 1.2 1.2 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 Delay Addi: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.0 0.3 0.3 0.5 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.00 1.00 1.00 1.00	
Delay/Veh: 22.3 22.3 22.3 29.1 29.1 1 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1		
AdjDel/Veh: 22.3 22.3 22.3 29.1 29.1 1 LOS by Move: C C C C C C	3.2 14.6 14.6 11.1 13.7 13.7 B B B B B B B	
HCM2kAvgQ: 1 1 1 9 9 9 Note: Queue reported is the number of cars per 1	2 14 14 1 12 12 ane.	
HCM Ops Adjusted Lane Utilization Module: Lanes: 0 0 1! 0 0 0 0 1! 0 0	10110 10110	
Lane Group: LTR LTR LTR LTR LTR LTR #LnsInGrps: 1 1 1 1 1 1	L RT RT L RT RT 1 2 2 1 2 2	
HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 12 12 12	12 12 12 12 12 12 12	
CrsswalkWid: 8 8 % Hev Veh: 0 0	8 8 0 0	
Grade: 0% 0% Parking/Hr: No No Pup Crr/Ur: 0	0% 0% No No	
Area Type: < < < < < < < < < < < < < < < < < < <	r >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	
ExclusiveRT: Include Include % RT Prtct: 0 0	Include Include 0 0	
	2 XXXX XXXX 2 XXXX XXXY	
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1 Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00	00 1.00 1.00 1.00 1.00 1.00 00 1.00 1	
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1 Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 x Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 x		
Area Adj: 1.00	00 1.00 1.00 1.00 1.00 1.00 xxx 1.00 1.00 xxx 0.99 0.99	
LT Adj: 0.97 0.97 0.97 0.76 0.76 0.76 0 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0.19 XXXX XXXXX 0.15 XXXX XXXXX 00 1.00 1.00 1.00 1.00 1.00 1.00	
HLF Sat Adj: 0.88 0.88 0.74 0.74 0.74 0.74 0 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1 MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	9 1.00 1.00 0.15 0.99 0.99 00 1.00 1.00 1.00 1.00 1.00 00 0.95 0.95 1.00 0.95 0.95	
Fnl Sat Adj: 0.88 0.88 0.88 0.74 0.74 0.74 0	0.19 0.95 0.95 0.15 0.94 0.94	

Traffix 8.0.0715

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Future Volume Alternative									
Intersection #36 St Francis Dr/Embarcadero Rd									
***************************************	******	*******	******	******					
Approach:	North	South	East	West					
Cycle Length, C:	120	120	120	120					
Actual Green Time Per Lane Group, G:	43.81	43.81	68.19	68.19					
Effective Green Time Per Lane Group, g:	47.81	47.81	72.19	72.19					
Opposing Effective Green Time, go:	47.81	47.81	72.19	72.19					
Number Of Opposing Lanes, No:	1	1	2	2					
Number Of Lanes In Lane Group, N:	1	1	1	1					
Adjusted Left-Turn Flow Rate, Vlt:	5	236	78	30					
Proportion of Left Turns in Lane Group, Plt:	0.12	0.76	1.00	1.00					
Proportion of Left Turns in Opp Flow, Plto:	0.76	0.12	XXXXXX	XXXXXX					
Left Turns Per Cycle, LTC:	0.17	7.87	2.60	1.00					
Adjusted Opposing Flow Rate, Vo:	309	43	1060	1202					
Opposing Flow Per Lane Per Cycle, Volc:	10.30	1.43	18.60	21.09					
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00					
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00					
Eff grn until arrival of left-turn car, gf:	33.15	1.88	0.00	0.00					
Opposing Queue Ratio, qro:	0.60	0.60	0.40	0.40					
Eff grn blocked by opposing queue, gq:	17.05	3.79	21.47	25.91					
Eff grn while left turns filter thru, gu:	14.66	44.02	50.72	46.28					
Max opposing cars arriving during gq-gf, n:	0.00	0.96	XXXXXX	XXXXXXX					
Proportion of Opposing Thru & RT cars, ptho:	0.24	0.88	XXXXXX	XXXXXXX					
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.21	0.12					
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00					
Through-car Equivalents, ell:	1.92	1.46	3.71	4.27					
Single Lane Through-car Equivalents, el2:	1.00	1.00	XXXXXX	XXXXXX					
Minimum Left Turn Adjustment Factor, fmin:	0.05	0.07	0.06	0.06					
Single Lane Left Turn Adjustment Factor, fm:	0.97	0.76	0.19	0.15					
Left Turn Adjustment Factor, flt:	0.97	0.76	0.19	0.15					
Level Of Service Detailed Computation Re	eport (HCM	12000 Quei	ie Method)					
2000 HCM Operations	Method								
Future Volume Alter	native								
***************************************	*******	*******	********	*******					

Intersection	#36 \$	St Fra	ncis I *****	or/Emba	ircade	ro Rd *****	*****	*****	*****	*****	****	*****
Approach:	Noi	th Bo	und	Sou	ith Bo	und	Ea	ast Bo	und	We	st Boi	und
Movement:	L -	- т	- R	L -	т	- R	L -	- т	- R	L -	т	- R
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.60	0.60	0.60	0.60	0.60	0.60
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.9	0.9	0.9	8.0	8.0	8.0	1.3	12.6	12.6	0.4	10.5	10.5
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
UCM2KONONO.	1.0	1.0	1.0	1.2	1.2	1.2	1.0	12 0	12 0	0.2	11 5	11 5
HCM2RQueue:	1.0	1.0	±.0	9.1	9.1	9.1 	1.9	13.0	13.0	1	11.5	
70th%Factor:	1 20	1 20	1 20	1 18	1 18	1 18	1 20	1 17	1 17	1 20	1 18	1 18
HCM2k70th0;	1.1	1.1	1.1	10.8	10.8	10.8	2.2	16.2	16.2	0.8	13.5	13.5
85th%Factor:	1.59	1.59	1.59	1.52	1.52	1.52	1.58	1.49	1.49	1.59	1.50	1.50
HCM2k85thQ:	1.5	1.5	1.5	13.9	13.9	13.9	2.9	20.6	20.6	1.0	17.3	17.3
90th%Factor:	1.78	1.78	1.78	1.65	1.65	1.65	1.76	1.60	1.60	1.79	1.63	1.63
HCM2k90thQ:	1.7	1.7	1.7	15.1	15.1	15.1	3.3	22.1	22.1	1.2	18.7	18.7
95th%Factor:	2.07	2.07	2.07	1.86	1.86	1.86	2.04	1.78	1.78	2.08	1.82	1.82
HCM2k95thQ:	2.0	2.0	2.0	17.0	17.0	17.0	3.8	24.6	24.6	1.4	20.9	20.9
0.0++*=	2 62	2 62		2.10	2 10		0 57	2 05			2 11	
UCM22698+bO.	2.03	2.03	2.03	2.19	2.19	2.19	2.5/	2.05	2.05	2.05	2.11	2.11
HCM2K98CHQ.	2.5	2.5	2.5	20.1	20.1	20.1	4.0 niggi	20.5	20.5	1.7	24.5	24.5
			200	IO HCM	Onera	tions	Methor	3				
			Fu	ture \	/olume	Alter	native	<u> </u>				
*****	*****	*****	*****	*****	****	*****	*****	*****	*****	*****	****	*****
Intersection	#36 \$	St Fra	ncis I	r/Emba	ircade	ro Rd						
*******	*****	*****	* * * * * *	*****	*****	*****	* * * * * *	*****	*****	* * * * * *	****	*****
Approach:	Noi	rth Bo	und	Sou	ith Bo	und	Ea	ast Bo	und	We	st Bo	und
Movement:	L ·	- т	- R	L -	- т	- R	L ·	- T	- R	L -	т	- R
Run Speed:		30 M	PH		30 M	PH		30 M	PH		30 MI	PH
NumOfStops:	0.8	1.1	4.8	45.5	1.4	12.7	9.9	178	1.3	3.3	138	12.3
Nomo: woom 10	0 E		+									
Fuel Consumpt	ion.	-reoquit	2 543	nounde	,							
ruer combumpt	-1011-	1	0 132	gallor	, ne							
Carbon Diovid	le:	19	5.133	pounds								
Carbon Monox:	ide:	1	4.655	pounds	-							
Hydrocarbons		-	2.480	pounds	3							
Nitrogen Oxid	les:		0.588	pounds	3							
Name: year 20	000 co	omposi	te fle	et								
Fuel Consumpt	ion:	6	2.543	pounds	3							
		1	0.132	gallor	ıs							

10.132 gallons 195.133 pounds 14.655 pounds 2.480 pounds 0.588 pounds Carbon Dioxide: Carbon Monoxide: Hydrocarbons: Nitrogen Oxides:

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Level Of Service Computation Report 2000 HCM Operations (alternative) Cumulative PM									
Intersection #36: St Francis Dr/Embarcadero Rd									
	F	Final Vol: 68 Lanes: 0	Signal=Permit/Rigl 7*** 0 1!	nts=Include 250 0 0					
Final Vol: Lane	Signal=Pe s: Rights=Inc	rmit lude	Vol Cnt	• Date: n/a	Signal=Permit Rights=Include	Lanes:	Final Vol:		
81 1	≯		Cycle Time	sec): 120	•	0	93		
0			Loss Time	(sec): 0		. 1			
1279*** 1	-		Critical	V/C: 0.591		. 1	1043		
1			Avg Crit Del (sec/	veh): 18.1	- *	• 0			
10 0	Ĩ.		Avg Delay (sec/	veh): 16.4		1	32		
				LOS: B					
			▲ ↑ ↑	1 1					
	-	Lanes: 0	0 1!	0 0					
	Г	inar voi. 5	/ Signal=Permit/Rigl	nts=Include					
Approach: N Movement: L	lorth Bound - T - R	South Bound L - T - R	East Bound L - T - R	West Bound L - T - R					
Min. Green: Y+R: 4.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 4.0 4.0 4.0	0 0 0 0 4.0 4.0 4.0	0 0 0 0 4.0 4.0					
Volume Module: Base Vol: Growth Adi: 1.0	5 7 33 10 1.00 1.00	250 7 68 1.00 1.00 1.00	81 1273 10 1.00 1.00 1.00	32 1034 93 1.00 1.00 1.00					
Initial Bse: Added Vol: PasserBvVol:	5 7 33 0 0 0 0 0 0	250 7 68 0 0 0 0 0 0	81 1273 10 0 6 0 0 0 0	32 1034 93 0 9 0 0 0 0					
Initial Fut: User Adj: 1.0 PHF Adj: 1.0	5 7 33 0 1.00 1.00 0 1.00 1.00	250 7 68 1.00 1.00 1.00 1.00 1.00 1.00	81 1279 10 1.00 1.00 1.00 1.00 1.00 1.00	32 1043 93 1.00 1.00 1.00 1.00 1.00 1.00					
PHF Volume: Reduct Vol: Reduced Vol:	5 7 33 0 0 0 5 7 33	250 7 68 0 0 0 250 7 68	81 1279 10 0 0 0 81 1279 10	32 1043 93 0 0 0 32 1043 93					
PCE Adj: 1.0 MLF Adj: 1.0 FinalVolume:	0 1.00 1.00 0 1.00 1.00 5 7 33	1.00 1.00 1.00 1.00 1.00 1.00 250 7 68	1.00 1.00 1.00 1.00 1.00 1.00 81 1279 10	1.00 1.00 1.00 1.00 1.00 1.00 32 1043 93					
Saturation Flow Sat/Lane: 190	Module: 0 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900					
Adjustment: 0.8 Lanes: 0.1 Final Sat.: 18	7 0.87 0.87 1 0.16 0.73 5 259 1219	0.73 0.73 0.73 0.77 0.02 0.21 1070 30 291	0.17 0.95 0.95 1.00 1.98 0.02 321 3578 28	0.13 0.94 0.94 1.00 1.84 0.16 247 3275 292					
Capacity Analysi Vol/Sat: 0.0	.s Module: 3 0.03 0.03	0.23 0.23 0.23	0.25 0.36 0.36	0.13 0.32 0.32					
Crit Moves: Green/Cycle: 0.4 Volume/Cap: 0.0	0 0.40 0.40 7 0.07 0.07	**** 0.40 0.40 0.40 0.59 0.59 0.59	**** 0.60 0.60 0.60 0.42 0.59 0.59	0.60 0.60 0.60 0.21 0.53 0.53					
Uniform Del: 22. IncremntDel: 0. InitQueuDel: 0.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	28.6 28.6 28.6 1.7 1.7 1.7 0.0 0.0 0.0	12.5 14.6 14.6 1.5 0.4 0.4 0.0 0.0 0.0	10.8 13.8 13.8 0.7 0.2 0.2 0.0 0.0 0.0					
Delay Adj: 1.0 Delay/Veh: 22. User DelAdj: 1.0	0 1.00 1.00 6 22.6 22.6 0 1.00 1.00	1.00 1.00 1.00 30.3 30.3 30.3 1.00 1.00 1.00	1.00 1.00 1.00 14.0 15.0 15.0 1.00 1.00 1.00	1.00 1.00 1.00 11.5 14.0 14.0 1.00 1.00 1.00					
AdjDel/Veh: 22. LOS by Move: HCM2kAvgQ:	6 22.6 22.6 C C C 1 1 1	30.3 30.3 30.3 C C C 10 10 10	14.0 15.0 15.0 B B E 2 15 15	11.5 14.0 14.0 B B B 1 13 13					
Note: Queue repo HCM Ops Adjusted	orted is the r Lane Utiliza	number of cars pe ation Module:	r lane. 						
Lanes: 0 Lane Group: L1 #LnsInGrps:	0 1! 0 0 TR LTR LTR 1 1 1	0 0 1! 0 0 LTR LTR LTR 1 1 1	1 0 1 1 0 L RT RI 1 2 2	1 0 1 1 0 L RT RT 1 2 2					
HCM Ops Input Sa Lane Width: 1	turation Adj	Module: 12 12 12 12	12 12 12	12 12 12 12					
CrsswalkWid: % Hev Veh: Grade:	8 0 0%	8 0 0%	8 0 0%	8 0 0%					
Parking/Hr: Bus Stp/Hr: Area Type: <	No 0 < < < < < < <	No 0 < < < < < < < 0	No 0 ther > > > > > >	No 0 > > > > > > > > > > > >	• >				
Cnft Ped/Hr: ExclusiveRT: % RT Prtct:	0 Include 0	0 Include 0	0 Include 0	0 Include 0					
HCM Ops f(lt) Ad f(lt) Case:	ij Case Module 5 5 5	 ≥: 5 5 5 5	2 xxxx xxxx	 2 xxxx xxxx					
HCM Ops Saturati Ln Wid Adj: 1.0	on Adj Module 0 1.00 1.00	2: 1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00					
Grade Adj: 1.0 Parking Adj: 1.0 Bus Stp Adj: 1.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 xxxx 1.00 1.00	1.00 1.00 1.00 xxxx 1.00 1.00					
Area Adj: 1.0 RT Adj: 0.9	0 1.00 1.00	1.00 1.00 1.00 1.00 0.97 0.97 0.97	1.00 1.00 1.00 xxxx 1.00 1.00	1.00 1.00 1.00 xxxx 0.99 0.99					
PedBike Adj: 1.0 HCM Sat Adj: 0.8	0 1.00 1.00 0 1.00 1.00	0.73 0.75 0.75 0.75 1.00 1.00 1.00 0.73 0.73 0.73	1.00 1.00 1.00 0.17 1.00 1.00	1.00 1.00 1.00 0.13 0.99 0.99					
MLF Sat Adj: 1.0 Fnl Sat Adj: 0.8	0 1.00 1.00 7 0.87 0.87	1.00 1.00 1.00 0.73 0.73 0.73	1.00 0.95 0.95 0.17 0.95 0.95	1.00 0.95 0.95 0.13 0.94 0.94					

Traffix 8.0.0715

Future Volume Alternative								
***************************************	********	*******	*******	*******				
Intersection #36 St Francis Dr/Embarcadero Rd	*******	******	*******	******				
Approach:	North	South	East	West				
Cycle Length, C:	120	120	120	120				
Actual Green Time Per Lane Group, G:	43.44	43.44	68.56	68.56				
Effective Green Time Per Lane Group, g:	47.44	47.44	72.56	72.56				
Opposing Effective Green Time, go:	47.44	47.44	72.56	72.56				
Number Of Opposing Lanes, No:	1	1	2	2				
Number Of Lanes In Lane Group, N:	1	1	1	1				
Adjusted Left-Turn Flow Rate, Vlt:	5	250	81	32				
Proportion of Left Turns in Lane Group, Plt:	0.11	0.77	1.00	1.00				
Proportion of Left Turns in Opp Flow, Plto:	0.77	0.11	XXXXXX	XXXXXX				
Left Turns Per Cycle, LTC:	0.17	8.33	2.70	1.07				
Adjusted Opposing Flow Rate, Vo:	325	45	1136	1289				
Opposing Flow Per Lane Per Cycle, Volc:	10.83	1.50	19.93	22.61				
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00				
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00				
Eff grn until arrival of left-turn car, gf:	32.88	1.66	0.00	0.00				
Opposing Queue Ratio, gro:	0.60	0.60	0.40	0.40				
Eff grn blocked by opposing queue, gq:	17.81	3.95	23.60	28.70				
Eff grn while left turns filter thru, gu:	14.56	43.49	48.96	43.86				
Max opposing cars arriving during gq-gf, n:	0.00	1.15	XXXXXX	XXXXXX				
Proportion of Opposing Thru & RT cars, ptho:	0.23	0.89	XXXXXX	XXXXXX				
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.17	0.07				
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00				
Through-car Equivalents, ell:	1.95	1.47	3.99	4.66				
Single Lane Through-car Equivalents, el2:	1.00	1.14	XXXXXX	XXXXXX				
Minimum Left Turn Adjustment Factor, fmin:	0.05	0.07	0.06	0.06				
Single Lane Left Turn Adjustment Factor, fm:	0.97	0.75	0.17	0.13				
Left Turn Adjustment Factor, flt:	0.97	0.75	0.17	0.13				
Level Of Service Detailed Computation Re	eport (HCM	12000 Quei	ie Method)				
2000 HCM Operations	Method							
Future Volume Alter	native							
***************************************	********	*******	********	*******				

Intersection	#36 \$	St Fra	ncis I *****	Dr/Emba	arcade	ro Rd *****	*****	*****	*****	*****	****	*****
Approach:	Noi	th Bo	und	Sou	ith Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:	L ·	- т	- R	L ·	- т	- R	L ·	- т	- R	L -	- т	- R
Green/Cycle: ArrivalType:	0.40	0.40 3	0.40	0.40	0.40 3	0.40	0.60	0.60 3	0.60	0.60	0.60 3	0.60
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.9	0.9	0.9	8.5	8.5	8.5	1.4	13.9	13.9	0.5	11.6	11.6
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.1	0.1	0.1	1.4	1.4	1.4	0.7	1.4	1.4	0.3	1.1	1.1
HCM2KQueue:	1.0	1.0	1.0	9.9	9.9	9.9	2.1	15.3	15.3	0.8	12.7	12.7
70th%Factor:	1.20	1.20	1.20	1.18	1.18	1.18	1.19	1.17	1.17	1.20	1.17	1.17
HCM2k70thQ:	1.2	1.2	1.2	11.7	11.7	11.7	2.5	17.9	17.9	0.9	14.8	14.8
85th%Factor:	1.59	1.59	1.59	1.52	1.52	1.52	1.58	1.48	1.48	1.59	1.50	1.50
HCM2k85thQ:	1.6	1.6	1.6	15.0	15.0	15.0	3.3	22.7	22.7	1.2	18.9	18.9
90th%Factor:	1.78	1.78	1.78	1.64	1.64	1.64	1.76	1.59	1.59	1.79	1.61	1.61
HCM2k90thQ:	1.8	1.8	1.8	16.3	16.3	16.3	3.7	24.3	24.3	1.3	20.4	20.4
95th%Factor:	2.07	2.07	2.07	1.85	1.85	1.85	2.03	1.76	1.76	2.08	1.80	1.80
HCM2k95thQ:	2.1	2.1	2.1	18.3	18.3	18.3	4.3	26.9	26.9	1.6	22.7	22.7
98th%Factor:	2.63	2.63	2.63	2.17	2.17	2.17	2.55	2.01	2.01	2.64	2.08	2.08
HCM2k98thQ:	2.6	2.6	2.6	21.5	21.5	21.5	5.4	30.8	30.8	2.0	26.3	26.3
			Fuel	Consur	nption	and E	missio	ons				
			200	JO HCM	Opera	tions	Method	1				
			Fl	iture \	/olume	Alter	native					
Intersection	#36 \$	St Fra	ncis I	Dr/Emba	arcade	ro Rd						
********	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
Approach:	Noi	rth_Bo	und	Sou	ith_Bo	und	Ea	ast_Bo	und	We	est_Bo	und
Movement:	ь.	- T	- R	ь.	- T	- R	_ Ц -	- T	- R	_ Б -	- T	- R
l.												
Run Speea:		30 M	РН		30 M	IPH		30 M	РН		30 M	РН
NumOfStops:	0.8	1.1	5.1	49.3	1.4	13.4	10.7	197	1.5	3.6	151	13.5
Name. year is	995 CC	Juposi	7 0F1	eet.	_							
ruer consumpt	.1011.	1	0.001	gollo								
and a stand			1 604	garron	15							
Carbon Monovi	ido.	21	±.094	pounds	-							
Urdrogarbong	ue.	Ţ	0.943 0.710	pounds	-							
Nitrogan Ovi			2./1U	pounds	-							
MILLOGEN OXIC	ies.		0.038	pounds	5							
Name: year 20	100 ~		to f1	ot								
Fuel Congumpt	ion.	ະແມບອມ ຂ	CC 110 7 851	nound	-							
ruer consumpt		1	0 002	gallo	• •							
Carbon Dioxic	le:	21	1 694	nounde								
sares proved		~ ~		L - anton	-							

211.694 pounds 15.943 pounds 2.710 pounds 0.638 pounds Carbon Dioxide: Carbon Monoxide: Hydrocarbons: Nitrogen Oxides:

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Existing + Project AM Intersection #31: E Bayshore Dr/Embarcadero Rd Signal=Split/Rights=Overlap 861*** Final Vol: 170 56 Lanes: 1 0 0 1 0 Signal=Split Signal=Split Final Vol: Lanes: Rights=Overlap Vol Cnt Date: 5/27/2015 Rights=Include Lanes: Final Vol: Cycle Time (sec): 120 521*** 0 7*** Loss Time (sec): 12 1 590 Critical V/C: 0.966 1 144 0 Avg Crit Del (sec/veh): 57.1 0 353 Avg Delay (sec/veh): 52.4 1 20 D LOS: Lanes: 1 0 0 1 0 130*** Final Vol: 65 40 Signal=Split/Rights=Include Approach: Movement: North Bound West Bound т -R т -Min. Green: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Y+R: 4.0 4.0 4.0 4.0 4.0 Volume Module: >> Count Date: 27 May 2015 <<7:00 AM to 8:45 AM</th> Base Vol: 92 63 40 55 169 861 521 566 329 15 1 Growth Adj: 1.00 15 144 1.00 15 144 5 0 0 0 7 0 0 130 521 590 Initial Fut: 65 40 56 170 861 353 20 144 User Adj: PHF Adj: PHF Volume: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 861 521 590 353 20 144 1.00 0 Reduct Vol: 0 0 0 0 0 0 Reduced Vol: 130 521 590 20 144 861 353 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 521 590 353 20 144 7 PCE Adj: MLF Adj: FinalVolume: Saturation Flow Module: Capacity Analysis Module: 0.11 0.10 0.10 0.16 0.16 0.71 0.34 0.33 0.22 0.01 0.05 0.05 **** Vol/Sat: Crit Moves: Crit Moves: **** **** **** **** **** **** Green/Cycle: 0.11 0.11 0.39 0.39 0.74 0.35 0.35 0.46 0.05 0.05 Volume/Cap: 0.97 0.91 0.40 0.40 0.97 0.97 0.96 0.47 0.23 0.97 0.97 0.91 0.40 0.40 0.97 0.97 0.96 0.47 0.23 0.97 0.97 0.91 0.40 0.40 0.97 0.91 0.47 0.35 0.35 0.46 0.05 0.05 0.05 0.52 26.5 26.5 1.4 38.5 38.4 22.2 54.9 57.0</ 1.00 1.00 1.00 1.00 22.7 56.3 119 118.6 C E F F 9 1 4 2 Note: Queue reported is the number of cars per lane R L RT 1 2 2 -------HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 CrsswalkWid: 8 Hev Veh: 0 Grade: 0% 12 12 12 12 12 12 12 12 0% 0% 0% Parking/Hr: No No No No Bus Stp/Hr: 0 0 0 0 Area Type: Cnft Ped/Hr: ExclusiveRT: · > > > > Include Include Include Include % RT Prtct: 0 0 0 HCM Ops f(lt) Adj Case Module: f(lt) Case: 1 xxxx xxxx 4 xxxx 4 4 4 4 xxxx 1 xxxx xxxx ---||---1.00 1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 1.00 1.00 1.00 xxxx xxxx 0.85 0.99 0.99 xxxxx 1.00 1.00 1.00 0.99 0.85 0.85 xxxx 1.00 1.00 1.00 xxxx 0.99 1.00 0.99 LT Adj: 0.95 xxxx xxxxx PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 0.98 0.98 0.85 0.44 1.00 1.00 0.95 0.95 1.00 0.41 0.93 0.85 0.95 xxxx xxxxx El Adj: 0.95 XXXX XXXX PedBike Adj: 1.00 1.00 1.00 HCM Sat Adj: 0.95 0.94 0.94 Usr Sat Adj: 0.65 0.44 1.00 MLF Sat Adj: 1.00 1.00 1.00 Fnl Sat Adj: 0.62 0.41 0.94 1.00 0.85 0.75 1.00 1.00 1.00 0.99 0.95 0.99 0.85 0.75 1 00 0 95 0.44 1.00 1.00 0.84 0.74 1.00 1.00 0.95 0.95 0.64 0.95 0.90 0.41

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

Traffix 8.0.0715

Delay Adjustment Factor	Module:	
Coordinated: < < < < <	< < < < < < < < < < < < > > > > > > > >	> > >
Signal Type: < < < < <	< < < < < < < < Actuated >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	> > >
DelAdjFctr: 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	.00
Level Of Servic	e Detailed Computation Report (Ped/Bike Sat Adj)	
	2000 HCM Operations Method	

Future Volume Alternative

***********	*******	*******	******	*******	******	*******	* * * * * * *	*******
Intersection	#31 E Bay	shore Dr	/Embarca	dero Rd		********		
Approach:	North E	Bound	South	Bound	East	Bound	West	Bound
Movement:	L - T	- R	L - T	' - R 	L - T	' - R	L -	T - R
CrsswalkWid:	0.00	8.00	0.00	8.00	0.00	8.00	0.00	8.00
CrsswalkLen:	0.00	60.00	0.00	72.00	0.00	36.00	0.00	36.00
MinPedGrn:	0.00	18.22	0.00	21.21	0.00	12.20	0.00	12.21
PedGrn:	0.00	18.22	0.00	21.21	0.00	12.20	0.00	12.21
PedVolume:	0	2	0	1	0	0	0	1
PedFlowRate:	0	13	0	6	0	0	0	10
BikeVol:	0	0	0	0	0	0	0	0
BikeFlwRate:	0	0	0	0	0	0	0	0
PedOcc:	0.000	0.007	0.000	0.003	0.000	0.000	0.000	0.005
BikeOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedAfterOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
r0cc:	0.000	0.007	0.000	0.003	0.000	0.000	0.000	0.005
TurnVehAdj:	0.000	0.996	0.000	0.998	0.000	1.000	0.000	0.995
Prt:	0.000	0.381	0.000	1.000	0.000	1.000	0.000	0.046
Prta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plt:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedBike Adj:	1.000	0.998	1.000	0.998	1.000	1.000	1.000	1.000
Level C	f Service	Detaile	d Comput	ation Rep	ort (HCM	12000 Queu	e Metho	d)
		2000	HCM Ope	rations M	lethod			
		These		31+				

Future Volume Alternative Intersection #31 E Bayshore Dr/Embargadero Rd

INTERSECTION #31 E Baysnore Dr/Embarcadero RG												
Approach:	Noi	th Bo	ound	Sou	ith Bo	ound	Ea	ast Bo	ound	We	est Bo	ound
Movement:	L ·	- т	- R	L ·	- т	- R	L ·	- т	- R	L ·	- т	- R
Green/Cycle:	0.11	0.11	0.11	0.39	0.39	0.74	0.35	0.35	0.46	0.05	0.05	0.05
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	4.3	2.7	6.2	6.0	5.3	26.2	9.0	20.3	8.1	0.6	2.8	1.3
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.12
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.19	0.19	0.12
Q2:	3.8	2.8	3.9	0.7	0.7	8.7	5.3	7.4	0.9	0.1	1.2	0.7
HCM2KQueue:	8.1	5.5	10.0	6.7	5.9	34.9	14.3	27.7	9.0	0.7	4.0	2.0
70th%Factor:	1.18	1.19	1.18	1.18	1.19	1.14	1.17	1.15	1.18	1.20	1.19	1.20
HCM2K/UthQ:	9.5	6.5	11.8	/.9	/.1	39.8	16./	31.9	10.6	0.8	4.8	2.4
OEth&Eastor:	1 52	1 55	1 51	1 54	1 55	1 20	1 40	1 42	1 52	1 50	1 5 6	1 50
ucmolegetho:	12 2	T.00	15 2	10 2	1.00	10 6	21 2	20 /	12 7	1 1	4.50	2 1
HCM2K85CHQ.	12.3	0.5	10.2	10.2	9.2	40.0	21.2	39.4		1	0.5	3.1
90th%Factor:	1 67	1 70	1 64	1 69	1 70	1 47	1 60	1 50	1 66	1 79	1 73	1 76
HCM2k90tb0:	13 5	9 4	16 5	11 2	10 1	51 3	22 8	41 6	14 9	1 2	6 9	3 5
95th%Factor:	1.88	1.94	1.84	1.91	1.93	1.59	1.77	1.63	1.86	2.08	1.98	2.04
HCM2k95thQ:	15.2	10.7	18.5	12.7	11.5	55.3	25.3	45.2	16.7	1.4	8.0	4.0
98th%Factor:	2.24	2.36	2.16	2.30	2.33	1.77	2.03	1.82	2.20	2.65	2.43	2.56
HCM2k98thQ:	18.1	12.9	21.7	15.3	13.9	61.7	29.0	50.4	19.8	1.8	9.8	5.0
			Fuel	Consur	nptior	n and E	missio	ons				
			200	0 HCM	Opera	tions	Methor	1				

2000 HCM Operations Method

Future Volume Alternative									

Intersection #31 E Bays	Intersection #31 E Bayshore Dr/Embarcadero Rd								
Approach: North Bou Movement: L - T - Run Speed: 30 MI NumOfStops: 32.4 16.1	und - R PH 9.9	South Bound East Bound West Bound L - T - R L - T - R							
Name: year 1995 composit	e flee	et							
Fuel Consumption: 145	5.105 p 3.507 g	pounds gallons							
Carbon Dioxide: 452	2.729 p	pounds							
Carbon Monoxide: 3'	7.740 p	pounds							
Hydrocarbons:	7.615 p	pounds							
Nitrogen Oxides:	L.098 p	pounds							
Name: year 2000 composit	e flee	et							
Fuel Consumption: 145	5.105 p	pounds							
23	3.507 g	gallons							
Carbon Dioxide: 453	2.729 p	pounds							
Carbon Monoxide: 37	7.740 p	pounds							
Hydrocarbons:	7.615 p	pounds							
Nitrogen Oxides:	L.098 p	pounds							

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Level Of Service Computation Report

		2000 HC	Existing + Pr	oject PM
Intersection #31: E Ba	yshore Dr/Emba	rcadero Rd	_	
	Final Vol: 508***	Signal=Split/Rights 110	=Overlap 17	
	Lanes: 1	0 0	1 0	
	/			
	•	*★ ★	** *	
Signal=	Split			Signal=Split
Final Vol: Lanes: Rights=	Overlap	Vol Cnt D	ate: 5/27/2015	Rights=Include Lanes: Final Vol:
489*** 1 🔎		Cycle Time (3	66). 120	C 0 50
		Loss Time (s	ec): 12	▲
1 🛶				4 1
²¹² ¹ →		Critical	//C: 1.069	4 1 547***
0		Avg Crit Del (sec/v	eh): 101.5	0
Ť		•	,	¥
152 1 🔨		Avg Delay (sec/v	eh): 91.2	1 76
•		1	OS' F	•
		▲ ♠ ♠	Ab b	
			re (e	
	Lanes: 1	0 0	1 0	
	Final Vol: 409***	269	26	
		Signal=Split/Rights	=Include	
Approach: North Bound	South Bound	East Bound	West Bound	
Movement: L - T -	R L - T - R	L - T - R	L - T - R	
Min. Green: 0 0	0 0 0 0	0 0 0	0 0 0	
Y+R: 4.0 4.0 4	.0 4.0 4.0 4.0 	4.0 4.0 4.0	4.0 4.0 4.0	
Volume Module: >> Count Da Base Vol: 332 264	te: 27 May 2015 << 4 26 16 109 508	:00 PM to 5:45 PM 489 187 127	71 547 50	
Growth Adj: 1.00 1.00 1. Initial Bse: 332 264	00 1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	
Added Vol: 77 5		0 25 25	5 0 0	
Initial Fut: 409 269	26 17 110 508	489 212 152	76 547 50	
User Adj: 1.00 1.00 1. PHF Adj: 1.00 1.00 1.	00 1.00 1.00 1.00 00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00	
PHF Volume: 409 269 Reduct Vol: 0 0	26 17 110 508 0 0 0 0	489 212 152 0 0 0	76 547 50 0 0 0	
Reduced Vol: 409 269	26 17 110 508	489 212 152	76 547 50	
MLF Adj: 1.00 1.00 1.	00 1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	
FinalVolume: 409 269	26 17 110 508 	489 212 152	76 547 50	
Saturation Flow Module: Sat/Lane: 1900 1900 19	00 1900 1900 1900	1900 1900 1900	1900 1900 1900	
Adjustment: 0.62 0.43 0.	99 0.84 0.74 0.64	0.40 0.92 0.85	0.95 0.89 0.41	
Final Sat.: 1173 791	76 192 1245 1209	1534 1744 1615	1805 2826 258	
Capacity Analysis Module:				
Vol/Sat: 0.35 0.34 0. Crit Moves: ****	34 0.09 0.09 0.42	0.32 0.12 0.09 ****	0.04 0.19 0.19	
Green/Cycle: 0.33 0.33 0. Volume/Cap: 1.07 1.04 1.	33 0.09 0.09 0.39 04 0.93 0.93 1.07	0.30 0.30 0.62	0.18 0.18 0.18 0.18 0.23 1.07 1.07	
Uniform Del: 40.4 40.4 40 IncremntDel: 65 6 65 0 65	.4 53.9 53.9 36.4	42.1 33.7 9.4	42.0 49.1 49.1	
InitQueuDel: 0.0 0.0 0	.0 0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	
Delay/Veh: 106.1 105 105	.4 110.3 110 97.4	97.2 33.8 9.4	42.4 107 107.0	
User DelAdj: 1.00 1.00 1. AdjDel/Veh: 106.1 105 105	00 1.00 1.00 1.00 .4 110.3 110 97.4	1.00 1.00 1.00 97.2 33.8 9.4	1.00 1.00 1.00 42.4 107 107.0	
LOS by Move: F F HCM2kAvg0: 23 16	F F F F 32 8 8 27	F C A 15 7 2	D F F 2 17 8	
Note: Queue reported is th	e number of cars per	lane.		
HCM Ops Adjusted Lane Util	ization Module:			
Lanes: 1001 Lane Group: L RT	U U L U U L RT LT LT R	LT LT R	L RT RT	
#LnsInGrps: 1 1	1 1 1 1 1	3 3 1	1 2 2	
HCM Ops Input Saturation A Lane Width: 12 12	dj Module: 12 12 12 12 12	12 12 12	12 12 12	
CrsswalkWid: 8	8	8	8	
Grade: 0%	0%	0%	0%	
Parking/Hr: No Bus Stp/Hr: 0	No 0	NO 0	NO 0	
Area Type: < < < < < < Cnft Ped/Hr: 3	< < < < < < < < < < 0t 1	her > > > > > > > > > > > > > > > 0	> > > > > > > > > > > > > > > > > > >	> >
ExclusiveRT: Include % RT Prtct: 0	Include 0	Include 0	Include 0	
HCM Ops f(1t) Add Cose Med	 ule:			
f(lt) Case: 1 xxxx xx	xx 4 4 xxxx	4 4 xxxx	1 хххх хххх	
HCM Ops Saturation Adj Mod	 ule:			
Ln Wid Adj: 1.00 1.00 1. Hev Veh Adj: 1.00 1.00 1.	00 1.00 1.00 1.00 00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00	
Grade Adj: 1.00 1.00 1. Parking Adj: yyyy 1 00 1	00 1.00 1.00 1.00 00 xxxx xxxx 1 00	1.00 1.00 1.00	1.00 1.00 1.00 xxxx 1.00 1.00	
Bus Stp Adj: xxxx 1.00 1.	00 xxxx xxxx 1.00	xxxx xxxx 1.00	xxxx 1.00 1.00	
Area Adj: 1.00 1.00 1. RT Adj: xxxx 0.99 0.	00 1.00 1.00 1.00 99 xxxx xxxx 0.85	1.00 1.00 1.00 xxxx xxxx 0.85	1.00 1.00 1.00 xxxx 0.99 0.99	
LT Adj: 0.95 xxxx xxx PedBike Adj: 1.00 1.00 1.	xx 0.99 0.99 xxxxx 00 1.00 1.00 1.00	0.97 0.97 xxxxx 1.00 1.00 1.00	0.95 xxxx xxxxx 1.00 1.00 1.00	
HCM Sat Adj: 0.95 0.99 0. Usr Sat Adj: 0.65 0.44 1	99 0.99 0.99 0.85 00 0.85 0.75 0.75	0.97 0.97 0.85	0.95 0.99 0.99 1.00 0.95 0.44	
MLF Sat Adi: 1.00 1.00 1.	00 1.00 1.00 1.00	0.95 0.95 1.00	1.00 0.95 0.95	

Traffix 8.0.0715

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Approach:	North	Bound	South	Bound	East	Bound	West Bound			
Movement:	L -	T – R	L -	T – R	L -	T – R	L -	T - R		
CrsswalkWid:	0.00	8.00	0.00	8.00	0.00	8.00	0.00	8.00		
CrsswalkLen:	0.00	60.00	0.00	72.00	0.00	36.00	0.00	36.00		
MinPedGrn:	0.00	18.23	0.00	21.21	0.00	12.20	0.00	12.23		
PedGrn:	0.00	18.23	0.00	21.21	0.00	12.20	0.00	12.23		
PedVolume:	0	3	0	1	0	0	0	3		
PedFlowRate:	0	20	0	6	0	0	0	29		
BikeVol:	0	0	0	0	0	0	0	0		
BikeFlwRate:	0	0	0	0	0	0	0	0		
PedOcc:	0.000	0.010	0.000	0.003	0.000	0.000	0.000	0.015		
BikeOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
PedAfterOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
r0cc:	0.000	0.010	0.000	0.003	0.000	0.000	0.000	0.015		
TurnVehAdj:	0.000	0.994	0.000	0.998	0.000	1.000	0.000	0.985		
Prt:	0.000	0.088	0.000	1.000	0.000	1.000	0.000	0.084		
Prta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Plt:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Plta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
PedBike Adj:	1.000	0.999	1.000	0.998	1.000	1.000	1.000	0.999		
Level (Of Servi	ce Detaile	d Compu	tation Rep	ort (HC	M2000 Queu	e Metho	d)		

2000 HCM Operations Method

Future Volume Alternative Intersection #31 E Bayshore Dr/Embarcadero Rd

			* * * * *	*****	*****	*****	*****	*****		*****		*****
Approach:	Nor	th Bour	nd	Sou	ith Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:	_ L -	т –	R	_ L -	- T	- R	L ·	- T	- R	_ L -	- T	- R
(0)	0.22	0 22 0			0 00		0.20	0 20		0.10	0 10	
Green/Cycle.	0.33	0.33 (1.33	0.09	0.09	0.39	0.30	0.30	0.02	0.18	0.10	0.18
Arrivariype.	1 00	1 00 1	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
progracior.	13 6	1.00 1	21 2	4 7	4 1	16 9	1.00	5.00	2 1	2.00	11 5	5 3
UnstreamWC:	13.0	0 00 0	21.2	0 00	· · · ·	10.9	0.0	0 00	0 00	0 38	0 38	0.38
UpstreamAdi:	0.00	0.00 0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50
EarlvArrAdi:	1.00	1.00 1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.39	0.39	0.24
02;	9.0	6.7 1	10.7	3.6	3.4	10.3	6.8	0.7	0.2	0.1	5.7	2.9
HCM2KOueue:	22.6	16.0 3	31.9	8.3	7.6	27.2	15.4	6.6	2.3	2.3	17.2	8.3
70th%Factor:	1.16	1.17 1	1.15	1.18	1.18	1.15	1.17	1.18	1.19	1.19	1.17	1.18
HCM2k70thQ:	26.2	18.7 3	36.6	9.8	8.9	31.3	18.0	7.8	2.7	2.7	20.0	9.8
85th%Factor:	1.44	1.48 1	1.40	1.53	1.53	1.42	1.48	1.54	1.58	1.58	1.47	1.53
HCM2k85thQ:	32.6	23.7 4	44.8	12.7	11.6	38.7	22.8	10.2	3.6	3.6	25.3	12.6
90th%Factor:	1.53	1.58 1	1.48	1.66	1.67	1.50	1.59	1.69	1.76	1.76	1.57	1.66
HCM2k90thQ:	34.6	25.3 4	47.3	13.8	12.6	40.9	24.4	11.2	4.0	4.0	27.0	13.7
95th%Factor:	1.67	1.75 1	1.60	1.88	1.89	1.63	1.76	1.92	2.03	2.03	1.73	1.88
HCM2K95thQ:	37.8	28.0 5	51.1	15.6	14.3	44.4	27.0	12.7	4.6	4.6	29.8	15.5
09th%Eastor:	1 00	1 00 1	1 70	2 22	2 26	1 02	2 01	2 20	2 54	2 54	1 07	2 22
ucmole08+bo:	12 4	21 0 5	1./9	10 5	2.20	10 6	2.01	2.30	2.54	2.54	1.9/	2.23
nem2k50eng.	12.1	JI.J .	Fuel	Consur	nption	and F	missi/	10.2	5.0	5.0	55.0	10.4
			200	0 HCM	Opera	tions	Metho	3				
			Fu	ture N	/olume	Alter	nativ	-				
*******	*****	* * * * * * *	* * * * *	*****	*****	*****	****	*****	*****	* * * * * *	*****	*****
Intersection	#31 E	Baysho	ore D	r/Emba	arcade	ro Rd						
*******	*****	******	* * * * *	*****	*****	* * * * * *	****	*****	*****	*****	*****	*****
Approach:	Nor	th Bour	nd	Sou	ith Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:	L -	т –	R	L -	- т	- R	L	- т	- R	L -	- т	- R
Run Speed:		30 MPH	H		30 M	PH		30 M	IPH		30 M	PH
NumOfStops: 3	105.8	68.7	6.6	4.2	27.3	133.0	125.9	42.4	15.8	16.2	139	12.7
Name: year 1	995 coi	mposite	e fle	et								
Fuel Consump	tion:	217.	.533	pounds	3							
a 1 al 1		35.	.240	galloi	ıs							
Carbon Dioxid	ue.	6/6.	425	pounds	5							
Carbon Monox.	ide.	50.	400	pounds	5							
Hydrocarbons		12.	403	pounds	5							
NICLOGEN OXIC	ues.	±.	.452	pounda	•							
Name: year 2	000 co	mposite	- fle	et								
Fuel Consumpt	tion:	217	. 533	pounds	-							
Jonbump		35	.240	gallor	-							
Carbon Dioxid	de:	678	.704	pounds	3							
Carbon Monox	ide:	58.	.435	pounds	3							
Hydrocarbons	:	12.	.403	pounds	3							
Nitrogen Oxio	des:	1.	.452	pounds	3							

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Level Di Service Computation Report 2000 HCM Operations (alternative) Existing + Project AM										
Intersection #36: St Francis Dr/Embarcadero R	d									
Signal=Peri Final Vol: 41 Lanes: 0 0	mit/Rights=Include 10*** 330 1! 0 0									
Signal=Permit Final Vol: Lanes: Rights=Include V	ol Cnt Date: 5/27/2015	Signal=Permit Rights=Include La	nes: Final Vol:							
	Time (sec): 120		0 89							
0	Critical V/C: 0.584	<u> </u>	1 1 946							
1 Avg Crit D	el (sec/veh): 21.4	↓ ↓	0							
5 0 🗙 Avg Dela	ay (sec/veh): 20.8	₹	1 17							
*	LOS: C	·								
▲ ◀	1 1 /									
Lanes: 0 0 Final Vol: 9 Signal-Bag	1! 0 0 15 27									
Signal=ren	aund West Bound									
Movement: L T R L T R L T T R L T T No	- R L - T - R 									
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	0 4.0 4.0 4.0 4.0 									
Base vol. 9 15 27 330 10 41 36 107 Growth Adj: 1.00<	5 17 941 89 0 1.00 1.00 1.00 1.00 1 5 17 941 89 5 0 0 5 0 5 0 0 5 0									
PasserByVol: 0 <t< td=""><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td></td><td></td><td></td></t<>	$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
PHF Adj: 1.00	$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
PCE Adj: 1.00	0 1.00 1.00 1.00 1.00 0 1.00 1.00 1.00 1									
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 190	0 1900 1900 1900 1900 5 0.95 0.15 0.94 0.94									
Lanes: 0.18 0.29 0.53 0.86 0.03 0.11 1.00 1.99 Final Sat.: 293 488 878 1165 35 145 311 3590 	9 0.01 1.00 1.83 0.17 0 17 280 3256 306									
Capacity Analysis Module: Vol/Sat: 0.03 0.03 0.03 0.28 0.28 0.28 0.12 0.30 Crit Moves: **** **** Green/Cvcle: 0.48 0.48 0.48 0.48 0.48 0.48 0.48 0.52 0.52	0 0.30 0.06 0.29 0.29									
Volume/Cap: 0.06 0.06 0.06 0.58 0.58 0.58 0.24 0.58 Uniform Del: 16.4 16.4 16.4 22.2 22.2 22.2 16.1 20.2 IncremntDel: 0.0 0.0 0.0 1.4 1.4 1.4 0.8 0.5	8 0.58 0.12 0.56 0.56 2 20.2 15.0 19.9 19.9 5 0.5 0.4 0.4 0.4									
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
AdjDel/Veh: 16.5 16.5 16.5 23.6 23.6 23.6 16.8 20. LOS by Move: B B B C C C B C HCM2kAvgQ: 1 1 1 10 10 10 1 1	7 20.7 15.4 20.3 20.3 C B C C 5 15 0 14 14									
Note: Queue reported 1s the number of cars per lane. 										
Lane Group: LTR LTR LTR LTR LTR L RT #LnsInGrps: 1 1 1 1 1 1 1 2 	RT L RT RT 2 2 1 2 2 									
HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 12 12 12 12 CrsswalkWid: 8 8 8 % Hev Veh: 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
Grade: 0% 0% 0% Parking/Hr: No No No Bus Stp/Hr: 0 0 0	6 0% 0 No 0 0									
Area Type: < < < < < < < < < < < < < < < < < < <	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	• >								
HCM Ops f(lt) Adj Case Module: f(lt) Case: 5 5 5 5 5 5 2 xxxx	······									
HCM Ops Saturation Adj Module: Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 1.00 1.00 1.00 1.00 0 1.00 1.00 1.00 1									
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0 1.00 1.00 1.00 1.00 0 1.00 xxxx 1.00 1.00 0 1.00 xxxx 1.00 1.00 0 1.00 xxxx 1.00 1.00									
Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	y 1.00 1.00 1.00 1.00 0 1.00 xxxx 0.99 0.99 x xxxx 0.15 xxxx xxxxx 0 1.00 1.00 1.00 1.00									
HCM Sat Adj: 0.87 0.87 0.87 0.71 0.71 0.71 0.16 1.00 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$									
Fni Sat Adj: 0.87 0.87 0.87 0.71 0.71 0.71 0.16 0.99 Traffix 8.0.0715	Copyright (c) 2008 Dow	ling Associates, Inc.		Licensed to Hexagon Trans., San Jose						

Future Volume Alternative										

Intersection #36 St Francis Dr/Embarcadero Rd	* * * * * * * * *	******	*******	******						
Approach:	North	South	East	West						
Cycle Length, C:	120	120	120	120						
Actual Green Time Per Lane Group, G:	54.20	54.20	57.80	57.80						
Effective Green Time Per Lane Group, g:	58.20	58.20	61.80	61.80						
Opposing Effective Green Time, go:	58.20	58.20	61.80	61.80						
Number Of Opposing Lanes, No:	1	1	2	2						
Number Of Lanes In Lane Group, N:	1	1	1	1						
Adjusted Left-Turn Flow Rate, Vlt:	9	330	38	17						
Proportion of Left Turns in Lane Group, Plt:	0.18	0.87	1.00	1.00						
Proportion of Left Turns in Opp Flow, Plto:	0.87	0.18	XXXXXX	XXXXXX						
Left Turns Per Cycle, LTC:	0.30	11.00	1.27	0.57						
Adjusted Opposing Flow Rate, Vo:	381	51	1035	1085						
Opposing Flow Per Lane Per Cycle, Volc:	12.70	1.70	18.16	19.04						
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00						
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00						
Eff grn until arrival of left-turn car, gf:	36.21	1.11	0.00	0.00						
Opposing Queue Ratio, qro:	0.52	0.52	0.48	0.48						
Eff grn blocked by opposing queue, gq:	16.96	3.66	25.25	27.04						
Eff grn while left turns filter thru, gu:	21.99	54.54	36.55	34.76						
Max opposing cars arriving during gq-gf, n:	0.00	1.27	XXXXXX	XXXXXX						
Proportion of Opposing Thru & RT cars, ptho:	0.13	0.82	XXXXXX	XXXXXX						
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.23	0.20						
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00						
Through-car Equivalents, ell:	2.06	1.48	3.61	3.80						
Single Lane Through-car Equivalents, el2:	1.00	1.24	XXXXXX	XXXXXX						
Minimum Left Turn Adjustment Factor, fmin:	0.04	0.06	0.06	0.06						
Single Lane Left Turn Adjustment Factor, fm:	0.94	0.72	0.16	0.15						
Left Turn Adjustment Factor, flt:	0.94	0.72	0.16	0.15						
Level Of Service Detailed Computation	Report (Ped/Bike	Sat Adj)							
2000 HCM Operations	2000 HCM Operations Method									
Future Volume Alte:	rnative									

*****	******	*******	********	*******	*******	*****	******	*****
Intersection	#36 St F	'rancis I	Dr/Embarca	dero Rd				
*******	******	******	*******	******	*******	*****	*******	******
Approach:	North	Bound	South	Bound	East B	ound	West B	ound
Movement:	L - 1	' - R	L – T	' - R	L - T	- R	L - T	- R
Gueren Dewidt			0.00		0.00		0.00	
CreewalkLen'	60.00	60.00	60.00	60.00	24 00	24 00	24 00	24 00
MinPedGrn:	18.23	18.20	18.20	18.23	9.29	9.37	9.37	9.29
PedGrn:	58.20	58.20	58.20	58.20	61.80	61.80	61.80	61.80
PedVolume:	3	0	0	3	10	19	19	10
PedFlowRate:	6	0	0	6	19	37	37	19
BikeVol:	0	0	0	0	0	0	0	0
BikeFlwRate:	0	0	0	0	0	0	0	0
PedOcc:	0.003	0.000	0.000	0.003	0.010	0.018	0.018	0.010
BikeOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedAfterOcc:	0.003	0.000	0.000	0.000	0.008	0.000	0.014	0.000
r0cc:	0.002	0.000	0.000	0.003	0.002	0.018	0.003	0.010
TurnVehAdj:	0.999	1.000	1.000	0.998	0.998	0.982	0.997	0.990
Prt:	0.000	0.529	0.000	0.108	0.000	0.005	0.000	0.086
Prta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plt:	0.176	0.000	0.866	0.000	1.000	0.000	1.000	0.000
Pita:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Peabike Adj:	1.000	1.000	1.000	1.000	0.998	1.000	0.997	0.999
Level	or servic	e Decari	Lea Comput	ation Re	POIL (HCM2	ooo que	ue Method)	
		200	ло нсм оре	rations	Methoa			
*********	********	۲۱ *******	10010	me Aller	nalive	******	********	******
Intersection	#36 9+ 1	'rancie T)r/Fmbarca	dero Pd				
**********	#30 SL F	*******	51/Embarca	*******	******	******	******	******
Approach:	North	Bound	South	Bound	East B	ound	West B	ound
Movement:	T T	' – R	I. – T	' – R	L - T	- R	I T	- R
Green/Cycle:	0.48 0.4	8 0.48	0.48 0.4	8 0.48	0.52 0.52	0.52	0.52 0.52	0.52
ArrivalType:		3		3	3		3	
ProgFactor:	1.00 1.0	0 1.00	1.00 1.0	0 1.00	1.00 1.00	1.00	1.00 1.00	1.00
Q1:	0.9 0.	9 0.9	9.1 9.	1 9.1	0.7 13.2	13.2	0.3 12.4	12.4
UpstreamVC:	0.00 0.0	0.00	0.00 0.0	0 0.00	0.00 0.00	0.00	0.00 0.00	0.00
UpstreamAdj:	0.00 0.0	0.00	0.00 0.0	0 0.00	0.00 0.00	0.00	0.00 0.00	0.00
EarlyArrAdj:	1.00 1.0	0 1.00	1.00 1.0	0 1.00	1.00 1.00	1.00	1.00 1.00	1.00
Q2:	0.1 0.	1 0.1	1.4 1.	4 1.4	0.3 1.4	1.4	0.1 1.3	1.3
HCM2KQueue:	1.0 1.	0 1.0	10.5 10.	5 10.5	1.0 14.6	14.6	0.4 13.7	13.7
70th%Factor:	1.20 1.2	1.20	1.18 1.1	8 1.18	1.20 1.17	1.17	1.20 1.17	1.17
HCM2k70thQ:	1.2 1.	2 1.2	12.3 12.	3 12.3	1.2 17.0	17.0	0.5 16.0	16.0
85th%Factor:	1.59 1.5	9 1.59	1.51 1.5	1 1.51	1.59 1.48	1.48	1.60 1.49	1.49
HCM2k85thQ:	1.5 1.	5 1.5	15.8 15.	8 15.8	1.6 21.6	21.6	0.7 20.4	20.4
90th%Factor:	1.78 1.7	8 1.78	1.64 1.6	4 1.64	1.78 1.59	1.59	1.79 1.60	1.60
HCM2k90thQ:	1.7 1.	7 1.7	17.1 17.	1 17.1	1.8 23.2	23.2	0.8 21.9	21.9
95th%Factor:	2.07 2.0	17 2.07	1.84 1.8	4 1.84	2.07 1.77	1.77	2.09 1.78	1.78
HCM2k95thQ:	2.0 2.	0 2.0	19.2 19.	2 19.2	2.1 25.7	25.7	0.9 24.3	24.3
98th%Factor:	2.63 2.6	2.63	2.15 2.1	5 2.15	2.63 2.03	2.03	2.6/ 2.05	2.05
HCM2K98tHQ.	2.0 2.	0 2.0 Eucl	22.5 22.	5 22.5	2.6 29.5 miggiong	29.5	1.1 28.0	28.0
		Fuer	Consumpti	on and E	Mothod			
		200	JU HCM OPE	ma Nitar	netivo			
*****	*******	*******	*********	********	*********	******	******	******
Intersection	#36 St B	rancis I	r/Embarca	dero Rd				
*********	*******	*******	*******	*******	*******	******	*******	******
Approach:	North	Bound	South	Bound	East B	ound	West B	ound
Movement:	т. – Т	' – R	T T	' – R	I T	- R	I T	- R
Run Speed:	30	MPH	30	MPH	30	MPH	30	MPH
NumOfStops:	1.2 2.	0 3.6	59.3 1.	8 7.4	5.2 187	0.9	2.2 162	15.2
Name: year 1	995 compo	site fle	eet					
Fuel Consump	tion:	69.255	pounds					
-		11.219	gallons					
Carbon Dioxi	de:	216.076	pounds					
Carbon Monox	ide:	16.663	pounds					
Hydrocarbons	:	2.953	pounds					
Nitrogen Oxi	des:	0.630	pounds					
Name: year 2	000 compo	site fle	eet					
Fuel Consump	tion:	69.255	pounds					
		11.219	gallons					
Carbon Dioxi	de:	216.076	pounds					
Carbon Monox	ide:	16.663	pounds					
Hydrocarbons	:	2.953	pounds					
Nitrogen Oxi	des:	0.630	pounds					

DISCLAIMER The fuel consumption and emissions measures should be used with

Traffix 8.0.0715

Mon Feb 08 caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

	Level Of Service Computation Report 2000 HCM Operations (alternative) Existing + Project PM	
Intersection #36: St Francis Dr/Embaro	cadero Rd	
F 11/1	Signal=Permit/Rights=Include	
Final Vol: 26 Lanes: 0	3^{+++} 189) 0 1! 0 0	
Signal=Permit	Signal=Permit	Vol
	Cycle Time (sec): 120	, voi:
39	Loss Time (sec): 0 87	
1139*** 1	Critical V/C: 0.475 1 91	7
	Ava Crit Del (sec/veh): 13.4	
, _ `		
9 U 🗡		J
	LOS: B	
•	↑ ↑ ↑ /	
Lanes: 0	0 0 1! 0 0	
Final Vol: 5	5 4 31 Signal=Permit/Rights=Include	
Approach: North Bound South Bound	East Bound West Bound	
Min. Green: 0 0 0 0 0 0		
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0) 4.0 4.0 4.0 4.0 4.0 4.0 7:00 AM to 8:45 AM	
Base Vol: 5 4 31 189 3 26 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00	39 1133 9 30 908 87 1.00 1.00 1.00 1.00 1.00 1.00	
Initial BSE 5 4 51 169 5 26 Added Vol: 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0		
Initial Fut: 5 4 31 189 3 26 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00	5 39 1139 9 30 917 87 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	
PHF Volume: 5 4 31 189 3 26 Reduct Vol: 0 0 0 0 0 0 0	39 1139 9 30 917 87 0 0 0 0 0 0	
Reduced Vol: 5 4 31 189 3 26 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00) 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	
FinalVolume: 5 4 31 189 3 26	; 39 1139 9 30 917 87 	
Sat/Lane: 1900 1900 1900 1900 1900 1900 Adjustment: 0.87 0.87 0.87 0.73 0.73 0.73	1900 1900 1900 1900 1900 1900 3 0.23 0.95 0.95 0.19 0.94 0.94	
Lanes: 0.12 0.10 0.78 0.87 0.01 0.12 Final Sat.: 207 165 1281 1204 19 166 	: 1.00 1.98 0.02 1.00 1.83 0.17 ; 431 3578 28 353 3254 309 ;	
Capacity Analysis Module: Vol/Sat: 0.02 0.02 0.02 0.16 0.16 0.16 Crit Moves: ****	0.09 0.32 0.32 0.08 0.28 0.28	
Green/Cycle: 0.33 0.33 0.33 0.33 0.33 0.33 Volume/Cap: 0.07 0.07 0.07 0.48 0.48 0.48	0.67 0.67 0.67 0.67 0.67 0.67 0.14 0.48 0.48 0.13 0.42 0.42	
Uniform Del: 27.6 27.6 27.6 31.9 31.9 31.9 IncremntDel: 0.1 0.1 0.1 0.8 0.8 0.8 InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0	0 0.2 0.1 0.1 0.2 0.1 0.1 0.1 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Delay/Veh: 27.6 27.6 27.6 32.7 32.7 32.7 Urger Deladj: 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 7.4 9.7 9.7 7.4 9.2 9.2	
AdjDel/Veh: 27.6 27.6 27.6 32.7 32.7 LOS by Move: C C C C C C	7.4 9.7 9.7 9.7 7.4 9.2 9.2 2 A A A A A A	
HCM2kAvgQ: 1 1 1 7 7 7 Note: Queue reported is the number of cars per	/ 1 11 11 1 9 9 wr Iane. 	
HCM Ops Adjusted Lane Utilization Module: Lanes: 0 0 1! 0 0 0 0 1! 0 0 Lane Group: LTP LTP LTP LTP LTP		
HINGGED IN AN AN AN AN AN AN AN		
HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 12 12 12 CrsswalkWid: 8 8	2 12 12 12 12 12 12 8 8	
% Hev Veh: 0 0 Grade: 0% 0% Darking (Ur; No No	0 0 0% 0%	
Bus Stp/Hr: 0 0 Area Type: < < < < < < < < < < < < < < < < <<<<<>< < < < < < < < < < < < < < < < < < < <	0 0 0 0	
Cnft Ped/Hr: 2 3 ExclusiveRT: Include Include % RT Prtct: 0 0	5 5 Include Include 0 0	
HCM Ops f(lt) Adj Case Module:	······································	
HCM Ops Saturation Adj Module:		
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Grade 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 1.00 1.00	
Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00	xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00	
Area AGJ: 1.00 1.00 1.00 1.00 1.00 1.00 RT Adj: 0.90 0.90 0.90 0.98 0.98 0.98 LT Adj: 0.97 0.97 0.97 0.74 0.74 0.74	: 1.00 1.00 1.00 1.00 1.00 1.00 : XXXX 1.00 1.00 XXXX 0.99 0.99 : 0.23 XXXX XXXXX 0.19 XXXX XXXXX	
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 HCM Sat Adj: 0.87 0.87 0.87 0.73 0.73 0.73 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00) 1.00 1.00 1.00 1.00 1.00 0.23 1.00 1.00 0.19 0.99 0.00 1.00 1.00 1.00 1.00	
MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Fnl Sat Adj: 0.87 0.87 0.87 0.73 0.73 0.73	1.00 0.95 0.95 1.00 0.95 0.95 0.23 0.95 0.95 0.19 0.94 0.94	
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Future Volume Alternative										
***************************************	******	*******	*******	*******						
Intersection #36 St Francis Dr/Embarcadero Rd	******	* * * * * * * * * *	*******	*******						
Approach:	North	South	East	West						
Cycle Length, C:	120	120	120	120						
Actual Green Time Per Lane Group, G:	35.63	35.63	76.37	76.37						
Effective Green Time Per Lane Group, g:	39.63	39.63	80.37	80.37						
Opposing Effective Green Time, go:	39.63	39.63	80.37	80.37						
Number Of Opposing Lanes, No:	1	1	2	2						
Number Of Lanes In Lane Group, N:	1	1	1	1						
Adjusted Left-Turn Flow Rate, Vlt:	5	189	39	30						
Proportion of Left Turns in Lane Group, Plt:	0.13	0.87	1.00	1.00						
Proportion of Left Turns in Opp Flow, Plto:	0.87	0.13	XXXXXX	XXXXXX						
Left Turns Per Cycle, LTC:	0.17	6.30	1.30	1.00						
Adjusted Opposing Flow Rate, Vo:	218	40	1004	1148						
Opposing Flow Per Lane Per Cycle, Volc:	7.27	1.33	17.61	20.14						
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00						
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00						
Eff grn until arrival of left-turn car, gf:	26.97	2.31	0.00	0.00						
Opposing Queue Ratio, gro:	0.67	0.67	0.33	0.33						
Eff grn blocked by opposing queue, gq:	14.64	4.02	16.47	20.02						
Eff grn while left turns filter thru, gu:	12.66	35.61	63.90	60.35						
Max opposing cars arriving during gq-gf, n:	0.00	0.85	XXXXXX	XXXXXX						
Proportion of Opposing Thru & RT cars, ptho:	0.13	0.88	XXXXXX	XXXXXX						
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.25	0.16						
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00						
Through-car Equivalents, ell:	1.74	1.46	3.50	4.04						
Single Lane Through-car Equivalents, el2:	1.00	1.00	XXXXXX	XXXXXX						
Minimum Left Turn Adjustment Factor, fmin:	0.06	0.09	0.05	0.05						
Single Lane Left Turn Adjustment Factor, fm:	0.97	0.74	0.23	0.19						
Left Turn Adjustment Factor, flt:	0.97	0.74	0.23	0.19						
Level Of Service Detailed Computation	Report	(Ped/Bike	Sat Adj)							
2000 HCM Operations Method										
Future Volume Alter	rnative									

*****	******	******	*********	*******	********	******	******	******
Intersection	#36 St F	rancis I	Dr/Embarca	dero Rd				
********	******	*****	* * * * * * * * * *	******	*******	******	* * * * * * * * * *	******
Approach:	North	Bound	South	Bound	East H	Bound	West E	lound
Movement:	L - T	- R	L - T	' - R	L - T	- R	L - T	- R
Crsswalkwid:	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
MinBedGrn:	18 23	18 22	18 22	18 23	9 24	9 24	9 24	9 24
PedGrn:	39 63	39 63	39 63	39 63	80 37	80 37	80 37	80 37
PedVolume:	3	2	2	33.05	5	5	5	5
PedFlowRate:	9	6	6	9	7	7	7	7
BikeVol:	0	0	0	0	0	0	0	0
BikeFlwRate:	0	0	0	0	0	0	0	0
PedOcc:	0.005	0.003	0.003	0.005	0.004	0.004	0.004	0.004
BikeOcc:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedAfterOcc:	0.004	0.000	0.003	0.000	0.003	0.000	0.003	0.000
r0cc:	0.003	0.003	0.003	0.005	0.001	0.004	0.001	0.004
TurnVehAdj:	0.998	0.998	0.998	0.997	0.999	0.996	0.999	0.996
Prt:	0.000	0.775	0.000	0.119	0.000	0.008	0.000	0.087
Prta:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Plt:	0.125	0.000	0.867	0.000	1.000	0.000	1.000	0.000
Pita:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PedBike Adj:	1.000	0.999	0.999	1.000	0.999	1.000	0.999	1.000
Level	Of Servic	e Detai.	led Comput	ation Re	eport (HCM)	2000 Que	ue Method)	
		200	JU HCM Ope	rations	Method			
*******	*******	F1	4**********	*********	.11aLIVE *********	******	*******	******
Intersection	#36 St #	rancis	Dr/Embarca	dero Rd				
*********	********	******	**********	*******	******	******	******	******
Approach:	North	Bound	South	Bound	East F	Bound	West F	Bound
Movement:	L - T	- R	L - T	- R	L - T	- R	L - T	- R
Green/Cycle:	0.33 0.3	3 0.33	0.33 0.3	3 0.33	0.67 0.67	0.67	0.67 0.67	0.67
ArrivalType:		3		3	1	3	3	
ProgFactor:	1.00 1.0	0 1.00	1.00 1.0	0 1.00	1.00 1.00	1.00	1.00 1.00	1.00
Q1:	0.9 0.	9 0.9	5.8 5.	8 5.8	0.5 9.8	9.8	0.4 8.1	8.1
UpstreamVC:	0.00 0.0	0 0.00	0.00 0.0	0 0.00	0.00 0.00	0.00	0.00 0.00	0.00
UpstreamAdj:	0.00 0.0	0 0.00	0.00 0.0	0 0.00	0.00 0.00	0.00	0.00 0.00	0.00
EarlyArrAdj:	1.00 1.0	0 1.00	1.00 1.0	0 1.00	1.00 1.00	1.00	1.00 1.00	1.00
Q2:	0.1 0.	1 0.1	0.9 0.	9 0.9	0.2 0.9	0.9	0.1 0.7	0.7
HCM2KQueue:	1.0 1.	0 1.0	6.7 6.	7 6.7	0.6 10.7	10.7	0.5 8.8	8.8
70th%Factor:	1.20 1.2	0 1.20	1.18 1.1	8 1.18	1.20 1.18	8 1.18	1.20 1.18	1.18
HCM2k70thQ:	1.2 1.	2 1.2	7.9 7.	9 7.9	0.8 12.5	5 12.5	0.6 10.4	10.4
85th%Factor:	1.59 1.5	9 1.59	1.54 1.5	4 1.54	1.59 1.53	1.51	1.59 1.52	1.52
HCM2k85thQ:	1.6 1.	6 1.6	10.2 10.	3 10.3	1.0 16.1	16.1	0.8 13.4	13.4
90th%Factor:	1.78 1.7	8 1.78	1.69 1.6	9 1.69	1.79 1.63	3 1.63	1.79 1.66	1.66
HCM2k90thQ:	1.8 1.	8 1.8	11.2 11.	2 11.2	1.1 17.4	1 17.4	0.9 14.6	14.6
95th%Factor:	2.07 2.0	7 2.07	1.91 1.9	1 1.91	2.08 1.8	3 1.83	2.08 1.87	1.87
HCM2k95thQ:	2.1 2.	1 2.1	12.7 12.	8 12.7	1.3 19.5	5 19.5	1.1 16.5	16.5
98th%Factor:	2.63 2.6	3 2.63	2.30 2.3	2.30	2.65 2.14	2.14	2.66 2.21	2.21
HCM2K98LIQ.	2.0 2.	0 2.0 Eucl	15.3 15.	5 15.5 on and I	1./ 22.0	22.8	1.3 19.5	19.5
		Fuer	Consumpti	on and r	Mothod			
		200	uture Volu	me Alter	native			
*******	*******	******	*********	*******	*******	******	*******	******
Intersection	#36 St F	rancis I	Dr/Embarca	dero Rd				
********	*******	******	*******	******	*******	******	* * * * * * * * *	******
Approach:	North	Bound	South	Bound	East H	Bound	West E	Bound
Movement:	L - T	- R	L - T	- R	L - T	- R	L - T	- R
Run Speed:	30	MPH	30	MPH	30	MPH	30	MPH
NumOfStops:	0.9 0.	7 5.3	37.5 0.	6 5.2	3.5 138	3 1.1	2.7 105	10.0
Name: year 1	995 compo	site ile	eet ,					
Fuel Consump	tion:	49.05/	pounas					
and a pinni	a	1.94/	gallons					
Carbon Dioxi	ido.	11 126	pounds					
Undrogenhong		1 700	pounds					
Nitrogen Ovi	des:	1./00	pounds					
OXI		0.4/4	Pounds					
Name: vear 2	 000 compo	site fle	eet					
Fuel Consump	tion:	49.057	pounds					
		7.947	gallons					
Carbon Dioxi	de:	153.059	pounds					
Carbon Monox	ide:	11.136	pounds					
Hydrocarbons	:	1.780	pounds					
Nitrogen Oxi	des:	0.474	pounds					

DISCLAIMER The fuel consumption and emissions measures should be used with

Traffix 8.0.0715

Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative) Mitigated Bkgd + Proj PM Intersection #31: E Bayshore Dr/Embarcadero Rd Signal=Split/Rights=Overlap 514*** Final Vol: 110 25 Lanes: 1 0 0 1 0 Signal=Protect Signal=Protect Final Vol: Lanes: Vol Cnt Date: Rights=Include Lanes: Final Vol: Rights=Overlap n/a Cycle Time (sec): 120 496*** 2 0 57 Loss Time (sec): 12 1 674*** 353 Critical V/C: 1.107 1 Avg Crit Del (sec/veh): 113.6 0 152 Avg Delay (sec/veh): 88.7 1 77 F LOS: Lanes: 1 0 1! 0 0 27*** Final Vol: 409 269 Signal=Split/Rights=Include Approach: Movement: North Bound West Bound L --||------0 0 т Т R Min. Green: 4.0 4.0 4.0 4.0 4.0 Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Volume Module: Base Vol: 332 264 Growth Adj: 1.00 1.00 Initial Bse: 332 264 Added Vol: 77 5 PasserByVol: 0 0 10 269 496 325 1.00 1.00 496 328 0 0 24 109 1.00 1.00 24 109 1 7 27 514 127 72 674 57 27 1.00 27 0 1.00 1.00 1.00 72 674 5 0 0 0 514 127 57 1 0 1 0 25 0 0 0 0 0 0 496 353 Initial Fut: 409 269 27 25 110 514 152 77 674 57 User Adj: PHF Adj: PHF Volume: 409 209 1.00 1.00 1.00 1.00 409 269 1.00 1.00 1.00 1.00 1.00 1.00 27 25 110 1.00 1.00 1.00 1.00 496 353 1.00 1.00 1.00 1.00 1.00 1.00 152 77 674 1.00 1.00 57 1.00 514 0 Reduct Vol: 0 0 Reduced Vol: 409 269 0 0 0 0 0 0 0 0 0 25 110 496 353 77 674 27 514 152 57 1.00 1.00 514 PCE Adj: MLF Adj: FinalVolume: Saturation Flow Module: 1900 0.41 0 31 242 Capacity Analysis Module: 0.20 0.34 0.34 0.09 0.09 0.42 0.32 0.15 0.15 0.04 0.24 0.24 **** **** Vol/Sat: Crit Moves: Crit Moves: **** Green/Cycle: 0.30 0.30 0.09 0.09 Volume/Cap: 0.65 1.11 1.11 1.01 1.01 Uniform Del: 36.2 41.7 41.7 54.5 54.5 IncremtDel: 1.4 68.8 68.8 80.8 80.8 80.8 Uniform Del: 1.00 0.00 0.00 0.00 0.00 0.00 ***** ***** 0.38 0.29 0.39 0.69 0.11 0.21 0.21 1.11 1.11 0.38 0.21 0.38 1.11 1.11 37.0 42.6 26.2 6.6 49.3 47.3 47.3 74.4 75.0 0.2 0.0 1.2 68.3 68.3 0.0 1.00 1.00 1.00 1.00 1.00 1.00 6.6 50.4 116 115.5 1.00 1.00 1.00 6.6 50.4 116 1 00 116 115.5 A 3 . 11 22 3 HCM Ops Input Saturation Adj Module: Lane Width: 12 12 12 12 CrsswalkWid: 8 Hev Veh: 0 Grade: 0% 12 12 12 12 12 12 12 12 0% 0% 0% Parking/Hr: No No No No 0 Bus Stp/Hr: 0 0 0 Area Type: Cnft Ped/Hr: ExclusiveRT: · > > > > n U Include Include Include Include % RT Prtct: 0 0 0 HCM Ops f(lt) Adj Case Module: f(lt) Case: 4 4 4 4 4 -----||--f(lt) Case: 4 4 xxxx 1 xxxx xxxx 4 1 xxxx xxxx ---||---1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Hev ven Adj: 1.00 1.00 Grade Adj: 1.00 1.00 Parking Adj: 1.00 1.00 Bus Stp Adj: 1.00 1.00 Area Adj: 1.00 1.00 RT Adj: 0.99 0.99 LT Adj: 0.97 0.97 1.00 1.00 1.00 1.00 1.00 xxxx xxxx 1.00 1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx xxxx 1.00 xxxx xxxx 1.00 1.00 1.00 1.00 xxxx xxxx 0.85 0.99 0.99 xxxxx 1.00 1.00 1.00 1.00 1.00 0.99 0.97 xxxx 1.00 1.00 1.00 xxxx 0.96 xxxx 1.00 1.00 1.00 xxxx 0.99 1.00 1.00 1.00 0.99 0.95 xxxx xxxxx 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.96 0.96 0.44 1.00 1.00 0.97 0.95 0.95 0.41 0.91 0.91 0.95 xxxx xxxxx 1.00 0.85 1.00 1.00 1.00 0.99 0.95 0.99 0.75 1.00 0.95 0.44 MLF Sat Adi: 1.00 1.00 0.95 0.95 Fnl Sat Adj: 0.64 0.95 0.89 0.41

Traffix 8.0.0715

Delay Adjustment Factor Module: Coordinated: < < < < < < < < < < < < < < < < < < <								

Intersection #31 E 1	Bayshore D	r/Embarcade	ro Rd ******	******	*****	* * * * * * * * * *	******	
Approach: North	1 Bound	South Bo	und	East Bo	und	West 1	Bound	
Movement: L -	T - R	L - T	- R	L - T	- R	L - T	- R	
Green/Cycle: 0.30 0	.30 0.30	0.09 0.09	0.38	0.29 0.39	0.69	0.11 0.2	L 0.21	
ArrivalType:	3 1 00	1 00 1 00	1 00	3	1 00	1 00 1 0	3	
ol: 8 4 1	.00 1.00 5 5 20 6	5 0 4 4	17 1	2.00 1.00	1.00	2 4 14) 1.00	
UpstreamVC: 0.00 0	.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00	0.00 0.0	0.00	
UpstreamAdj: 0.00 0	.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00	1.00 1.0	1.00	
EarlyArrAdj: 1.00 1	.00 1.00	1.00 1.00	1.00	1.00 1.00	1.00	0.32 0.4	5 0.29	
Q2: 1.7 1	L.4 13.3	4.4 4.2	11.7	7.4 0.6	0.3	0.2 8.3	L 4.1	
HCM2KQueue: 10.0 2	7.9 33.9	9.4 8.6	28.9	15.9 6.9	3.4	2.6 22.0	10.6	
70th%Factor: 1.18 1	.15 1.14	1.18 1.18	1.15	1.17 1.18	1.19	1.19 1.10	1.18	
HCM2R/UCHQ: II.8 3.	2.1 38.8	11.1 10.1	l	18.6 8.2	4.1	3.1 25.1	5 12.4	
85th%Factor: 1 51 1	42 1 40	1 52 1 53	1 41	1 48 1 54	1 57	1 58 1 4	1 1 51	
HCM2k85th0: 15.2 3	9.6 47.4	14.3 13.1	40.8	23.5 10.7	5.4	4.0 31.1	3 15.9	
90th%Factor: 1.64 1	.50 1.47	1.65 1.66	1.49	1.58 1.68	1.74	1.75 1.5	3 1.64	
HCM2k90thQ: 16.5 4	L.9 50.0	15.5 14.2	43.1	25.2 11.7	6.0	4.5 33.1	3 17.3	
95th%Factor: 1.84 1	.63 1.59	1.86 1.87	1.62	1.75 1.91	2.00	2.02 1.6	3 1.83	
HCM2k95thQ: 18.5 4	5.4 54.0	17.5 16.0	46.8	27.8 13.2	6.9	5.2 37.0) 19.4	
09th%Eastor: 2 16 1	00 1 77	2 10 2 22	1 01	1 00 2 20	2 47	2 52 1 0		
HCM2k98th0: 21 7 5	02 1.77	20 6 19 0	52 2	31 8 15 9	8 5	6 5 41	5 22.14	
neninisoung. http://	Fuel	Consumption	and Em	issions	0.5	0.0 11.		
	200	0 HCM Opera	tions M	lethod				
	Fu	ture Volume	Altern	ative				
*****	*******	******	*****	*******	*****	******	******	
Intersection #31 E 1	Bayshore D	r/Embarcade	ro Rd					
		*********	******	********	******	********	*******	
Approach: North	1 Bound	South Bo	una	East BO	una	west i	Bound	
			- r 		- r 		- R	
Run Speed:	30 MPH	30 M	PH	30 M	PH	30	MPH	
NumOfStops: 88.6 7	0.6 7.1	6.3 27.5	137.7 1	29.7 63.1	13.6	17.8 17	4 14.7	
Name: year 1995 com	posite fle	et						
Fuel Consumption:	234.499	pounds						
	37.989	gallons						
Carbon Dioxide:	731.638	pounds						
Carbon Monoxide:	62.915	pounds						
Nitrogen Oxides:	1 568	pounds						
	1.500							
Name: year 2000 com	posite fle	et						
Fuel Consumption:	234.499	pounds						
	37.989	gallons						
Carbon Dioxide:	731.638	pounds						
Carbon Monoxide:	62.915	pounds						
Hydrocarbons:	13.334	pounds						
Nitrogen Uxides:	1.568	pounas						
DISCLAIMER								
The fuel consumption	n and emis	sions measu	res sho	uld be use	d with			
caution and only for	comparis	ons of diff	erent s	ignal timi	ngs, ge	eometric		
dogian Enturo Volum	altempet	irrog or for		l nlonning	opplid	antiona (

causion and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

		2000110	Mitigated C	um AM	
Intersection #31: E Bays	hore Dr/Embard	cadero Rd			
Fi	inal Vol: 926**** Lanes: 1	Signal=Split/Rights=	=Overlap 61 1 0		
Signal=Pro Final Vol: Lanes: Rights=Ove	tect erlap	Vol Cnt Da Cycle Time (se	• ate: n/a ec): 120	Signal=Protect Rights=Include Lan	es: Final Vol:
561*** 2 _/		Loss Time (se	ec): 12	 ▲	8
		Critical V	//C: 1.051		162***
1 -	Ą	Avg Crit Del (sec/ve	eh): 85.9	· ج)
392 0		Avg Delay (sec/ve	eh): 61.1		24
•			DS: E	•	
	▲ ·	⁴ ↑	* /		
Fi	Lanes: 1 inal Vol: 161 S	0 1! 71*** Signal=Split/Rights	0 0 43 =Include		
Approach: North Bound Movement: L - T - R	South Bound L - T - R	East Bound L - T - R	West Bound L - T - R		
Min. Green: 0 0 0 Y+R: 4.0 4.0 4.0	0 0 0 4.0 4.0 4.0	0 0 0 0 4.0 4.0	0 0 0 4.0 4.0 4.0		
Volume Module: Base Vol: 123 69 43 Growth Adj: 1.00 1.00 1.00 Initial Bse: 123 69 43 Added Vol: 38 2 0	60 182 926 1.00 1.00 1.00 1 60 182 926 1 1 0	561 630 368 1.00 1.00 1.00 561 630 368 0 24 24	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		
PasserByVol: 0 0 0 Initial Fut: 161 71 43 User Adj: 1.00 1.00 1.00	0 0 0 61 183 926 1.00 1.00 1.00 1	0 0 0 561 654 392 1.00 1.00 1.00	$\begin{array}{cccc} 0 & 0 & 0 \\ 24 & 162 & 8 \\ 1.00 & 1.00 & 1.00 \end{array}$		
PHF Adj: 1.00 1.00 1.00 PHF Volume: 161 71 43 Reduct Vol: 0 0 0	1.00 1.00 1.00 1 61 183 926 0 0 0	$1.00 \ 1.00 \ 1.00 \ 561 \ 654 \ 392 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ 0 \ $	$1.00 \ 1.00 \ 1.00 \ 24 \ 162 \ 8 \ 0 \ 0 \ 0 \ 0$		
Reduced Vol. 161 /1 43 PCE Adj: 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 FinalVolume: 161 71 43	1.00 1.00 1.00 1 1.00 1.00 1.00 1 61 183 926	561 654 392 1.00 1.00 1.00 1.00 1.00 1.00 561 654 392	24 162 8 1.00 1.00 1.00 1.00 1.00 1.00 24 162 8		
 Saturation Flow Module: Sat/Lane: 1900 1900 1900	+ 1900 1900 1900 :	 1900 1900 1900	 1900 1900 1900		
Adjustment: 0.76 0.76 0.95 Lanes: 1.43 0.38 0.19 Final Sat.: 2069 551 334	0.84 0.74 0.64 0.23 0.77 1.00 363 1088 1211	0.41 0.90 0.90 2.00 1.25 0.75 1541 2131 1277	0.95 0.90 0.42 1.00 1.81 0.19 1805 3077 152		
Capacity Analysis Module: Vol/Sat: 0.08 0.13 0.13 Crit Moves: **** Green/Cycle: 0.12 0.12	0.17 0.17 0.76	0.36 0.31 0.31	0.01 0.05 0.05		
Volume/Cap: 0.64 1.05 1.05 Uniform Del: 50.1 52.6 52.6 IncremntDel: 3.1 69.7 69.7	0.44 0.44 1.05 27.6 27.6 16.4 0.6 0.6 44.6	1.05 0.81 0.61 39.2 33.3 21.4 53.0 3.9 0.7	0.81 1.05 1.05 58.8 57.0 57.0 87.5 84.9 84.9		
InitQueuDel: 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 Delay/Veh: 53.2 122 122.3	0.0 0.0 0.0 1.00 1.00 1.00 28.2 28.2 61.0	0.0 0.0 0.0 1.00 1.00 1.00 92.3 37.1 22.1 1	0.0 0.0 0.0 1.00 1.00 1.00 146.3 142 141.9		
User DelAdj: 1.00 1.00 1.00 AdjDel/Veh: 53.2 122 122.3 LOS by Move: D F F	1.00 1.00 1.00 1 28.2 28.2 61.0 5 C C E	1.00 1.00 1.00 92.3 37.1 22.1 3 F D C	1.00 1.00 1.00 146.3 142 141.9 F F F F		
HCM2kAvgQ: 5 12 14 Note: Queue reported is the m 	7 7 45 umber of cars per 3 	17 20 15 lane.	1 5 2		
HCM Ops Adjusted Lane Utiliza Lanes: 1 0 1! 0 0 Lane Group: LTR LTR LTR #LnsInGrps: 2 1 1	tion Module: 0 1 0 0 1 LT LT R 1 1 1	2 0 1 1 0 L RT RT 2 2 2 2	1 0 1 1 0 L RT RT 1 2 2		
HCM Ops Input Saturation Adj Lane Width: 12 12 12 CrsswalkWid: 8 % Hev Veh: 0	Module: 12 12 12 8 0	12 12 12 8 0	12 12 12 8 0		
Grade: 0% Parking/Hr: No Bus Stp/Hr: 0	0% No 0	0% No 0	0% No 0		
Area Type: < < < < < < < < < < Cnft Ped/Hr: 0 ExclusiveRT: Include	< < < < < < < 0 the 0 Include	er > > > > > > > > > > > > > > > > > > >	> > > > > > > > > > > > > > > > > > >	>	
* RT Prtct: 0 	0 · : 4 4 xxxx	0 1 xxxx xxxx	0 1 xxxx xxxx		
 HCM Ops Saturation Adj Module Ln Wid 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		
Hev Veh Adj: 1.00 1.00 1.00 Grade Adj: 1.00 1.00 1.00 Parking Adj: 1.00 1.00 1.00	1.00 1.00 1.00 1 1.00 1.00 1.00 1 xxxx xxxx 1.00 1	1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00		
Bus Stp Adj: 1.00 1.00 1.00 Area Adj: 1.00 1.00 1.00 RT Adj: 0.98 0.98 0.98	xxxx xxxx 1.00 x 1.00 1.00 1.00 xxxx xxxx 0.85	xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 0.94 0.94	xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 0.99 0.99		
LT Adj: 0.97 0.97 0.97 PedBike Adj: 1.00 1.00 1.00	0.99 0.99 xxxxx 1 1.00 1.00 1.00	0.95 xxxx xxxxx 1.00 1.00 1.00	0.95 xxxx xxxxx 1.00 1.00 1.00		
MLF Sat Adj: 0.95 0.95 0.95 USr Sat Adj: 0.80 0.80 1.00 MLF Sat Adj: 1.00 1.00 1.00 Fn] Sat Adj: 0.76 0.76 0.95	0.85 0.75 0.75 0.75 0.84 0.74 0.64	0.93 0.94 $0.940.44$ 1.00 $1.000.97$ 0.95 $0.950.41$ 0.90 0.90	$1.00 \ 0.95 \ $		

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

	1.1	1.1	1.1				
Delay Adjustment Factor	Module:						
Coordinated: < < < < <	< < < < < < < <	< < No > > >	> > > > > > > > > >	> > > > > > >			
Signal Type: < < < < <	< < < < < < <	Actuated	<pre>> > ></pre>	> > > > > > >			
DelAdjFctr: 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.0	0 1.00 1.00 1.	00 1.00			
Level Of Service Detailed Computation Report (HCM2000 Queue Method)							
	2000 HCM Oper	ations Method					

Approach:	No	rth Bo	und	So	ith Bo	und	Ea	ast Bo	und	We	est Bo	ound
Movement:	L	- т	- R	L ·	- т	- R	L -	- т	- R	L·	- т	- R
Green/Cycle: ArrivalTvpe:	0.12	0.12	0.12	0.38	0.38	0.73	0.35	0.38	0.50	0.02	0.05	0.05
ProgFactor: Q1: UpstreamVC: UpstreamAdj: EarlyArrAdj: Q2: HCM2KQueue:	1.00 3.6 0.00 0.00 1.00 1.5 5.0	1.00 6.2 0.00 0.00 1.00 5.4 11.6	1.00 7.7 0.00 0.00 1.00 6.1 13.9	1.00 6.7 0.00 0.00 1.00 0.8 7.4	1.00 5.9 0.00 0.00 1.00 0.8 6.6	1.00 30.9 0.00 0.00 1.00 13.9 44.8	1.00 9.6 0.00 1.00 7.0 16.6	1.00 16.4 0.00 0.00 1.00 3.5 19.9	1.00 13.2 0.00 0.00 1.00 1.5 14.7	1.00 0.8 0.00 1.00 0.10 0.3 1.1	1.00 3.1 0.00 1.00 0.19 1.8 5.0	1.00 1.5 0.00 1.00 0.12 1.0 2.4
70th%Factor: HCM2k70thQ:	1.19 6.0	1.17 13.6	1.17	1.18 8.8	1.18 7.9	1.13	1.17	1.16 23.1	1.17 17.2	1.20	1.19 5.9	1.19
85th%Factor: HCM2k85thQ:	1.55 7.8	1.50 17.5	1.49	1.53	1.54 10.2	1.37	1.47	1.45 28.9	1.48	1.59	1.55 7.7	1.58
90th%Factor: HCM2k90thQ:	1.71 8.6	1.62 18.9	1.60	1.68	1.69 11.2	1.44 64.6	1.57	1.55 30.8	1.59 23.4	1.78	1.71 8.5	1.75
95th%Factor: HCM2k95thQ:	1.95	1.81 21.1	1.78	1.90	1.91 12.7	1.55	1.74 28.8	1.70 33.8	1.77 25.9	2.06	1.96 9.7	2.02
98th%Factor: HCM2k98thQ:	2.38 12.0	2.11 24.5	2.04 28.4 Fuel 200	2.26 16.8 Consu 0 HCM	2.30 15.3 nption Opera Volume	1.73 77.6 and E tions Alter	1.98 32.8 missic Method	1.92 38.1 ons	2.02 29.7	2.62	2.38 11.8	2.53 6.1
********	****	* * * * * *	*****	****	*****	*****	****	*****	* * * * * *	* * * * *	* * * * * *	****
Intersection ************	#31 1 *****	E Bays *****	hore [*****)r/Emba	arcade *****	ro Rd *****	*****	*****	*****	****	*****	****
Approach: Movement:	No: L	rth Bo - T	und - R	Soi L	uth Bo - T	und - R	L	ast Bo - T	und - R	L We	est Bo - T	ound - R
Run Speed: NumOfStops:	38.3	30 M 17.9	 PH 10.8	11.3	30 M 34.0	 IPH 268.0	144.1	30 M 146	IPH 70.3	6.0	30 № 40.6	1PH 2.0

Mame, Year 1000 com	POSICE III		
Fuel Consumption:	179.187	pounds	
	29.028	gallons	
Carbon Dioxide:	559.062	pounds	
Carbon Monoxide:	47.059	pounds	
Hydrocarbons:	9.632	pounds	
Nitrogen Oxides:	1.322	pounds	
Name: year 2000 com	posite fle	eet	
Fuel Consumption:	179.187	pounds	
	29.028	gallons	
Carbon Dioxide:	559.062	pounds	
Carbon Monoxide:	47.059	pounds	
Hydrocarbons:	9.632	pounds	
Nitrogen Oxides:	1.322	pounds	
DISCLAIMED			

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements. Level Of Service Computation Report 2000 HCM Operations (Future Volume Alternative)

Mitigated Cum PM Intersection #31: E Bayshore Dr/Embarcadero Rd Signal=Split/Rights=Overlap 551*** Final Vol: 27 119 0 0 Lanes: 1 Signal=Protect Signal=Protect Final Vol: Lanes: Rights=Overlap Vol Cnt Date: n/a Rights=Include Lanes: Final Vol: Cycle Time (sec): 120 531*** 2 0 61 Loss Time (sec): 12 0 1 713*** 383 Critical V/C: 1.200 1 Avg Crit Del (sec/veh): 149.1 0 178 0 Avg Delay (sec/veh): 111.6 1 86 LOS: F 1! Lanes: 1 0 0 0 291*** Final Vol: 476 29 Signal=Split/Rights=Include South Bound R L - T - R --||------Approach: North Bound East Bound West Bound East Bound L - T - R west Bound L - T - R L - T - R Movement: Min. Green: Y+R: 0 0 0 0 0 0 0 0 0 0 0 n 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 Volume Module: Volume mounter Base Vol: 399 286 29 26 118 Growth Adj: 1.00 1.00 1.00 1.00 1.00 Initial Bse: 399 286 29 26 118 Added Vol: 77 5 0 1 1 DassarByVol: 0 0 0 0 0 0 27 119 551 531 358 153 81 713 61 1.00 1.00 1.00 1.00 1.00 1.00 1.00 531 0 0 153 25 0 178 81 5 0 551 358 713 61 0 25 476 291 29 119 551 531 383 713 Initial Fut: 27 86 61 Initial Fut: 4/6 291 User Adj: 1.00 1.00 PHF Adj: 1.00 1.00 PHF Volume: 476 291 Reduct Vol: 0 0 Reduct Vol: 0 0 Reduced Vol: 476 291 PCE Adj: 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 551 531 383 178 86 713 61 531 383 0 0 531 383 1.00 1.00 178 178 1.00 0 86 0 713 0 61 551 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 FinalVolume: 476 291 29 27 119 551 531 383 178 86 713 61 --||----Final Sat.: 2101 774 ----||------||-----------Capacity Analysis Module: Vol/Sat: 0.23 0.38 0.38 0.10 0.10 0.45 0.34 0.16 0.16 0.05 0.25 0.25 Crit Moves: **** **** **** Green/Cycle: 0.31 0.31 0.31 0.09 0.09 0.38 0.29 0.38 0.70 0.11 0.21 0.21 0 0 1 2 0 1 1 0 1 0 1 1 0 Lanes: 0 1! 0 0 0 1 1 1 R 1 Lane Group: L RT 2 2 L RT 1 2 RT RT LTR 1 -----||---#LnsInGrps: 2 2 HCM Ops Input Saturation Adj Module: 12 12 12 Lane Width: 12 12 12 12 12 12 12 12 12 CrsswalkWid: 8 8 8 % Hev Veh: Grade: Parking/Hr: n 0 0 n ∩≋ ∩ % ∩≋ ∩ % 0 Bus Stp/Hr: Area Type: Cnft Ped/Hr: 0 U Include Include ExclusiveRT: Include Include xxxx xxxx 1.00 1.00 xxxx xxxx Bus Stp Adj: Area Adj: RT Adj: LT Adj: PedBike Adj: HCM Sat Adj: 1.00 1.00 1.00 1.00 0.97 0.97 1.00 1.00 1.00 1.00 xxxx 0.95 1.00 1.00 1.00 1.00 1.00 1.00 0.97 1.00 0.97 0 85 0 95 XXXX 0 99 0 99 xxxx xxxx 0.99 0.99 1.00 1.00 0.99 0.99 xxxx 0.95 0.95 0.95 xxxx xxxxx 1.00 1.00 1.00 0.95 0.95 0.95 0.95 xxxx 1.00 1.00 0.95 0.99 1.00 0.85 xxxxx 1.00 0.99 1.00 1.00 0.97 0.97 Usr Sat Adj: 0.80 0.80 1.00 0.85 0.75 0.75 0.44 1.00 1.00 1.00 0.95 0.44 MLF Sat Adi: 1.00 1.00 1.00 1.00 1.00 1.00 0.97 0.95 0.95 1.00 0.95 Fnl Sat Adj: 0.77 0.77 0.97 0.84 0.74 0.64 0.41 0.90 0.90 0.95 0.89 0.41

Traffix 8.0.0715

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Delay Adjustment Factor Module:							
Coordinated: < < < < < < < < < < < < < No >>>>>>>>>>							
Signal Type: < < < < < < < < < Actuated >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>							
DelAdjFctr: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0							
Level Of Service Detailed Computation Report (HCM2000 Queue Method)							
2000 HCM Operations Method							

***********		F1	uture \	/olume	Alter	native	<u>)</u>	*****	*****		******
Intersection	#31 E Bays	hore I	Dr/Emba	ircade	ro Rd	*****					******
Approach.	North Pc	und	S	th Ro	und		et Bo	und	We	et Bo	und
Movement:	L - T	- R	L -	- T	- R	L -	- T	- R	L -	.зс во · Т	- R
Green/Cycle: ArrivalType:	0.31 0.31	0.31	0.09	0.09	0.38	0.29	0.38	0.70	0.11	0.21	0.21
ProgFactor:	9 8 18 4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
UpstreamVC: UpstreamAdj: EarlyArrAdj:	0.00 0.00 0.00 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Q2: HCM2KQueue:	2.3 15.9 12.1 34.3	18.9	5.5	5.1 9.9	15.8	9.4	0.7	0.3	0.2	11.5 26.3	5.6 12.5
70th%Factor: HCM2k70thQ:	1.17 1.14 14.2 39.2	1.14 47.6	1.18	1.18 11.6	1.14 39.1	1.16	1.18 9.4	1.19 4.6	1.19	1.15 30.3	1.17
85th%Factor: HCM2k85thQ:	1.50 1.40 18.2 47.8	1.37 57.7	1.51	1.52 15.0	1.40 47.7	1.46	1.53 12.2	1.56	1.57	1.42 37.4	1.50 18.7
90th%Factor: HCM2k90thQ;	1.62 1.47 19.6 50.5	1.45 60.8	1.63	1.64 16.2	1.47 50.4	1.56	1.67 13.3	1.73	1.75	1.51 39.6	1.61 20.1
95th%Factor: HCM2k95thQ:	1.81 1.59 21.9 54.5	1.56 65.4	1.83 19.9	1.85 18.2	1.59 54.4	1.71 31.7	1.88 15.1	1.98	2.01 5.8	1.64 43.1	1.80 22.4
98th%Factor: HCM2k98thQ:	2.09 1.77 25.4 60.7	1.74 73.0 Fuel 200 Fu	2.13 23.3 Consum 00 HCM iture \	2.17 21.4 nption Opera Volume	1.77 60.6 and E tions Alter	1.94 35.9 missio Methoo native	2.24 17.9 ons	2.44 9.5	2.50 7.3	1.83 48.2	2.08 26.0
************** Intersection	#31 E Bays	hore I	******* Dr/Emba	***** arcade	****** ro Rd	****	*****	*****	*****	****	*****
************** Approach: Movement:	North Bc L - T	ound - R	Sou L -	1th Bo - T	****** und - R	***** Ea	****** ast Bo - T	und - R	****** We	st Bo - T	****** und - R
Run Speed: NumOfStops: :	30 № 105.6 80.1	1PH 8.0	6.8	30 M 30.1	 PH 156.9	144.4	30 № 70.6	1PH 16.1	20.1	30 M 188	PH 16.1
Name: year 19	995 composi	te fle	et								

the state of the second										
NumOfStops: 105.6	80.1 8.0	6.8	30.1	156.9	144.4	70.6	16.1	20.1	188	16.1
Name: year 1995 co	omposite fle	eet								
Fuel Consumption:	310.091 50.235	pounds gallon	s							
Carbon Dioxide:	967.485	pounds								
Carbon Monoxide:	84.072	pounds								
Hydrocarbons:	18.099	pounds								
Nitrogen Oxides:	1.981	pounds								
Name: year 2000 co	mposite fle	eet								
Fuel Consumption:	310.091	pounds								
	50.235	gallon	s							
Carbon Dioxide:	967.485	pounds								
Carbon Monoxide:	84.072	pounds								
Hydrocarbons:	18.099	pounds								
Nitrogen Oxides:	1.981	pounds								
DISCLAIMER										

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Future Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Level Of Service Computation Report 2000 HCM Operations (alternative) Mitigated Bkgd + Proj PM							
Intersection #36: St Francis Dr/Embard	cadero Rd	·					
	Signal=Permit/Rights=Include						
Final Vol: 66	5 7*** 236 0 11 0 0						
	أسأ أأله أس						
Sized Dermit		Cirnel Dermit					
Signal=Permit Final Vol: Lanes: Rights=Include	Vol Cnt Date: n/a	Rights=Include Lanes: Final Vol:					
78 1 🍠	Cycle Time (sec): 120	▲ 0 87					
•	Loss Time (sec): 0						
1193*** 1	Critical V/C: 0.554	1 973					
1	Avg Crit Del (sec/veh): 17.6	•					
9 0 _ 🔨	Avg Delay (sec/veh): 15.9	1 30					
*	LOS [.] B	▼					
Lanes: 0) 0 1! 0 0						
Final Vol: 5	5 7 31 Signal-Permit/Rights-Include						
Approach: North Bound South Bound	East Bound West Bound						
Movement: L - T - R L - T - R	L - T - R L - T - R						
Min. Green: 0 <th< td=""><td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td></td><td></td></th<>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						
Volume Module: Base Vol: 5 7 31 236 7 66	5 78 1187 9 30 964 87						
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 5 7 31 236 7 66 Added Vol: 0 0 0 0 0 0	1.00 1.00 1.00 1.00 1.00 1.00 78 1187 9 30 964 87 0 6 0 0 9 0						
PasserByVol: 0 0 0 0 0 0 Initial Fut: 5 7 31 236 7 66	0 0 0 0 0 0 0 5 78 1193 9 30 973 87						
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 DHF Volume: 5 7 31 236 7 66	$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
Reduct Vol: 0 <th< td=""><td>0 0 0 0 0 0 0 78 1193 9 30 973 87</td><td></td><td></td></th<>	0 0 0 0 0 0 0 78 1193 9 30 973 87						
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 FinalVolume: 5 7 31 236 7 66	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00						
Saturation Flow Module:							
Sat/Lane: 1900 1900 1900 1900 1900 1900 Adjustment: 0.88 0.88 0.88 0.74 0.74 0.74 Lanes: 0.12 0.16 0.72 0.77 0.2 0.21	1900 1900 1900 1900 1900 1900 0.19 0.95 0.95 0.15 0.94 0.94 1 00 1 00 1 84 0 16						
Final Sat.: 194 271 1200 1069 32 299	361 3579 27 285 3274 293						
Capacity Analysis Module: Vol/Sat: 0.03 0.03 0.03 0.22 0.22 0.22	0.22 0.33 0.33 0.11 0.30 0.30						
Green/Cycle: 0.40 0.40 0.40 0.40 0.40 0.40 0.40 Volume/Cap: 0.06 0.06 0.06 0.55 0.55	0 0.60 0.60 0.60 0.60 0.60 0.60 6 0.36 0.55 0.55 0.17 0.49 0.49						
Uniform Del: 22.3 22.3 22.3 27.9 27.9 27.9 IncremntDel: 0.0 0.0 0.0 1.2 1.2 1.2 Inicomposition 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	12.1 14.3 14.3 10.6 13.5 13.5 1 1.0 0.3 0.3 0.5 0.2 0.2 0 0.0 0.0 0.0 0.0 0.0 0.0						
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Delay /Veh: 22.3 22.3 22.3 29.1 29.1 29.1	0 1.00 1.00 1.00 1.00 1.00 1.00 1.00 13.2 14.6 14.6 11.1 13.7 13.7						
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 22.3 22.3 22.3 29.1 29.1 29.1 29.1	1.00 1.00 1.00 1.00 1.00 1.00 1.00 13.2 14.6 14.6 11.1 13.7 13.7						
HCM2kAvgQ: 1 1 9 9 9 9 Note: Queue reported is the number of cars pe	2 14 14 1 12 12 er lane.						
HCM Ops Adjusted Lane Utilization Module:							
Lane Group: LTR LTR LTR LTR LTR LTR #LnsInGrps: 1 1 1 1 1 1	L RT RT L RT RT . 1 2 2 1 2 2						
HCM Ops Input Saturation Adj Module:	·						
Lane width 12	8 8 0 0						
Grade: 0% 0% Parking/Hr: No No	0% 0% No No						
Dus Stp/Hr. U U Area Type: < < < < < < < < < < < < < < < < < < <	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	> >					
ExclusiveRT: Include Include % RT Prtct: 0 0	Include Include 0 0						
HCM Ops f(lt) Adj Case Module: f(lt) Case: 5 5 5 5 5 5 5	; 2 xxxx xxxx 2 xxxx xxx	:					
HCM Ops Saturation Adj Module:	·						
Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 Grade 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00						
Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00	xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00						
Area Adj: 1.00 1.00 1.00 1.00 1.00 RT Adj: 0.90 0.90 0.97 0.97 0.97 LT Adj: 0.97 0.97 0.97 0.76 0.76	0 1.00 1.00 1.00 1.00 1.00 1.00 7 xxxx 1.00 1.00 xxxx 0.99 0.99 8 0.19 xxxx xxxxx 0.15 xxxx x****						
PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 HCM Sat Adj: 0.88 0.88 0.88 0.74 0.74 0.74	1.00 1.00 1.00 1.00 1.00 1.00 0.19 1.00 1.00 0.15 0.99 0.99						
UST SAT Adj: 1.00 1.00 1.00 1.00 1.00 1.00 MLF SAT Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Fnl Sat Adj: 0.88 0.88 0.88 0.74 0.74 0.74	<pre>1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95 0.19 0.95 0.95 0.15 0.94 0.94</pre>						
Traffix 8.0.0715	Copyright (c) 2008 Dov	vling Associates, Inc.	Licensed to Hexagon Trans., San Jose				

Level Of Service Detailed Computation Report	: (Permitt	ed Left ?	furn Sat A	Adj)			
2000 HCM Operations	Method						
Future Volume Alter	native	*******	*******	******			
Intersection #36 St Francis Dr/Embarcadero Rd							
***************************************	******	******	*******	******			
Approach:	North	South	East	West			
Cycle Length, C:	120	120	120	120			
Actual Green Time Per Lane Group, G:	43.81	43.81	68.19	68.19			
Effective Green Time Per Lane Group, g:	47.81	47.81	72.19	72.19			
Opposing Effective Green Time, go:	47.81	47.81	72.19	72.19			
Number Of Opposing Lanes, No:	1	1	2	2			
Number Of Lanes In Lane Group, N:	1	1	1	1			
Adjusted Left-Turn Flow Rate, Vlt:	5	236	78	30			
Proportion of Left Turns in Lane Group, Plt:	0.12	0.76	1.00	1.00			
Proportion of Left Turns in Opp Flow, Plto:	0.76	0.12	XXXXXXX	XXXXXX			
Left Turns Per Cycle, LTC:	0.17	7.87	2.60	1.00			
Adjusted Opposing Flow Rate, Vo:	309	43	1060	1202			
Opposing Flow Per Lane Per Cycle, Volc:	10.30	1.43	18.60	21.09			
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00			
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00			
Eff grn until arrival of left-turn car, gf:	33.15	1.88	0.00	0.00			
Opposing Queue Ratio, qro:	0.60	0.60	0.40	0.40			
Eff grn blocked by opposing queue, gq:	17.05	3.79	21.47	25.91			
Eff grn while left turns filter thru, gu:	14.66	44.02	50.72	46.28			
Max opposing cars arriving during gq-gf, n:	0.00	0.96	XXXXXXX	XXXXXX			
Proportion of Opposing Thru & RT cars, ptho:	0.24	0.88	XXXXXX	XXXXXX			
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.21	0.12			
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00			
Through-car Equivalents, ell:	1.92	1.46	3.71	4.27			
Single Lane Through-car Equivalents, el2:	1.00	1.00	XXXXXXX	XXXXXX			
Minimum Left Turn Adjustment Factor, fmin:	0.05	0.07	0.06	0.06			
Single Lane Left Turn Adjustment Factor, fm:	0.97	0.76	0.19	0.15			
Left Turn Adjustment Factor, flt:	0.97	0.76	0.19	0.15			
Level Of Service Detailed Computation Re	eport (HCM	12000 Quei	ue Method)			
2000 HCM Operations Method							
Future Volume Alter	native						

	*****			******		*****			*****	*****		*****
Intersection	#36 \$	St Fra	ncis I	Dr/Emba	ircade	ro Rd	*****	*****	*****	*****	*****	*****
Approach.	Nor	th Bo	und	Sou	th Ro	und	F	act Bo	und	W.	agt Bo	und
Movement:	T	T DC	D	7 300	исні БО	D	T E4	ast Bt	D	T 110	st bu	D
MOVELLEIL.	1	- 1	- r.		- 1	- r		- 1	- r.	1	- 1	- r.
				0.40			0.00			0.00		
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.60	0.60	0.60	0.60	0.60	0.60
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.9	0.9	0.9	8.0	8.0	8.0	1.3	12.6	12.6	0.4	10.5	10.5
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdi:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlvArrAdi:	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
02.	0 1	0 1	0 1	1 2	1 2	1 2	0 5	1 2	1 2	0 2	1 0	1 0
UGNOVO	1 0	1 0	1 0	0.1	0.1	0 1	1 0	12 0	12.0	0.2	11 5	11 5
HCM2KQueue.	1.0	1.0	1.0	9.1	9.1	9.1	1.9	13.0	13.0	0.7	11.5	11.5
							1			1		
70th%Factor:	1.20	1.20	1.20	1.18	1.18	1.18	1.20	1.17	1.17	1.20	1.18	1.18
HCM2k70thQ:	1.1	1.1	1.1	10.8	10.8	10.8	2.2	16.2	16.2	0.8	13.5	13.5
85th%Factor:	1.59	1.59	1.59	1.52	1.52	1.52	1.58	1.49	1.49	1.59	1.50	1.50
HCM2k85thO:	1.5	1.5	1.5	13.9	13.9	13.9	2.9	20.6	20.6	1.0	17.3	17.3
							1			1		
90th%Factor:	1 78	1 78	1 78	1 65	1 65	1 65	1 76	1 60	1 60	1 79	1 63	1 63
UCM2k00th0:	1 7	1 7	1 7	1 - 1	1 - 1	1 - 1	2.70	22 1	22 1	1 2	10 7	10 7
HCM2K90CHQ.	1.1	1./	1./	12.1	12.1	12.1	3.3	22.1	22.1	1.2	10./	10./
95th%Factor:	2.07	2.07	2.07	1.86	1.86	1.86	2.04	1.78	1.78	2.08	1.82	1.82
HCM2k95thQ:	2.0	2.0	2.0	17.0	17.0	17.0	3.8	24.6	24.6	1.4	20.9	20.9
98th%Factor:	2.63	2.63	2.63	2.19	2.19	2.19	2.57	2.05	2.05	2.65	2.11	2.11
HCM2k98th0:	2.5	2.5	2.5	20.1	20.1	20.1	4.8	28.3	28.3	1.7	24.3	24.3
-			Fuel	Consur	nction	and E	missi	ons				
			200	10 HCM	Opera	tions	Metho	4				
			200 E1	iture 1	lume	Alter	natiw					
*********	*****	*****	******	*******	*****	******	*****	- * * * * * *	*****	*****	*****	*****
T	#2C 0			See (Thereby a								
Intersection	#30 2	st Fra	Incis I	JE / ElliDa	ircade	ro ka						
*********	*****	*****	*****	******		*****	*****	*****	******	*****	*****	*****
Approach:	Noi	rth Bo	ound	Soi	ith Bo	und	Ea	ast Bo	ound	We	est Bo	und
Movement:	L -	- T	- R	L -	- T	- R	L	- T	- R	_ L -	- T	- R
Run Speed:		30 №	IPH		30 M	IPH		30 M	IPH		30 M	PH
NumOfStops:	0.8	1.1	4.8	45.5	1.4	12.7	9.9	178	1.3	3.3	138	12.3
Name: vear 1	995 cc	izogm	te fle	eet								
Fuel Consump	tion:	6	2.543	pounds								
consump		1	0 132	gallor								
and nime		10										
Carbon Dioxi	ue:	19	10.133	pounds	5							
Carbon Monox	ıde:	1	4.655	pounds	3							
Hydrocarbons	:		2.480	pounds	3							
Nitrogen Oxi	des:		0.588	pounds	3							
Name: year 2	000 cc	omposi	te fle	eet								
Fuel Consump	tion:	e	2.543	pounds	3							
conbump		1	0 132	gallor								
Carbon Dievi	do.	10	5 132	nounda								
Carbon DIOXI		19		Pounds								
Carpon Monov	100'		4 6 6 6	nounde								

Carbon Monoxide: 14.655 pounds Hydrocarbons: 2.480 pounds Nitrogen Oxides: 0.588 pounds DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Level Of Service Computation Report 2000 HCM Operations (alternative) Mitigated Cum AM								
Intersection #36: St Francis Dr/Embarcader	ro Rd							
Signal	=Permit/Rights=Include							
Final Vol: 54	12*** 370							
Lanes: 0 0								
•	* * ** *							
Signal=Permit Final Vol: Lanes: Rights=Include	Vol Cnt Date: n/a	Signal=Permit Rights=Include Lanes: Final Vol:						
54 1 🔶	Cycle Time (sec): 120	🔶 0 95						
. 🔺	Loss Time (sec): 0	▲						
1176*** 1	Critical V/C: 0.654	1 1028						
1 Avg C	Crit Del (sec/veh): 23.6	↓ 0						
¥		¥						
5 0 ¥ Avg	g Delay (sec/ven): 23.0							
	LOS: C							
▲ ◀	↑ ↑ ↑ /►							
Final Vol: 10	17 29							
Signal=	=Permit/Rights=Include							
Approach: North Bound South Bound Ea Movement: L - T - R L - T - R L - 	ast Bound West Bound - T - R L - T - R 							
Min. Green: 0 <th< td=""><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td></td><td></td></th<>	$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
Volume Module: Base Vol: 10 17 29 370 12 54 54								
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 10 17 29 370 12 54 54	1.00 1.00 1.00 1.00 1.00 1170 5 18 1023 95							
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								
Initial Ful: 10 17 29 370 12 54 54 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00	11/6 5 18 1028 95 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00							
PHF Volume: 10 17 29 370 12 54 54 Reduct Vol: 0 0 0 0 0 0 0	1176 5 18 1028 95 0 0 0 0 0							
Reduced Vol: 10 17 29 370 12 54 54 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1176 5 18 1028 95 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00							
FinalVolume: 10 17 29 370 12 54 54	1176 5 18 1028 95 							
Saturation Flow Module: Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 Adjustment: 0.87 0.87 0.87 0.70 0.70 0.70 0.13	1900 1900 1900 1900 1900 0.95 0.95 0.11 0.94 0.94							
Lanes: 0.18 0.30 0.52 0.85 0.03 0.12 1.00 Final Sat.: 294 500 853 1132 37 165 247	1.99 0.01 1.00 1.83 0.17 3591 15 215 3262 301							
Capacity Analysis Module: Vol/Sat: 0.03 0.03 0.03 0.33 0.33 0.33 0.22	0.33 0.33 0.08 0.32 0.32							
Crit Moves: **** Green/Cycle: 0.50 0.50 0.50 0.50 0.50 0.50 0.50	**** 0.50 0.50 0.50 0.50 0.50							
Volume/Cap: 0.07 0.07 0.07 0.65 0.65 0.65 0.44 Uniform Del: 15.6 15.6 15.6 22.3 22.3 22.3 19.2 Incremental: 0.0 0.0 0.0 2.4 2.4 2.4 2.5	$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	0.0 0.0 0.0 0.0 0.0 1.00 1.00 1.00 1.00							
Delay/Veh: 15.6 15.6 15.6 24.7 24.7 24.7 21.6 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 DdDel/Veh: 15.6 15.6 15.6 24.7 24.7 24.7 21.6	23.1 23.1 17.1 22.6 22.6 1.00 1.00 1.00 1.00 1.00 23.1 23.1 17.1 22.6 22.6							
LOS by Move: B B B C C C C C HCM2AAvgQ: 1 1 1 13 13 13 2	C C B C C 17 17 1 16 16							
Note: Queue reported is the number of cars per lane	:. 							
Lanes: 0 0 1! 0 0 0 1! 0 0 1 (Lane Group: LTR LTR LTR LTR LTR L	0 1 1 0 1 0 1 1 0 RT RT L RT RT							
#LnsInGrps: 1 1 1 1 1 1 1 1 	2 2 1 2 2							
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12 12	12 12 12 12 12 12 8 8							
% Hev Veh: 0 0 Grade: 0% 0%	0 0 0% 0%							
Parking/Hr: NO NO Bus Stp/Hr: 0 0 Area Type: < < < < < < < < < < < < < < < < < < <	NO NO 0 0	>						
Cnft Ped/Hr: 0 0 ExclusiveRT: Include Include :	0 0 Include Include							
<pre>% RT Prtct: 0 0 0 </pre>								
f(lt) Case: 5 5 5 5 5 5 2								
HCM Ops Saturation Adj Module: Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 1.00 1.00 1.00							
Grade Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 xxxx	1.00 1.00 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00							
Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00 XXXX Area Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 xxxx 1.00 1.00 1.00 1.00 1.00							
LT Adj: 0.93 0.93 0.93 0.71 0.71 0.71 0.13 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00	xxxx xxxx 0.11 xxxx xxxx 1.00 1.00 1.00 1.00 1.00							
HCM Sat Adj: 0.87 0.87 0.87 0.70 0.70 0.70 0.13 Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MUF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 0.11 0.99 0.99 1.00 1.00 1.00 1.00 1.00							
Fnl Sat Adj: 0.87 0.87 0.87 0.70 0.70 0.70 0.13	0.95 0.95 0.11 0.94 0.94							
I ramix 8.0.0715	Copyright (c) 2008 Dowli	ng Associates, Inc.	Licensed to Hexagon Trans., San Jose					

Future Volume Alternative								
***************************************	*******	*******	********	******				
Intersection #36 St Francis Dr/Embarcadero Rd								
***************************************	*******	*******	********	******				
Approach:	North	South	East	West				
Cycle Length, C:	120	120	120	120				
Actual Green Time Per Lane Group, G:	55.93	55.93	56.07	56.07				
Effective Green Time Per Lane Group, g:	59.93	59.93	60.07	60.07				
Opposing Effective Green Time, go:	59.93	59.93	60.07	60.07				
Number Of Opposing Lanes, No:	1	1	2	2				
Number Of Lanes In Lane Group, N:	1	1	1	1				
Adjusted Left-Turn Flow Rate, Vlt:	10	370	54	18				
Proportion of Left Turns in Lane Group, Plt:	0.18	0.85	1.00	1.00				
Proportion of Left Turns in Opp Flow, Plto:	0.85	0.18	XXXXXX	XXXXXX				
Left Turns Per Cycle, LTC:	0.33	12.33	1.80	0.60				
Adjusted Opposing Flow Rate, Vo:	436	56	1123	1181				
Opposing Flow Per Lane Per Cycle, Volc:	14.53	1.87	19.70	20.72				
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00				
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00				
Eff grn until arrival of left-turn car, gf:	36.35	0.86	0.00	0.00				
Opposing Queue Ratio, gro:	0.50	0.50	0.50	0.50				
Eff grn blocked by opposing queue, gg:	18.23	3.82	29.30	31.61				
Eff grn while left turns filter thru, gu:	23.58	56.11	30.77	28.46				
Max opposing cars arriving during gg-gf, n:	0.00	1.48	XXXXXX	XXXXXX				
Proportion of Opposing Thru & RT cars, ptho:	0.15	0.82	XXXXXX	XXXXXX				
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.17	0.14				
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00				
Through-car Equivalents, ell:	2.17	1.48	3.94	4.18				
Single Lane Through-car Equivalents, el2:	1.00	1.41	XXXXXX	XXXXXX				
Minimum Left Turn Adjustment Factor, fmin:	0.04	0.06	0.07	0.07				
Single Lane Left Turn Adjustment Factor, fm:	0.93	0.71	0.13	0.11				
Left Turn Adjustment Factor, flt;	0.93	0.71	0.13	0.11				
Level Of Service Detailed Computation Re	port (HCM	12000 Ouei	e Method					
2000 HCM Operations	Method							
Future Volume Alter	native							
******	*******	*******	********	******				

Intersection #36 St Francis Dr/Embarcadero Rd												
Approach: North Bound				South Bound			Ea	ast Bo	und	West Bound		
Movement:	L -	т	- R	L -	- T	- R	L	- T	- R	L	- T	- R
Green/Cycle: ArrivalType:	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
01:	1.0	1.0	1.0	10.8	10.8	10.8	1.2	15.4	15.4	0.3	14.4	14.4
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.1	0.1	0.1	1.8	1.8	1.8	0.7	1.8	1.8	0.2	1.6	1.6
HCM2KQueue:	1.0	1.0	1.0	12.6	12.6	12.6	1.9	17.2	17.2	0.5	16.0	16.0
70th%Eastor:	1 20	1 20	1 20	1 17	1 17		1 20	1 17	1 17	1 20	1 17	1 17
UCM2k70tb0:	1 2	1 2	1 2	14 8	14 8	14 8	2.20	20 0	20 0	1.20	18 7	18 7
HCM2K/0CHQ.	1.2	1.2	±.2	14.0	14.0			20.0	20.0		10.7	
85th%Factor:	1.59	1.59	1.59	1.50	1.50	1.50	1.58	1.47	1.47	1.59	1.48	1.48
HCM2k85th0:	1.7	1.7	1.7	18.8	18.8	18.8	3.0	25.3	25.3	0.8	23.6	23.6
90th%Factor:	1.78	1.78	1.78	1.61	1.61	1.61	1.76	1.57	1.57	1.79	1.58	1.58
HCM2k90thQ:	1.9	1.9	1.9	20.3	20.3	20.3	3.3	27.0	27.0	0.9	25.3	25.3
95th%Factor:	2.07	2.07	2.07	1.80	1.80	1.80	2.04	1.73	1.73	2.08	1.75	1.75
HCM2k95thQ:	2.1	2.1	2.1	22.6	22.6	22.6	3.8	29.8	29.8	1.1	28.0	28.0
98th%Factor:	2 62	2 62	2 62	2 08	2 08	2 08	2 57	1 97	1 97	2 66	1 99	1 99
HCM2k98th0:	2.02	2.02	2 7	26 2	26 2	26 2	4 8	33 8	33 8	1 4	31 9	31 9
			Fuel	Consur	nption	and F	missi	ons				
2000 HCM Operations Method												
Future Volume Alternative												

Intersection	#36 S	t Fra	ncis I	Dr/Emba	arcade	ro Rd						
**************************************	*****					*****	*****	*****		*****		*****
Approach:	NOL	T BOI	una	- 501	лип во	una	T	ast BC	ound p	TWE	st BC	una p
MOVELLETIC ·			- r.		- 1	- r 	1	- 1	- R	1	- 1	- r
Run Speed:		30 MI	PH		30 M	PH	1	30 M	1PH	1	30 M	IPH
NumOfStops:	1.3	2.2	3.8	68.8	2.2	10.0	8.6	218	0.9	2.5	187	17.3
Name: year 19	995 co	mposi	te fle	eet	_							
Fuer consumpt	.1011.	1	J.904	pounds	5							
Carbon Diani	10.	25	2 420	yallor	15							
Carbon Monovi	ide.	25. 1	2.420 D 654	pounds	-							
Wydrogarborg	ue.	1	2 5 3 0	pounds	-							
Nitrogen Ovic	les:		1.728	pounds	3							
Name: year 20	000 cc	mposi	te fle	eet								
Fuel Consumpt	ion:	8	0.904	pounds	3							

80.904 pounds 13.106 gallons 252.420 pounds 19.654 pounds 3.539 pounds 0.728 pounds Carbon Dioxide: Carbon Monoxide: Hydrocarbons: DISCLAIMER DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements. Nitrogen Oxides:

Level Of Service Computation Report 2000 HCM Operations (alternative) Mitigated Cum PM								
Intersection #36: St Francis Dr/Embard	cadero Rd							
	Signal=Permit/Rights=Include							
Final Vol: 68	3 7*** 250							
Lanes: 0								
•	** * ** *							
Signal=Permit Final Vol: Lanes: Rights=Include	Vol Cnt Date: n/a	Signal=Permit Rights=Include Lanes: Final Vol:						
81 1 🍠	Cycle Time (sec): 120	🔶 0 93						
o 🐥	Loss Time (sec): 0							
1279*** 1	Critical V/C: 0.591	1 1043						
1	Avg Crit Del (sec/veh): 18.1	0						
10 0 _		¥ 12						
₩ ₩	Avg Delay (sectiveli). 10.4	¥ ¹ ³²						
▲	↑ ↑ ♪ ♪</td <td>•</td>	•						
Lanes: 0) 0 1! 0 0							
Final Vol: 5	5 7 33							
Ammongh' North Bound Couth Bound	Signal=Permit/Rights=Include							
Movement: L - T - R L - T - R 	L - T - R L - T - R	-						
Min. Green: 0 <th< td=""><td></td><td>0 0</td></th<>		0 0						
Volume Module: Base Vol: 5 7 33 250 7 68	8 81 1273 10 32 1034 9	3						
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 5 7 33 250 7 68	1.00 1.00 1.00 1.00 1.00 1.00 81 1273 10 32 1034 9	0 3						
Added Vol: 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 Initial Fut: 5 7 33 250 7 68		0 0 3						
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0						
PHF Volume: 5 7 33 250 7 68 Reduct Vol: 0 0 0 0 0 0 Reduced Vol: 5 7 33 250 7 68	8 81 1279 10 32 1043 9. 0 0 0 0 0 0 0 8 81 1279 10 32 1043 9.	3 0 3						
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0						
FinalVolume: 5 7 33 250 7 68	8 81 1279 10 32 1043 93	3 -						
Sat/Lane: 1900 1900 1900 1900 1900 1900 Adjustment: 0.87 0.87 0.87 0.73 0.73 0.73	1900 1900 1900 1900 1900 1900 0.17 0.95 0.95 0.13 0.94 0.9	0 4						
Lanes: 0.11 0.16 0.73 0.77 0.02 0.21 Final Sat.: 185 259 1219 1070 30 291	. 1.00 1.98 0.02 1.00 1.84 0.1 . 321 3578 28 247 3275 29: 	6 2 -						
Capacity Analysis Module: Vol/Sat: 0.03 0.03 0.03 0.23 0.23 0.23	0.25 0.36 0.36 0.13 0.32 0.3	2						
Crit Moves: ***** Green/Cycle: 0.40 0.40 0.40 0.40 0.40 0.40 0.40 Volume/Cap: 0.07 0.07 0.07 0.59 0.59	**** 0 0.60 0.60 0.60 0.60 0.60 0.61 0 0.42 0.59 0.59 0.21 0.53 0.51	0						
Uniform Del: 22.5 22.5 22.5 28.6 28.6 28.6 IncremntDel: 0.0 0.0 0.0 1.7 1.7 1.7	12.5 14.6 14.6 10.8 13.8 13.8 1.5 0.4 0.4 0.7 0.2 0.3	8 2						
InitQueuDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Delay (Vab: 22 6 22 6 22 6 30 3 0 3 0 3 0 3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0						
User DelAdj: 1.00 1.00 1.00 1.00 1.00 AdjDel/Veh: 22.6 22.6 22.6 30.3 30.3 30.3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0 0						
LOS by Move: C C C C C C C C C C C C C C C C C C C	2 B B B B B 1 0 2 15 15 1 13 1 0 2 17 17 17	B 3						
HCM Ops Adjusted Lane Utilization Module:		-						
Lanes: 0 0 1! 0 0 0 0 1! 0 0 Lane Group: LTR LTR LTR LTR LTR LTR	10110101010 L RT RT L RT R 122212	T 2						
HCM Ops Input Saturation Adj Module:		_						
Lane Width: 12 12 12 12 12 12 12 12 12 12 12 12 12	2 12 12 12 12 12 12 8 8 0 0	2						
Grade: 0% 0% Parking/Hr: No No	0% 0% No No							
Bus Stp/Hr: 0 0 Area Type: < < < < < < < < < < < < < < < 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	> >						
ExclusiveRT: Include Include % RT Prtct: 0 0	Include Include 0 0							
HCM Ops f(lt) Adj Case Module:	·	-						
HCM Ops Saturation Adj Module:	, 2 AAAA AAAA 2 XXXX XXX 	~ -						
Ln Wid Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Hev Veh Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Grade 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0						
Parking Adj: 1.00 1.00 1.00 1.00 1.00 1.00 Bus Stp Adj: 1.00 1.00 1.00 1.00 1.00 1.00	xxxx 1.00 1.00 1.00 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00 xxxx 1.00 1.00	0 0						
Area Adj: 1.00	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	0 9						
PedBike Adj: 0.87 0.87 0.97 0.75 0.75 0.75 PedBike Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 HCM Sat Adj: 0.87 0.87 0.87 0.73 0.73 0.73	0 0.17 XXXX XXXXX 0.13 XXXX XXXX 0 1.00 1.00 1.00 1.00 1.00 1.00 0.17 1.00 1.00 0.13 0.99 0.99	x 0 9						
Usr Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Sat Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.95 0.95 1.00 0.95 0.95	0 5						
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Future Volume Alternative									
***************************************	*******	*******	*******	******					
Intersection #36 St Francis Dr/Embarcadero Rd	*****	******	******	******					
Approach:	North	South	East	West					
Cycle Length, C:	120	120	120	120					
Actual Green Time Per Lane Group, G:	43.44	43.44	68.56	68.56					
Effective Green Time Per Lane Group, g:	47.44	47.44	72.56	72.56					
Opposing Effective Green Time, go:	47.44	47.44	72.56	72.56					
Number Of Opposing Lanes, No:	1	1	2	2					
Number Of Lanes In Lane Group, N:	1	1	1	1					
Adjusted Left-Turn Flow Rate, Vlt:	5	250	81	32					
Proportion of Left Turns in Lane Group, Plt:	0.11	0.77	1.00	1.00					
Proportion of Left Turns in Opp Flow, Plto:	0.77	0.11	XXXXXX	XXXXXX					
Left Turns Per Cycle, LTC:	0.17	8.33	2.70	1.07					
Adjusted Opposing Flow Rate, Vo:	325	45	1136	1289					
Opposing Flow Per Lane Per Cycle, Volc:	10.83	1.50	19.93	22.61					
Opposing Platoon Ratio, Rpo:	1.00	1.00	1.00	1.00					
Lost Time Per Phase, tl:	0.00	0.00	0.00	0.00					
Eff grn until arrival of left-turn car, gf:	32.88	1.66	0.00	0.00					
Opposing Queue Ratio, qro:	0.60	0.60	0.40	0.40					
Eff grn blocked by opposing queue, gq:	17.81	3.95	23.60	28.70					
Eff grn while left turns filter thru, gu:	14.56	43.49	48.96	43.86					
Max opposing cars arriving during gq-gf, n:	0.00	1.15	XXXXXX	XXXXXX					
Proportion of Opposing Thru & RT cars, ptho:	0.23	0.89	XXXXXX	XXXXXX					
Left-turn Saturation Factor, fs:	XXXXXX	XXXXXX	0.17	0.07					
Proportion of Left Turns in Shared Lane, pl:	XXXXXX	XXXXXX	1.00	1.00					
Through-car Equivalents, ell:	1.95	1.47	3.99	4.66					
Single Lane Through-car Equivalents, el2:	1.00	1.14	XXXXXX	XXXXXX					
Minimum Left Turn Adjustment Factor, fmin:	0.05	0.07	0.06	0.06					
Single Lane Left Turn Adjustment Factor, fm:	0.97	0.75	0.17	0.13					
Left Turn Adjustment Factor, flt:	0.97	0.75	0.17	0.13					
Level Of Service Detailed Computation Report (HCM2000 Queue Method)									
2000 HCM Operations	Method								
Future Volume Alter	native								
***************************************	*******	*******	*******	*******					

Intersection	#36 5	St Fra	ncis I *****	Dr/Emba	rcade	ro Rd *****	*****	*****	*****	*****	****	*****
Approach:	h: North Bound			South Bound			Ea	ast Bo	und	West Bound		
Movement:	L -	т	- R	L -	т	- R	L ·	- т	- R	L -	т	- R
Green/Cycle: ArrivalType:	0.40	0.40 3	0.40	0.40	0.40 3	0.40	0.60	0.60 3	0.60	0.60	0.60 3	0.60
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.9	0.9	0.9	8.5	8.5	8.5	1.4	13.9	13.9	0.5	11.6	11.6
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.1	0.1	0.1	1.4	1.4	1.4	0.7	1.4	1.4	0.3	1.1	1.1
HCM2KQueue:	1.0	1.0	1.0	9.9	9.9	9.9	2.1	15.3	15.3	0.8	12.7	12.7
70th%Factor: HCM2k70thQ:	1.20	1.20	1.20	1.18	1.18	1.18	1.19	1.17	1.17	1.20	1.17	1.17 14.8
85th%Factor:	1.59	1.59	1.59	1.52	1.52	1.52	1.58	1.48	1.48	1.59	1.50	1.50
HCM2k85thQ:	1.6	1.6	1.6	15.0	15.0	15.0	3.3	22.7	22.7	1.2	18.9	18.9
90th%Factor:	1.78	1.78	1.78	1.64	1.64	1.64	1.76	1.59	1.59	1.79	1.61	1.61
HCM2k90thQ:	1.8	1.8	1.8	16.3	16.3	16.3	3.7	24.3	24.3	1.3	20.4	20.4
0Eth%Eastor:	2 07	2 07	2 07	1 05	1 0 5	1 05	2 02	1 76	1 76	2 00	1 00	1 00
UCM2k95tb0:	2.07	2.07	2.07	18 3	18 3	18 3	2.03	26 9	26 9	2.08	22 7	22 7
	2.1			10.5			1.5	20.5		1		
98th%Factor:	2.63	2.63	2.63	2.17	2.17	2.17	2.55	2.01	2.01	2.64	2.08	2.08
HCM2k98thQ:	2.6	2.6	2.6	21.5	21.5	21.5	5.4	30.8	30.8	2.0	26.3	26.3
			Fuel	Consum	ption	and E	missio	ons				
2000 HCM Operations Method												
			Fı	uture V	olume	Alter	native	2				
*********	******	*****	*****	******	*****	*****	*****	*****	*****	*****	*****	*****
Intersection #36 St Francis Dr/Embarcadero Rd												
Approach:	Noi	th Bo	und	Sou	th Bo	und	Ea	ast Bo	und	We	est Bo	und
Movement:	L -	- T	- R	L -	т	- R	_ L -	- T	- R	_ L -	· T ·	- R
l.												
Run Speea:	0.0	30 M	PH - 1	40.2	30 M	PH 12 4	10 7	30 M	1PH	2 6	30 MI	12 5
NumOIStops:	0.8	1.1	5.1	49.3	1.4	13.4	10.7	197	1.5	3.6	151	13.5
Name: year 10	995 cc	mnosi	te fle	et								
Fuel Consumption: 67.851 pounds												
10.992 gallons												
Carbon Dioxide: 211.694 pounds												
Carbon Monoxide: 15.943			pounds									
Hydrocarbons: 2.710 p					;							
Nitrogen Oxio	les:		0.638	pounds	;							
Name: year 20	100 cc	omposi	te fle	eet ,								
ruei Consumpt	_ion:	6	/.851	pounds								
Carbon Dioxid	le:	21	1 694	nounds								
arbon bioxide, 211.094 pounds												

211.694 pounds 15.943 pounds 2.710 pounds 0.638 pounds Carbon Dioxide: Carbon Monoxide: Hydrocarbons: Nitrogen Oxides:

DISCLAIMER The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Appendix F

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM

The Initial Study-Mitigated Negative Declaration identifies the mitigation measures that will be implemented to reduce the impacts associated with the 1700 Embarcadero Road Auto Dealership Project. The California Environmental Quality Act (CEQA) requires a public agency to adopt a monitoring and reporting program for assessing and ensuring compliance with any required mitigation measures applied to proposed development. As stated in section 21081.6(a)(1) of the Public Resources Code:

... the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.

Section 21081.6 also provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined as part of adopting a mitigated negative declaration.

The mitigation monitoring table lists those mitigation measures that may be included as conditions of approval for the project. To ensure that the mitigation measures are properly implemented, a monitoring program has been devised which identifies the timing and responsibility for monitoring each measure. The project applicant will have the responsibility for implementing the measures, and the various City of Palo Alto departments will have the primary responsibility for monitoring and reporting the implementation of the mitigation measures.
1700 Embarcadero Road Auto Dealership Project Initial Study-Mitigated Negative Declaration Mitigation Monitoring and Reporting Plan							
	Mitigation Measure Action Required When Monitoring to Occur Responsibility Responsibility						
BIOLOG	ICAL RESOURCES						
BIO-1	Nesting Bird Protection. To avoid disturbance of nesting and special-status birds, activities related to the project, including, but not limited to, vegetation removal, ground disturbance, and construction and demolition shall occur outside of the bird breeding season (typically February through August in the project region). If construction must begin within the breeding season, then a pre-construction nesting bird survey shall be conducted no more than 3 days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted within the Project Boundary, including a 300-foot buffer (500-foot for raptors), on foot, and within inaccessible areas (i.e., private lands) afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in the area. If nests are found, an avoidance buffer (which is dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be determined and demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to mark the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within this buffer until the avian biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist.	If construction work is planned during nesting season, verification of completed surveys will be required. Verification that prescribed mitigation measures are taken including adhering to time delays (due to nesting or breeding season) if species are observed.	At least once before work commences. Periodically during initial ground disturbance and/or vegetation removal.	Applicant	City of Palo Alto		
GEOLO	GY AND SOILS						
GEO-1	Geotechnical Design Considerations. The recommendations included in the 2015 Geotechnical Investigation conducted by Romig Engineers, Inc. (Appendix C) related to soil engineering shall be incorporated into the proposed project grading and building plans. The recommendations are related to: • Foundation design • Surface improvements • Retaining walls • Vehicle pavements	Verification that recommendations incorporated into the grading and building plans.	Prior to issuance of grading permit.	Applicant	City of Palo Alto		

1700 Embarcadero Road Auto Dealership Project Initial Study-Mitigated Negative Declaration Mitigation Monitoring and Reporting Plan							
	Mitigation Measure	Action Required	When Monitoring to Occur	Implementation Responsibility	Monitoring Responsibility		
TRANSF	PORTATION/TRAFFIC						
	East Bayshore Road and Embarcadero Road. The project applicant shall construct the following improvements and enter into a reimbursement agreement with the City for payment less their fair share of the improvement costs:	Verification that fair share payment has been made.	Prior to occupancy of the building.	Applicant	City of Palo Alto		
T-1	 Revise the eastbound leg on Embarcadero Road to include two left-turn pockets, a through lane, and a shared through/right-turn lane. This improvement shall also include changing the east-west phasing from split phase timing to protected left turn phasing. Restripe the northbound approach to have one left turn lane and one shared left-through-right lane. This would likely require modifying the median island and relocating the signal equipment on the west leg of the intersection. 						

Appendix G

Response to Comments on the Draft IS-MND

RESPONSES to COMMENTS

This appendix contains the written comments received in response to the Draft Initial Study -Mitigated Negative Declaration (IS-MND) prepared for the 1700 Embarcadero Road Auto Dealership Project and responses to those comments.

The IS-MND was circulated for a public review period that began on April 22, 2016, and concluded on May 12, 2016. The City received three comment letters on the Draft IS-MND; one of these, Letter 3, was received after the close of the comment period. The commenter and the page number on which each commenter's letter appears are listed in the table below. The comment letters and the City's responses follow. Each comment letter has been numbered sequentially and each separate issue raised by the commenter has been assigned a number. The responses to each comment identify first the number of the comment letter, and then the number assigned to each issue (Response 1.1, for example, indicates that the response is for the first issue raised in comment Letter 1).

Additional text discussed in the responses to comments is shown in the text of the Final IS-MND in strikethrough (for deleted text) and <u>underline</u> (for added text) format. Other minor corrections to the text that were not made specifically in response to the comments received are also shown in this format. None of these changes introduces significant new information or affect the conclusions of the IS-MND.

	Page #	
1.	County of Santa Clara Parks and Recreation Department	G-2
2.	Santa Clara Valley Transportation Authority	G-6
3.	California Department of Transportation (Caltrans) (Received after close of comment period)	G-11

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive Los Gatos, California 95032-7669 (408) 355-2200 FAX 355-2290 Reservations (408) 355-2201 www.parkhere.org

May 10, 2016

Attn: Sheldon Ah Sing City of Palo Alto 250 Hamilton Avenue Palo Alto, CA 94301

Subject: Notice of Intent to Adopt a Mitigated Negative Declaration for the 1700 Embarcadero Road Auto Dealership Project

Dear Mr. Sheldon Ah Sing:

The County of Santa Clara, Parks and Recreation Department ("County Parks Department"), has reviewed the Notice of Intent to Adopt a Mitigated Negative Declaration (MND) for the demolition of an existing 17,942 square-foot single-story commercial building, and construction and operation of a new three-story, approximately 61,510 square-foot, auto dealership with roof deck parking. Other on-site features proposed include a detached car wash facility, customer parking, vehicle merchandise display, solid waste/recycling facilities, and landscaping.

The County Parks Department is charged with the planning and implementation of *The Santa Clara County Countywide Trails Master Plan Update (Countywide Trails Plan),* an element of the Parks and Recreation Section of the County General Plan adopted by the Board of Supervisors on November 14, 1995. Although responsibility for the actual construction and long-term management of each individual trail varies, the County Parks Department provides general oversight and protection of the overall trail system. The existing trails and proposed trail routes located near the Project site are as follows:

San Francisco Bay Trail (Route R1-B) – This partially existing trail provides a regional connection along the San Francisco Bay shoreline. It is designated for hiking and cycling.

The MND should describe the above-mentioned trail route as well as the California Avenue Trail, which is identified in the *City of Palo Alto Bicycle & Pedestrian Transportation Plan*. This partially existing trail is another regional trail in close proximity, which currently extends from St. Francis Drive to the Baylands Preserve. The trail, acknowledged as part of the "Bay to Ridge Trail," starts near St. Francis Drive, crosses East Bayshore Road, and extends into the Baylands Preserve where it connects to the San Francisco Bay Trail.



Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Ken Yeager, S. Joseph Simitian

County Executive: Jeffrey V. Smith



Transportation/Traffic

The Draft MND states that the Project will have less than significant impact on public transit, bikeways, or pedestrian facilities. However, the Traffic Impact Analysis does not accurately note local and regional trails in the project vicinity. The Traffic Impact Analysis should be amended to address the following concerns:

- Figure 3 (Traffic Impact Analysis pg. 11) should be amended to show the on-street bicycle route within road right-of-way on Geng Road, as identified in the *City of Palo Alto Bicycle & Pedestrian Transportation Plan* (Map 6-1).
- Figure 3 (Traffic Impact Analysis pg. 11) should also be amended to show the California Avenue Trail beyond the "Bike/Pedestrian Bridge" as depicted in the *City of Palo Alto Bicycle & Pedestrian Transportation Plan* (Map 6-1).

The MND should address potential impacts to these trail routes and include mitigation measures for 1.3 those impacts.

Thank you for the opportunity to comment on the Notice of Intent to Adopt a Mitigated Negative Declaration for the 1700 Embarcadero Road Auto Dealership Project. If you have any questions regarding these comments, please feel free to contact me at (408) 355-2228 or via email at Hannah.Cha@prk.sccgov.org.

Sincerely,

aute Car

Hannah Cha Provisional Park Planner II

cc: Annie Thomson, Principal Planner



Board of Supervisors: Mike Wasserman, Cindy Chavez, Dave Cortese, Ken Yeager, S. Joseph Simitian

COMMENTER:	Hannah Cha, Provisional Park Planner II, County of Santa Clara Parks and
	Recreation Department

DATE: May 10, 2016

Response 1.1

The commenter summarizes the project description and provides an overview of the County of Santa Clara Parks and Recreation Department's responsibilities related to review of the proposed project. The commenter identifies the following two existing trails near the project site, and states an opinion that they should be described in the Draft IS-MND:

- A segment of the San Francisco Bay Trail ("Route R1-B") that traverses a portion of the Baylands Preserve near the project site, and
- The California Avenue Trail, which is identified in the *City of Palo Alto Bicycle & Pedestrian Transportation Plan* and extends from St. Francis Drive to the Baylands Preserve.

The Final IS-MND has been revised accordingly. The text on Page 12 has been augmented as follows:

The proposed project would increase the massing and intensity of development on the project site (see Figure 4). As such, the proposed project would represent a change in the visual character of the site. However, the existing visual character and quality of the site, characterized by a one-story commercial building, surface parking and landscaping, are considered low to moderate. Figure 8 shows a visual simulation of the proposed project from the Renzel Trail within the Baylands Nature Preserve. This trail is part of the larger San Francisco Bay Trail and connects to Embarcadero Road via an additional planned segment on Faber Place. As shown, the proposed project appears be generally consistent with the size and scale of the adjacent two-story office building bordering the project site to the south and two-story auto dealership located to the east. In addition, the proposed project would be consistent with the FAR and height allowances for the CS(AD) zone in accordance with the Palo Alto Municipal Code (PAMC) (see Section X, Land Use and Planning). The project site is visible from portions of other nearby trails and bike routes such as the freeway overcrossing portion of the St. Francis Drive-Embarcadero Road Crossing-Baylands connector trail and the segment of the Geng Road bike lane adjacent to the Geng Road/Embarcadero Road intersection. However, the existing views of urban development from these limited segments would not change substantially with the project's redevelopment of the site with an incrementally larger building.

Please see also Response 1.2 below.

Response 1.2

The commenter suggests that the Geng Road bicycle route and the St. Francis Drive-Embarcadero Road Crossing-Baylands connector trail discussed in Response 1.1 above be shown on Figure 3, *Existing Bicycle Facilities*, of the project's Traffic Impact Analysis (Appendix E to the IS-MND). Figure 3 of the Traffic Impact Analysis has been modified to show the bicycle route and trail. The revised figure is included in Appendix E of the Final IS-MND in the supplemental traffic memorandum prepared by Hexagon Transportation Consultants.

Response 1.3

The commenter states an opinion that the IS-MND should address potential impacts to these trail routes and include mitigation measures for those impacts. The commenter does not provide information or analysis to indicate that such impacts would occur or what they would be. Impacts related to aesthetics are discussed under Section I, *Aesthetics*, of the IS-MND, and as discussed there impacts related to views from public streets and trails would be less than significant and no mitigation measures are required. Impacts related to traffic, circulation and traffic safety are discussed in Section XVI, *Transportation/Traffic*, of the Draft IS-MND, and in the project's traffic impact analysis (TIA), included as Appendix E to the IS-MND. As discussed therein, impacts related to bicycle facilities and circulation would be less than significant and no mitigation measures are required. The following text has been added to the Final IS-MND in Section XVI, *Transportation/Traffic*; this information is also included in Appendix E in the May 2016 supplemental traffic memorandum prepared by Hexagon Transportation Consultants.

The San Francisco Bay trail is a partially existing Class I trail that provides a regional connection along the San Francisco Bay shoreline. This is a multi-use trail designed for hiking and cycling. This trail is located near the project site, with access along E. Bayshore Road. Views from trails are discussed in Section I, *Aesthetics*. The project would not result in significant traffic or circulation impacts to the trail.

•••

The California Avenue Trail is a partially existing Class II trail that currently extends from St. Francis Drive to the Baylands preserve. This planned trail will provide bicycle and pedestrian access between the existing bike/pedestrian bridge over US 101 to the existing Class II bicycle lanes along Louis Road. The completion of this trail will enhance the pedestrian and bicycle access to and from the west side of the US 101 and the project area. The proposed project would not result in significant traffic or circulation impacts to this trail.



May 12, 2016

City of Palo Alto Planning Department P.O. Box 10250 Palo Alto, CA 94303

Attention: Sheldon Ah Sing

Subject: Embarcadero Road Auto Dealership

Dear Mr. Ah Sing:

Santa Clara Valley Transportation Authority (VTA) staff have reviewed the Initial Study for a 61,510-square foot auto dealership at 1700 Embarcadero Road. We have the following comments.

Transportation Impact Analysis (TIA) Report

VTA notes that the analysis of potential effects on transit service in the TIA (pg. 34) is based on transit capacity rather than transit vehicle delay, as required per Section 9.2 of the 2014 TIA Guidelines. As noted in the 2014 VTA TIA Guidelines (page 46), the transit vehicle delay analysis may simply utilize information produced by the intersection Level of Service analysis, or other sources if available. In addition, the TIA did not include an Auto Trip Reduction Statement (ATRS), as required per Section 8.2 and Appendix C of the 2014 TIA Guidelines. Please submit the completed ATRS and transit vehicle delay analysis in a revised TIA report or memo to VTA, as well as in materials shared with the public and decision-makers regarding this project.

The October 2014 version of the VTA TIA Guidelines can be found online at <u>http://www.vta.org/cmp/tia-guidelines</u>. For any questions about the updated TIA Guidelines, please contact Robert Swierk of the VTA Planning and Program Development Division at 408-321-5949 or <u>Robert.Swierk@vta.org</u>.

Pedestrian Accommodations

Figure 12 of the TIA ("Conceptual Improvement Plan") indicates that a new crosswalk would be added on north leg of the intersection of Embarcadero Road and East Bayshore Road intersection, and an existing porkchop island would be removed on the southwest corner of the intersection, reducing the total pedestrian crossing distance on the south leg. However, these pedestrian improvements are not described in the text of the TIA or Initial Study. VTA supports these improvements and recommends that the City include them as enforceable conditions of approval for the project.

2.1

2.2

Letter 2

City of Palo Alto May 12, 2016 Page 2

Thank you for the opportunity to review this project. If you have any questions, please call me at (408) 321-5784.

Sincerely,

Roy Molseed Senior Environmental Planner

PA1504

VTA Development Review Program Contact List

Last Updated: 4/22/2016

Please route development referrals to:

Environmental (CEQA) Documents, Site Plans, other miscellaneous referrals Roy Molseed – <u>Roy.Molseed@vta.org</u> – 408.321.5784

Transportation Impact Analysis (TIA) Reports and Notification Forms: Robert Cunningham – <u>Robert.Cunningham@vta.org</u> – 408.321.5792 Eugene Maeda – <u>Eugene.Maeda@vta.org</u> – 408.952.4298

Electronic/email referrals are preferred, but please mail any hardcopy documents to:

[Name of recipient(s) as detailed above, depending on type of document]
Planning & Program Development Division
3331 North First Street, Building B-2
San Jose, CA 95134-1906

Contacts for specific questions related to VTA comments on a referral are below by topic area:

Transportation Impact Analysis (TIA) Guidelines (General Questions) Robert Swierk – <u>Robert.Swierk@vta.org</u> – 408.321.5949

Robert Cunningham – <u>Robert.Cunningham@vta.org</u> – 408.321.5792

Auto LOS Methodology

VTA Highway Projects & Freeway Ramp Metering

Shanthi Chatradhi – <u>Shanthi.Chatradhi@vta.org</u> – 408.952.4224

VTA Transit Service, Ridership & Bus Stops

Rodrigo Carrasco – <u>Rodrigo.Carrasco@vta.org</u> – 408.952.4106 Nicholas Stewart – <u>Nicholas.Stewart@vta.org</u> – 408.321.5939

TDM Programs

Congestion Management Program (CMP) VTA Eco Pass Program Questions <u>Before Project Approval</u> (e.g. when writing Conditions of Approval) Robert Cunningham – <u>Robert.Cunningham@vta.org</u> – 408.321.5792

VTA Eco Pass Program Questions <u>After</u> Project Approval (e.g. Program Implementation) Dino Guevarra – <u>Dino.Guevarra@vta.org</u> – 408.321.5572

BART Silicon Valley Extension Kevin Kurimoto – <u>Kevin Kurimoto@vta.org</u> – 408.942.6126

VTA Bicycle & Pedestrian Projects Lauren Ledbetter – <u>Lauren.Ledbetter@vta.org</u> – 408.321.5716

VTA Real Estate

Kathy Bradley – <u>Kathy.Bradley2@vta.org</u> – 408.321.5815

VTA Permits (Construction Access Permit, Restricted Access Permit) Victoria King-Dethlefs – <u>Victoria.King-Dethlefs@vta.org</u> – 408-321-5824 Cheryl D. Gonzales – <u>Cheryl.gonzales@vta.org</u> – 408-546-7608

Other Topics and General Questions about VTA Comments

Roy Molseed – <u>Roy.Molseed@vta.org</u> – 408.321.5784

COMMENTER:	Roy Molseed, Senior Environmental Planner, Santa Clara Valley
	Transportation Authority

DATE: May 12, 2016

Response 2.1

The commenter notes that the analysis of potential effects on transit service is based on transit capacity rather than transit vehicle delay, and that the TIA did not include an Auto Trip Reduction Statement (ATRS).

In response to this comment, Hexagon Transportation Consultants, the project traffic consultant, analyzed the transit vehicle delay associated with the proposed project and provided an ATRS in a memorandum dated May 17, 2016. The results of this memo are summarized in the Final IS-MND in Section XVI, *Transportation/Traffic*. The memo is also included in Appendix E of the Final IS-MND. As discussed in Section XVI, *Transportation and Traffic*, of the Final IS-MND, there are no regular VTA bus lines that travel through the study intersections, but there are two shuttles: City of Palo Alto Embarcadero Shuttle Service and the Marguerite Shuttle Service operated by Stanford University. Mitigation Measure T-1, which would offset the additional delay created by the project at the intersection of Embarcadero Road and East Bayshore Road, would also offset the increase in travel time. No additional significant impacts associated with the project have been identified in light of this comment.

Additionally in response to this comment, an ATRS has been prepared. The ATRS is included in Appendix E of the Final IS-MND. No additional significant impacts associated with the project have been identified in light of this comment.

Response 2.2

The commenter notes that the Figure 12 of the TIA indicates that a pedestrian improvement would be added on the north leg of the intersection of Embarcadero Road and East Bayshore Road, and that this pedestrian improvement is not specifically described in the text of the TIA or the Draft IS-MND. The commenter states support for this improvement and recommends that the City include the improvement as a condition of approval for the project.

The pedestrian improvement is not described in the Draft IS-MND because it does not address a potential project impact. However, it is planned by the City as part of the larger set of improvements for the intersection of East Bayshore Road and Embarcadero Road, and is therefore shown in the figure to provide a complete picture of the overall improvements. No changes to the IS-MND are warranted. The commenter's support for this improvement will be forwarded to the City's decision makers for their consideration.

STATE OF CALIFORNIA-CALIFORNIA STATE TRANSPORTATION AGENCY

DEPARTMENT OF TRANSPORTATION DISTRICT 4 P.O. BOX 23660 OAKLAND, CA 94623-0660 PHONE (510) 286-5528 FAX (510) 286-5559 TTY 711 www.dot.ca.goy

Letter 3 (received after close of comment period)

May 20, 2016

SCL101967 SCL/101/PM 52

Mr. Sheldon Ah Sing Department of Planning and Community Environment City of Palo Alto 250 Hamilton Avenue Palo Alto, CA 94301

Dear Mr. Ah Sing:

1700 Embarcadero Road Auto Dealership Project - Mitigated Negative Declaration

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system, in which we seek to reduce statewide vehicle miles traveled (VMT) and increase non-auto modes of active transportation. Caltrans plans to increase non-auto mode shares by 2020 through tripling bicycle, and doubling pedestrian and transit. Also, these targets support the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy, which promotes the increase of nonauto mode shares by ten percentage points and a decrease in automobile VMT per capita by ten percent. Our comments are based on the Mitigated Negative Declaration (MND).

Project Understanding

The proposed project is located approximately 356 feet northeast on Embarcadero Road from the northbound (NB) US Highway (US) 101/Embarcadero Road on- and off-ramps. The proposed project would involve the demolition of an existing 17,942 square foot (sf) single-story commercial building and construction and operation of a new three-story, approximately 61,510 sf auto dealership with roof deck parking. The building would integrate sales and administrative offices, customer parking, vehicle merchandise storage, and vehicle service/repair areas on multiple floors. Other on-site features would include a detached car wash facility, customer parking, vehicle merchandise display, solid waste/recycling facilities, and landscaping.

Lead Agency

As the lead agency, the City of Palo Alto (City) is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

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Serious Drought. Help save water/

Traffic Impacts

1. Left-Turning and US 101 Ramp Queues

- A. The proposed plan is likely to have impacts on the operations of the following metered freeway on-ramps:
 - Southbound (SB) US 101/Embarcadero Road loop on-ramp (metered 3:00 PM to 7:00 PM).
 - NB US 101/Embarcadero Road diagonal collector on-ramp (to be metered in the future for AM and PM).

During the ramp metering hours, the on-ramp queues will likely be lengthened with the additional traffic demand by this project, and they may impede onto the collector/ distributor and the local streets affecting their operations. Please provide additional storage on the on-ramps and associated local streets for the freeway on-ramp traffic to avoid such impacts.

- B. Caltrans recommends the Traffic Impact Analysis (TIA) and MND:
 - Clarify the reported number of left-turning vehicles in the queuing analysis for the East Bayshore Road/Embarcadero Road intersection. The TIA states on page vii, "The project would add 77 vehicles to the left turn movement during the PM peak hour..." However, on page 43, the TIA states, "The project will add 43 vehicles to this movement [left turn movement] during the PM peak hour." This is repeated on page 47 of the MND.
 - Include analyses of the Oregon Expressway on- and off-ramps, as they are connected to the Embarcadero Road ramps by collectors/distributors. The first paragraph of the TIA states, "The freeway ramps to and from Oregon Expressway were not analyzed because the project is not expected to add enough trips to warrant an analysis...." Additional queuing by this project may affect the operations of both the US 101/Embarcadero Road and US 101/Oregon Expressway interchanges.
 - Reassess the queuing and update the volume-to-capacity (V/C) values for the ramp metering rate at the SB US 101/Embarcadero Road loop on-ramp in the PM peak period. The rate is metered between 880 and 900 vehicles per hour (vph) on the high-occupancy vehicle (HOV) lane and between 300 and 400 vph on the single-occupancy vehicle (SOV) lane. The capacity of 900 vph in TIA Table 4 (p. 15) and in Table 9 (p. 25) should be changed accordingly to these metering rates.
- 2. Adjusting metering rates on State facilities cannot be considered mitigation to reduce potential impacts to on-ramp queuing. Please remove the TIA recommendation (p. 44) to re-evaluate the US 101/Embarcadero Road interchange, when the US 101 construction project is complete, and adjusting the rates as mitigation. Please see comment above for mitigation for queuing impacts.
- 3. Caltrans recommends exclusively using 2015 freeway ramp data or collect new data. Bay area traffic in general has grown substantially in the past few years, so mixing freeway ramp volumes from 2009 and 2010 with data from 2015 in a data set for existing conditions and analyses creates inaccurate assessments and underestimates impacts to State facilities.

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4. Please include a citation to the source document for the existing volumes provided by Caltrans, as referenced in TIA Table 4 and Table 25.

Vehicle Trip Reduction

Caltrans encourages the City to locate future housing, jobs, and employee-related services near major mass transit centers with connecting streets configured to facilitate walking and biking. This would promote mass transit use thereby reducing regional VMT and traffic impacts. Transportation Demand Management (TDM) programs should be documented with annual monitoring reports by an onsite TDM coordinator to demonstrate effectiveness. Suggested TDM strategies include working with the Santa Clara Valley Transportation Authority (VTA) to decrease headway times and improve way-finding on bus lines to provide a better connection between the project, the Palo Alto and California Avenue Stations, and regional destinations and providing:

- Secured bicycle storage facilities.
- Fix-it bicycle repair station(s).
- Bicycles for employee uses to access local resources.
- Showers, changing rooms and clothing lockers.
- 10% vehicle parking reduction.
- Carpool and clean-fuel parking spaces.
- Transit subsidies and/or transit passes to all employees.
- Emergency Ride Home program.
- Transit and trip planning resources.
- Carpool and vanpool ride-matching support.

Traffic Impact Fees

Given the project's contribution to area traffic and its proximity to US 101, the project should contribute fair share traffic impact fees to the US 101 Express Lanes Project. These contributions would be used to lessen future traffic congestion and improve transit in the project vicinity.

Traffic Control Plan

Since it is anticipated that vehicular, bicycle, and pedestrian traffic will be impacted during the construction of the proposed project requiring traffic restrictions and detours, a Caltransapproved Traffic Control Plan (TCP) is required to avoid project-related impacts to US 101. The TCP must also comply with the requirements of corresponding jurisdictions. In addition, pedestrian access through the construction zone must be in accordance with the Americans with Disabilities Act (ADA) regulations (see Caltrans' *Temporary Pedestrian Facilities Handbook* for maintaining pedestrian access and meeting ADA requirements during construction at: www.dot.ca.gov/hq/construc/safety/Temporary_Pedestrian_Facilities_Handbook.pdf) (see also Caltrans' Traffic Operations Policy Directive 11-01 "Accommodating Bicyclists in Temporary Traffic Control Zones" at: www.dot.ca.gov/hq/traffops/policy/11-01.pdf). All curb ramps and pedestrian facilities located within the limits of the project are required to be brought up to current ADA standards as part of this project.

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Mr. Ah Sing/City of Palo Alto May 20, 2016 Page 4

For further TCP assistance, please contact the Caltrans District 4 Office of Traffic Management Operations at (510) 286-4579. Further traffic management information is available at the following website:

www.dot.ca.gov/hq/traffops/trafmgmt/tmp_lcs/index.htm.

Sea Level Rise

The effects of sea level rise may have impacts on transportation facilities located in the project area. Executive Order (EO) S-13-08 directs State agencies to plan for potential impacts by considering a range of sea level rise scenarios for the years 2050 and 2100. Higher water levels may increase erosion rates, change environmental characteristics that affect material durability, lead to increased groundwater levels and change sediment movement along shores and at estuaries and river mouths, as well as affect soil pore pressure at dikes and levees on which transportation facilities are constructed. All these factors must be addressed through geotechnical and hydrological studies conducted in coordination with Caltrans.

Should you have any questions regarding this letter, please contact Brian Ashurst at (510) 286-5505 or brian.ashurst@dot.ca.gov.

Sincerely,

PATRICIA MAURICE District Branch Chief Local Development - Intergovernmental Review

c: Robert Swierk, Santa Clara Valley Transportation Authority (VTA) – electronic copy Robert Cunningham, Santa Clara Valley Transportation Authority (VTA) – electronic copy

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"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and itvability"

COMMENTER:	Patricia Maurice, District 4 Branch Chief, California Department of
	Transportation (Caltrans)

DATE: May 20, 2016

This letter was received after the close of the public comment period on the Draft IS-MND and after a final draft of this document was prepared. Nevertheless, the City considered these comments and Hexagon Transportation Consultants prepared a memorandum to the City to address these comments; the memorandum appears on the following pages.



May 25, 2016

Mr. Jarrett Mullen, Planning & Community Environment - Transportation City of Palo Alto 250 Hamilton Avenue Palo Alto, CA 94301

Re: 1700 Embarcadero Road Auto Dealership Project – Response to Caltrans

Dear Mr. Mullen:

Hexagon Transportation Consultants, Inc. has reviewed the Caltrans letter sent to the City of Palo Alto, dated May 20, 2016. The letter concerns the auto dealership project located at 1700 Embarcadero Road. Our responses to Caltrans comments are summarized below.

1A. Left-Turning and US 101 Ramp Queues

Caltrans noted that the project should provide additional storage on the on ramps and associated local streets for the freeway on ramp traffic to avoid impacts at nearby US 101 ramps. An analysis of freeway ramp queues was not conducted because neither the City of Palo Alto nor the VTA has established any standards of significance criteria related to freeway ramp operations. Additionally, Caltrans has not established any mechanism for collecting contributions towards any ramp improvements.

1B. Caltrans Recommendations

Left-Turn Volume at E Bayshore/Embarcadero

The report contains a discrepancy in the number of left-turning vehicles in the queueing analysis for the East Bayshore Road/Embarcadero Road intersection in the northbound direction during the PM peak hour. The correct number of project trips added is stated on page vii of the TIA and should be clarified elsewhere as 77 vehicles.

Oregon Expressway Ramps

The spillback and queuing issues that occur on the ramps are due to existing freeway congestion and slow meter rates. This issue is not due to the ramps capacity. For this reason the Embarcadero Road ramps were analyzed because operational issues on these ramps are not due to project related traffic.

Ramp Meter Rate

The project does not need to assess the volume-to-capacity (V/C) values for the ramp metering rate at the SB US 101/Embarcadero loop on-ramp in the PM peak period. It has already been determined that the project has a less than significant impact on the freeway segments, as defined by the Santa Clara Valley Transportation Authority (VTA). As noted above, operational issues related to freeway ramps are not CEQA issues since neither the City of Palo Alto nor the VTA has established any standards or significance criteria based on freeway ramp operations. The V/C analysis for the US 101/Embarcadero Road Interchange was revised to reflect the



metering rates suggested by Caltrans (see Table 1). Additionally, Caltrans has not established any mechanism for collecting contributions towards any ramp improvements.

Table 1

US 101 and Embarcadero Road Interchange – V/C Analysis

				Existing		Existing Plus Project Conditions		
			Peak			Project	Total	
Ramp	Туре	Capacity	Hour	Volume ¹	V/C	Trips	Volume	V/C
SB US 101 to EB Embarcadero Rd.	Loop	1,800	AM	270	0.15	14	284	0.16
			PM	100	0.06	15	115	0.06
WB Embarcadero Rd. to SB US 101 ²	Loop	900	AM	290	0.32	23	313	0.35
		400 ³	РM	560	1.40	45	605	1.51
NB US 101 to EB Embarcadero Rd.	Diagonal	2,000	AM	580	0.29	28	608	0.30
	-		PM	420	0.21	29	449	0.22
WB Embarcadero Rd. to NB US 101 ²	Diagonal	900	AM	115	0.13	11	126	0.14
	-		PM	370	0.41	23	393	0.44

¹ Existing AM and PM peak-hour ramp volumes are based on 2009 and 2010 hourly counts provided by Caltrans.

² This ramp is controlled by a ramp meter during the peak hour. Capacity reflects the maximum ramp meter rate.

³ Capacity for the PM Peak Hour at this loop ramp reflects the Caltrans metering rate for a single occupancy vehicle lane. V/C ratios also reflect this capacity.

2. Ramp Metering

The letter from Caltrans states that adjusting the metering rates on State facilities cannot be considered mitigation. Hexagon has described the slow metering rates in the TIA report to describe existing conditions, but does not suggest that modifying these rates should be used as a mitigation measure.

3. Freeway Ramp Data

Caltrans recommended exclusively using 2015 freeway ramp data or colleting new data. Throughout the preparation of the TIA for this project, Caltrans was contacted and asked to provide 2015 count data. To this date, no reply to these requests has been recorded and 2015 freeway data was unavailable at the time of the analysis. Freeway counts were not conducted as the current conditions along the freeway are not typical due to the ongoing construction.

4. Source of Count Data

The best available data was found on the Caltrans website, from 2009 and 2010. This data include US 101 freeway and ramp volumes in the project vicinity.

5. Vehicle Trip Reduction

The City of Palo Alto requires vehicle trip reduction programs where it is appropriate. No trip reductions were assumed for this project.

6. Traffic Impact Fees

Caltrans has suggested that the project contribute fair share traffic impact fees to the US 101 Express Lanes Project. Caltrans has not yet prepared a nexus study that is required to collect these fees. For this reason, the project cannot be obligated to make a fair-share contribution towards the US 101 Express Lanes Project.



7. Traffic Control Plan

The project will file a traffic control plan for any construction that occurs within Caltrans right-ofway.

8. Sea Level Rise

Caltrans comment regarding sea level rise and transportation facilities has been noted. The possible effects of sea level rise are not attributable to the proposed project.

If you have any questions please do not hesitate to call.

Sincerely,

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Gary K. Black President