YUCAIPA POINTE

MITIGATED NEGATIVE DECLARATION (MND)

September, 2019

City of Yucaipa
Community Development Department
34272 Yucaipa Boulevard
Yucaipa, CA 92399

CITY OF YUCAIPA
INITIAL STUDY

ENVIRONMENTAL CHECKLIST FORM

1. Project Title: Case No. 18-129/GPA/DA/CUP/TPM No. 20125

2. Lead Agency Name and Address: City of Yucaipa, 34272 Yucaipa Blvd., Yucaipa, CA 92399

3. Contact Person and Phone Number: Benjamin Matlock, (909) 797-2489 x 261

4. Project Location: South side of Yucaipa Boulevard, west of 18th Street, Assessor Parcel Numbers (APN):0300-191-01, -02, -17, -18, -28, -29, -30, -31, and 0300-192-07 and 08

5. Project Sponsor's Name and Address:

   VantageOne Real Estate Investments
   4 Corporate Plaza, Suite 210
   Newport Beach, CA 92660

6. General Plan Designation: CS (Service Commercial) and RM-10M (Multiple Residential)

7. Description of the Project: A Conditional Use Permit for a phased unified center development plan on approximately 24 gross acres, consisting of a variety of commercial uses, including retail, restaurants, an express carwash, a health club, and a future 39,000 square foot movie theater anchor, located along the south side of Yucaipa Boulevard, west of 18th Street. Tentative Parcel Map (TPM No. 20125) would subdivide the commercial Project to create individual parcels for each commercial pad area. As part of the Project, a General Plan Amendment is also proposed to redesignate approximately 1.1 acres of Multiple Family Residential (RM-10M) into Service Commercial (CS) to correspond with the Project boundary. Variances may also be proposed for the sign master plan, where larger signs are requested for better roadway visibility. A Development Agreement that would be executed between the City and the Project developer may also be proposed.

8. Surrounding Land Uses and Setting: Commercial uses are located to the west and north of the subject site, and residential uses are located east and south of the subject site. The site is bounded by Yucaipa Boulevard to the north, Avenue E and Interstate 10 to the west, and 18th Street to the east.

9. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement):

   - Yucaipa Valley Water District: Development Agreement
   - Western Heights Water Company: Agreement
   - San Bernardino County Environmental Health: Permit for Food Facilities
   - National Pollutant Discharge Elimination System (NPDES) permit or approval from the Regional Water Quality Control Board

Introduction

This section explains the background and purpose of this Mitigated Negative Declaration (MND), which is the environmental review document prepared pursuant to the provisions of the California Environmental Quality Act (CEQA) for the development of unified center development plan on approximately gross 24 acres, which will consist of a variety of commercial uses, including retail, restaurants, an express carwash, a health club, and a future 39,000 square foot movie theater anchor ("Project"). It establishes the context and scope for the MND, and outlines the process for reviewing the Draft MND and issuing the Final MND. The City of Yucaipa is the lead agency under CEQA. A "lead agency" is defined by Section 21067 of CEQA as "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment."

Environmental Review Process

This Initial Study and Notice of Intent (NOI) to adopt a MND is being circulated for agency and public review and comment for 30 days beginning September 2, 2019. All written comments must be received by 5:30 p.m. on October 2, 2019. Written comments or questions concerning this document should be directed to:

City of Yucaipa
ATTN: Benjamin Matlock
34272 Yucaipa Boulevard
Yucaipa, CA 92399

Detailed Project Description

Project Setting

The proposed Project is located on approximately 24 gross acres and is comprised of several different parcels, bounded by Yucaipa Boulevard to the north, Avenue E and Interstate 10 to the west, and 18th Street to the east. The Project site generally features gentle rolling hills, which slopes southwest, away from the frontage along Yucaipa Boulevard. Adjacent to the Project, the land then raises in elevation within the properties located on Avenue E. Prior fill areas are located onsite, which are associated with the approval of Cases No. 10-016/CUP and 10-025/CUP, Conditional Use Permits to allow for the import of fill material for a future development. Additionally, the site is currently operating as the construction staging area for Phase I and II of the Yucaipa Boulevard Widening, 15th Street to Interstate 10, Project.

Project Elements

Conditional Use Permit:

The proposed Project consists of a Conditional Use Permit for the development of a unified commercial development (Figure 5) located on two sites that are separated by Avenue E. The eastern site, which is identified as Area A of the Project Site Plan, is on approximately 22 acres and would involve construction of an approximately 34,000 square foot (sf) health club, approximately 39,000-sf theater with 975 seats, three restaurants approximately 17,900-sf, five fast food restaurants all with a drive-through, an approximately 3,779- sf car wash with a drive-through tunnel and office, and approximately 9,100-sf of

shops. The smaller western site, which is denoted as Area C on the Project Site Plan, is a 1.72-acre site and would involve the construction of an approximately 5,000-sf fast food restaurant with drive-through, approximately 2,000-sf retail shop, and approximately 1,000-sf restaurant.

An internal circulation design will be provided throughout the center for vehicles and pedestrians. Off-street parking will be provided throughout the site, and will meet or exceed the parking and loading requirement specified in the Yucaipa Development Code. Driveways for vehicles entering and leaving the development would be provided along Avenue E, Yucaipa Boulevard, including the signalized intersection of Yucaipa Boulevard and Chinaberry Street, and along 18th Street.

The majority of the roadway improvements along the site frontage has also been previously-constructed, or is currently under construction, as a result of the City's Yucaipa Boulevard Widening, 15th Street to Interstate 10, Project. Any remaining street frontage areas, including along Avenue E, would be conditioned to be developed during the construction of the Project. In addition, the construction of driveways for the site would be the responsibility of the applicant. The Project also proposes to complete intersection improvements at the intersection of Dunlap Boulevard and Avenue E, where a three way stop would be installed.

The site will be mass graded to modify the existing site grade to accommodate the Project. As part of the grading, the building pad areas to be provided along Yucaipa Boulevard will feature fill to raise the pad elevations to better align to the grade of the roadway for better visibility, and will feature stepped grading to general contour with the elevation changes along Yucaipa Boulevard. The rear of the site, where the proposed movie theater anchor will be located, will be lower in elevation. Area C of the site will also be graded to expand the buildable area of the site, with the retaining wall proposed adjacent to the existing In-N-Out restaurant site. Additional grading will be completed to facilitate the site drainage of the site. As previously noted, materials have been previously imported to the site and partial site grading has occurred as part of the approval of Cases No. 10-016/CUP and 10-025/CUP.

The Conditional Use Permit is expected to be completed in two primary site design phases, where the mass grading and majority of site improvements, including the vehicular and pedestrian network, are constructed within a portion of the site during each phase. Individual building construction activities may fall within different time schedule under each of the primary phases as individual tenants complete their building permit review process and construct their own buildings. The Conditional of Approval would reflect that the Project is to be phased, and that they are applicable during all phases.

It should be noted that the analysis contained in this MND assesses the most substantial version of the Project to provide a conservative assessment of the environmental impacts, as reflected in the Project site plan dated September, 2018. It is understood that the ultimate square footages for the different uses, or the total number of individual building pads, may be reduced as additional site design refinements occur to accommodate tenant requirements and/or site hydrology design and its associated cost analysis for the Project.

Tentative Parcel Map:

As part of the Project approval, Tentative Parcel Map (TPM No. 20125) is proposed, which would subdivide the commercial Project to create individual parcels that correspond to each commercial pad area (Figure 6). The TPM would also address the right-of-way alignment along Yucaipa Boulevard to provide for the required ultimate right-of-way width for the street, and would include a sidewalk easement for areas where the public sidewalk would be located within the unified center boundary.

General Plan Amendment:

As part of the Project, a General Plan Amendment (GPA) is also proposed to redesignate approximately 1.1 acres of Multiple Family Residential (RM-10M) into Service Commercial (CS) to correspond with the Project boundary (Figure 7). A Lot Line Adjustment would be completed to align the rear lot line to the proposed Land Use District boundary; the single family residences on the two parcels (APNs 0300-191-30, and 31) subject to the GPA would be retained in place.

Master Sign Plan:

A master sign plan will be developed for the site, which will regulate the individual tenant signage, and will also identify the placement of freestanding and monument signs, as well as the freeway-oriented which will be located in Area C. It is expected that Variances may be proposed for the sign master plan to facilitate larger, tenant consolidated signs for better roadway visibility, in lieu of individual monument signs for each pad area. In addition, a Variance would be requested for the freeway oriented sign to exceed the Development Code height of 60 feet in order to accommodate additional sign panel areas for each tenant.

Architecture Review:

Consistent with the City's Standard Conditions of Approval, all of the proposed building architecture and the site's conceptual Landscape Architecture will also be subject to approval by the City's Planning Commission. It is anticipated that the architecture for the majority of the buildings, as well as the Project's conceptual Landscape Architecture, will be presented as part of the project approval for the unified center; any outstanding building pads would then be subject to their own Architecture Review application and review.

Development Agreement:

The Project developer for the Project and the City are currently exploring the use of a development agreement. To strengthen the public planning process, encourage private participation in comprehensive planning and reduce the economic risk of development, the Legislature of the State of California had adopted the Development Agreement Regulations, which authorizes any city to enter into binding development agreements establishing certain development rights in real property with persons having legal or equitable interests in such property. Section 65865.2 of the California Government Code provides that "A development agreement shall specify the duration of the agreement, the permitted uses of the property, the density or intensity of use, the maximum height and size of proposed buildings, and provisions for reservation or dedication of land for public purposes. The development agreement may include conditions, terms, restrictions, and requirements for subsequent discretionary actions, provided that such conditions, terms, restrictions, and requirements for subsequent discretionary actions shall not prevent development of the land for the uses and to the density or intensity of development set forth in the agreement. The agreement may provide that construction shall be commenced within a specified time and that the project or any phase thereof be completed within a specified time. The agreement may also include terms and conditions relating to applicant financing of necessary public facilities and subsequent reimbursement over time."

The Project developer and the City are currently working on the salient points that could be developed in a draft Development Agreement, which would identify who is responsible for particular improvements and actions and the timing of those activities. If a Development Agreement is considered appropriate, it would be included as part of the Project approval.

Demolition Permit:

A legal nonconforming residence is currently located at 31479 Ave E would also be demolished in order to accommodate the development on Area C.

Other Permits:

Other permits required for the Project may include but are not limited to the following: issuance of encroachment permits for driveways, sidewalks, and utilities; security and parking area lighting; demolition permits; building permits; grading permits; tenant improvement permits; and permits for new utility connections. Permits from the Western Heights Water Company will be required for connection to their water service. Permits from the Yucaipa Valley Water District will be required for connection to their sewer service. The Project will be subject to a National Pollutant Discharge Elimination System (NPDES) permit, which requires adoption of an appropriate Storm Water Pollution Prevention Plan (SWPPP) and implementation of Best Management Practices (BMPs) to reduce erosion from storm water runoff. Land developers are required to provide the SWPPP and compliance with a Water Quality Management Plan (WQMP) prior to construction.

Figure 1 – Regional Vicinity Map

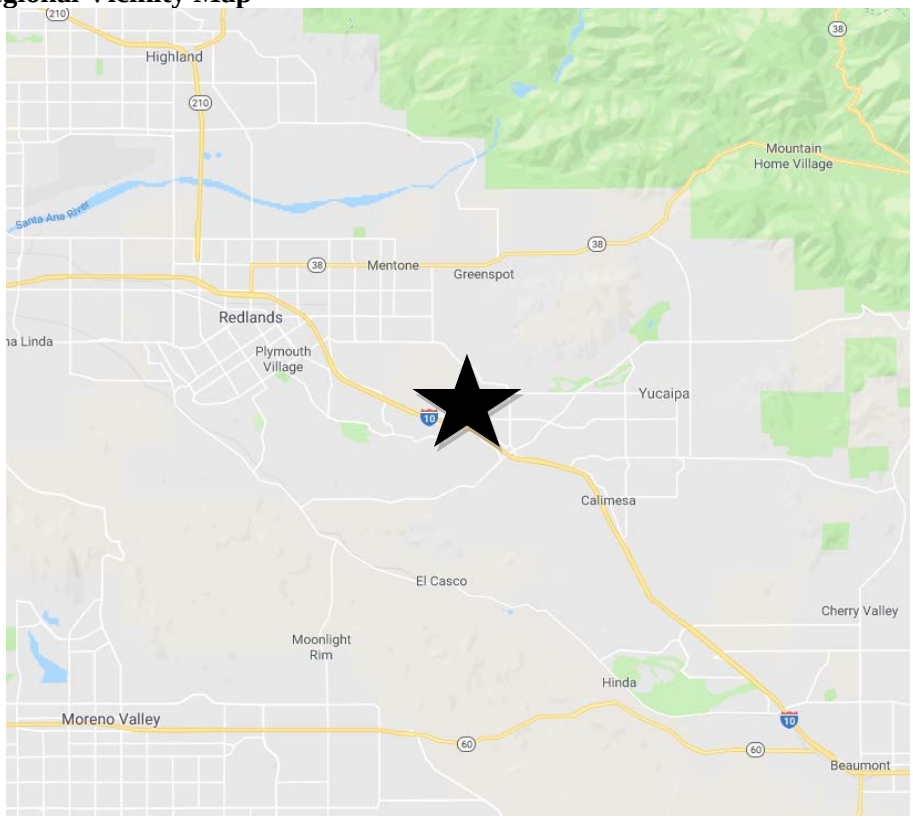


Figure 2 – Site Vicinity Map



Figure 3 – Aerial Image of Site

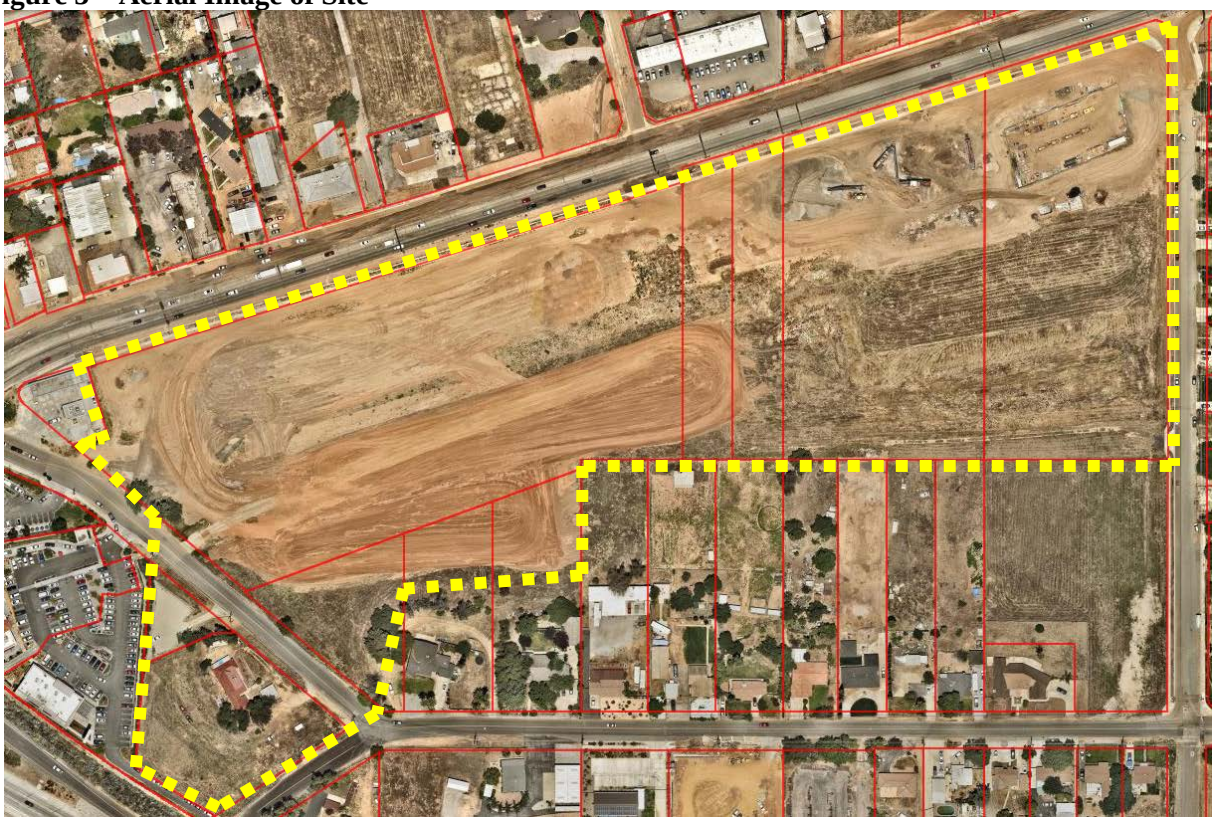


Figure 4 – Existing Land Use Designation

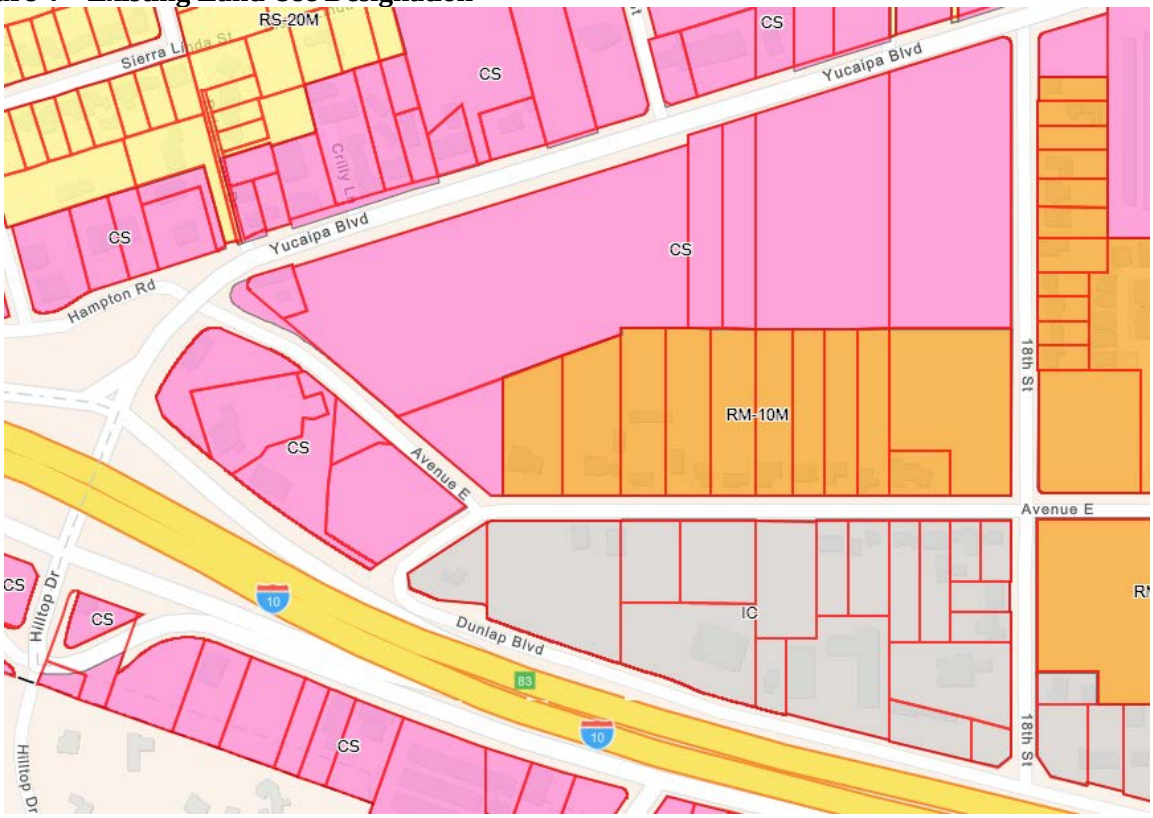
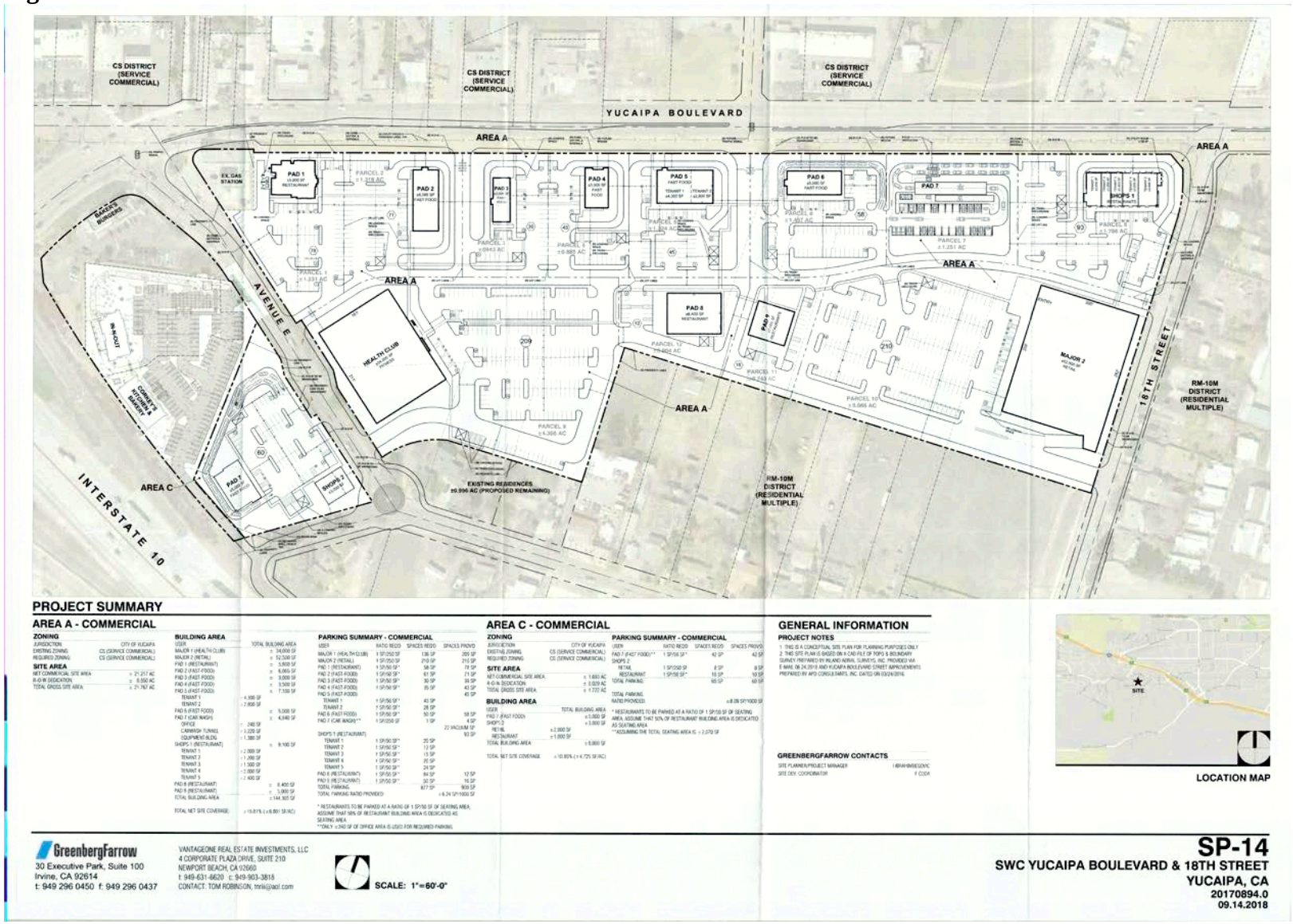


Figure 5 – Conditional Use Permit Exhibit



PROJECT SUMMARY

AREA A - COMMERCIAL

ZONING

JURISDICTION	CITY OF YUCAIPA
EXISTING ZONING	CS (SERVICE COMMERCIAL)
REQUIRED ZONING	CS (SERVICE COMMERCIAL)

SITE AREA

NET COMMERCIAL SITE AREA	± 21.217 AC
R-O-W DEDICATION	± 0.550 AC
TOTAL GROSS SITE AREA	± 21.767 AC

BUILDING AREA

USER	TOTAL BUILDING AREA
MAJOR 1 (HEALTH CLUB)	± 34,000 SF
MAJOR 2 (RETAIL)	± 52,500 SF
PAD 1 (RESTAURANT)	± 5,800 SF
PAD 2 (FAST-FOOD)	± 6,065 SF
PAD 3 (FAST-FOOD)	± 3,000 SF
PAD 4 (FAST-FOOD)	± 3,500 SF
PAD 5 (FAST-FOOD)	± 7,100 SF
TENANT 1	± 4,300 SF
TENANT 2	± 2,800 SF
PAD 6 (FAST FOOD)	± 5,000 SF
PAD 7 (CAR WASH)	± 4,840 SF
OFFICE	± 240 SF
CARWASH TUNNEL	± 3,220 SF
EQUIPMENT BLDG.	± 1,380 SF
SHOPS 1 (RESTAURANT)	± 9,100 SF
TENANT 1	± 2,000 SF
TENANT 2	± 1,200 SF
TENANT 3	± 1,500 SF
TENANT 4	± 2,000 SF
TENANT 5	± 1,400 SF
PAD 8 (RESTAURANT)	± 6,400 SF
PAD 9 (RESTAURANT)	± 5,800 SF
TOTAL BUILDING AREA	± 144,305 SF
TOTAL NET SITE COVERAGE	± 15.81% (± 6.801 SF/AC)

PARKING SUMMARY - COMMERCIAL

USER	RATIO REQ'D	SPACES REQ'D	SPACES PROV'D
MAJOR 1 (HEALTH CLUB)	1 SP/250 SF	136 SP	205 SP
MAJOR 2 (RETAIL)	1 SP/250 SF	210 SP	210 SP
PAD 1 (RESTAURANT)	1 SP/100 SF*	58 SP	73 SP
PAD 2 (FAST-FOOD)	1 SP/100 SF*	61 SP	71 SP
PAD 3 (FAST-FOOD)	1 SP/100 SF*	30 SP	38 SP
PAD 4 (FAST-FOOD)	1 SP/100 SF*	35 SP	43 SP
PAD 5 (FAST-FOOD)			45 SP
TENANT 1	1 SP/100 SF*	43 SP	
TENANT 2	1 SP/100 SF*	28 SP	
PAD 6 (FAST-FOOD)	1 SP/100 SF*	50 SP	58 SP
PAD 7 (CAR WASH)**	1 SP/250 SF	1 SP	4 SP
			22 VACUUM SP
			93 SP
SHOPS 1 (RESTAURANT)			
TENANT 1	1 SP/100 SF*	20 SP	
TENANT 2	1 SP/100 SF*	12 SP	
TENANT 3	1 SP/100 SF*	15 SP	
TENANT 4	1 SP/100 SF*	20 SP	
TENANT 5	1 SP/100 SF*	14 SP	
PAD 8 (RESTAURANT)	1 SP/100 SF*	64 SP	72 SP
PAD 9 (RESTAURANT)	1 SP/100 SF*	32 SP	16 SP
TOTAL PARKING		677 SP	900 SP
TOTAL PARKING RATIO PROVIDED			± 8.24 SP/1000 SF

* RESTAURANTS TO BE PARKED AT A RATIO OF 1 SP/100 SF OF SEATING AREA, ASSUME THAT 50% OF RESTAURANT BUILDING AREA IS DEDICATED AS SEATING AREA.
** ONLY ±240 SF OF OFFICE AREA IS USED FOR REQUIRED PARKING.

AREA C - COMMERCIAL

ZONING

JURISDICTION	CITY OF YUCAIPA
EXISTING ZONING	CS (SERVICE COMMERCIAL)
REQUIRED ZONING	CS (SERVICE COMMERCIAL)

SITE AREA

NET COMMERCIAL SITE AREA	± 1.693 AC
R-O-W DEDICATION	± 0.029 AC
TOTAL GROSS SITE AREA	± 1.722 AC

BUILDING AREA

USER	TOTAL BUILDING AREA
PAD 7 (FAST FOOD)	± 5,000 SF
SHOPS 2	± 3,800 SF
RETAIL	± 2,000 SF
RESTAURANT	± 1,800 SF
TOTAL BUILDING AREA	± 8,800 SF
TOTAL NET SITE COVERAGE	± 10.85% (± 4,725 SF/AC)

PARKING SUMMARY - COMMERCIAL

USER	RATIO REQ'D	SPACES REQ'D	SPACES PROV'D
PAD 7 (FAST FOOD)**	1 SP/100 SF*	42 SP	42 SP
SHOPS 2			
RETAIL	1 SP/250 SF	8 SP	8 SP
RESTAURANT	1 SP/100 SF*	10 SP	10 SP
TOTAL PARKING		60 SP	60 SP
TOTAL PARKING RATIO PROVIDED			± 6.82 SP/1000 SF

* RESTAURANTS TO BE PARKED AT A RATIO OF 1 SP/100 SF OF SEATING AREA, ASSUME THAT 50% OF RESTAURANT BUILDING AREA IS DEDICATED AS SEATING AREA.
** ASSUMING THE TOTAL SEATING AREA IS ± 2,070 SF

GENERAL INFORMATION

PROJECT NOTES

1. THIS IS A CONCEPTUAL SITE PLAN FOR PLANNING PURPOSES ONLY.
2. THIS SITE PLAN IS BASED ON A CAD FILE OF TOPO & BOUNDARY SURVEY PREPARED BY INLAND AERIAL SURVEYS, INC. PROVIDED VIA E-MAIL ON 04.24.2018 AND YUCAIPA BOULEVARD STREET IMPROVEMENTS PREPARED BY APD CONSULTANTS, INC. DATED ON 03/24/2016.

GREENBERGFARROW CONTACTS

SITE PLANNER/PROJECT MANAGER | I BRAHMBEGOVIC
SITE DEV. COORDINATOR | F COSH

GreenbergFarrow
30 Executive Park, Suite 100
Irvine, CA 92614
t: 949 296 0450 f: 949 296 0437

VANTAGEONE REAL ESTATE INVESTMENTS, LLC
4 CORPORATE PLAZA DRIVE, SUITE 210
NEWPORT BEACH, CA 92660
t: 949-631-6620 c: 949-903-3818
CONTACT: TOM ROBINSON, tmrii@aol.com

SCALE: 1"=60'-0"

SP-14
SWC YUCAIPA BOULEVARD & 18TH STREET
YUCAIPA, CA
20170894.0
09.14.2018

Figure 6 – Tentative Parcel Map Exhibit

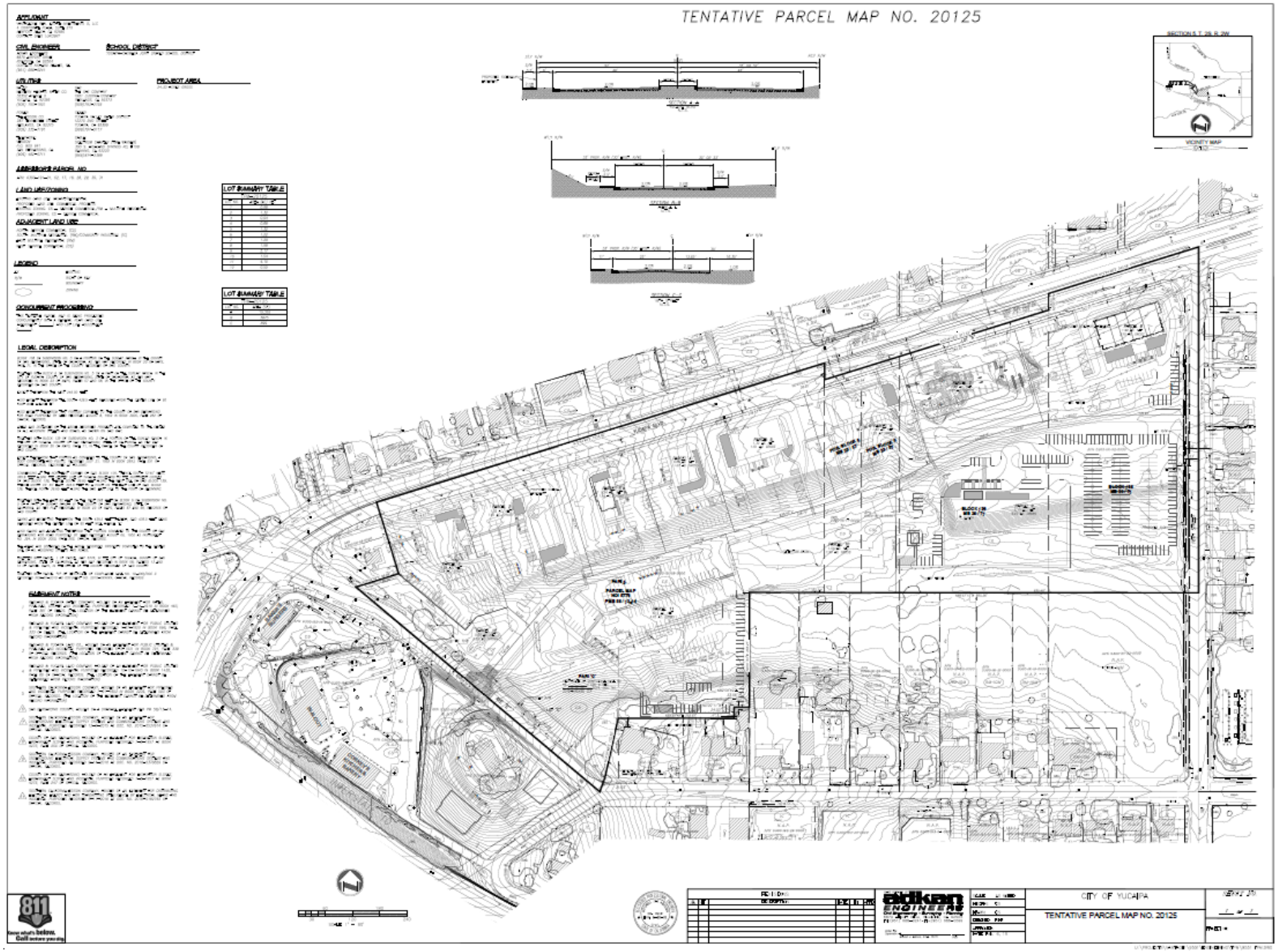
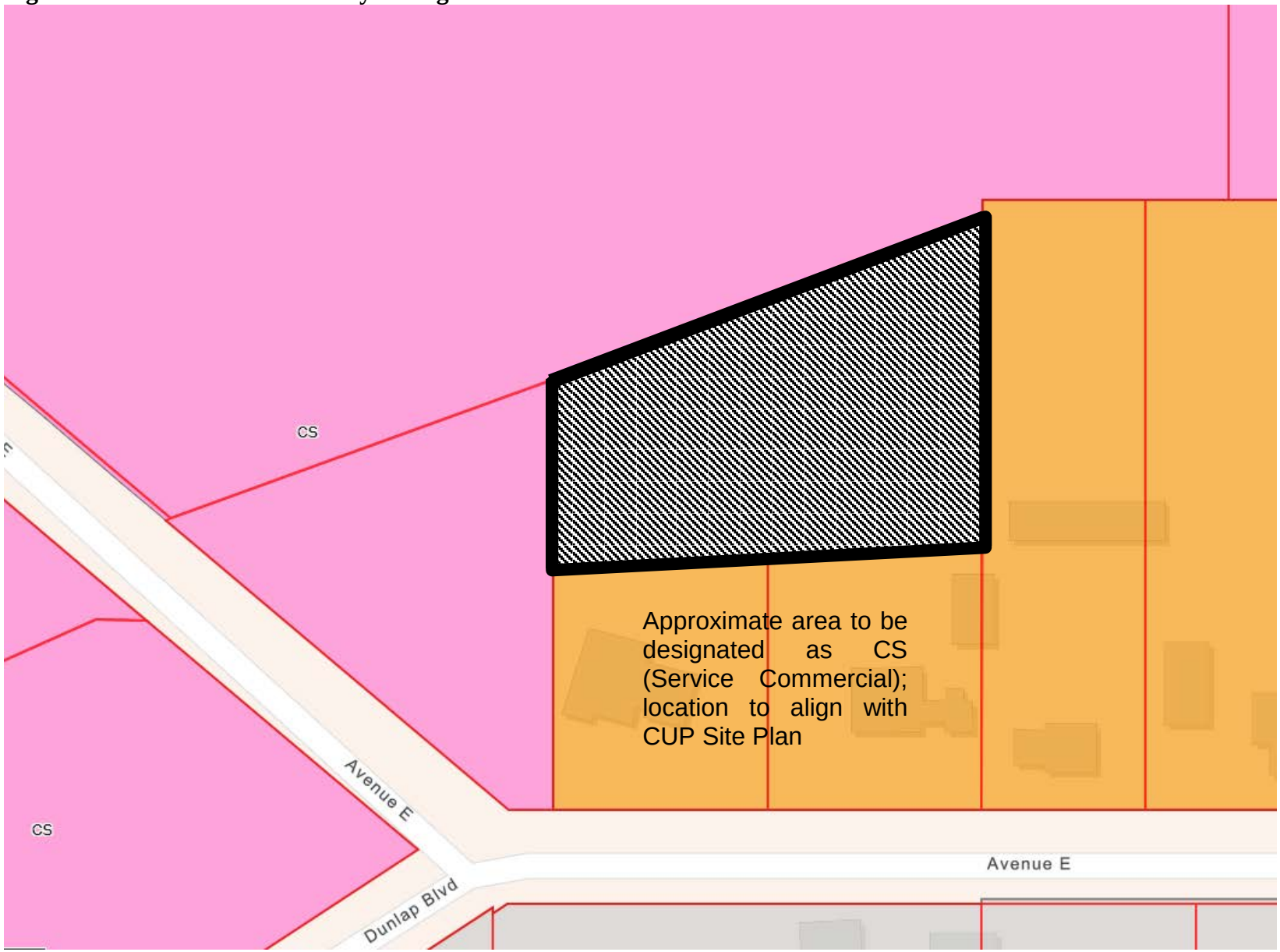


Figure 7 – General Plan Boundary Change



ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below (■) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Greenhouse Gases		Public Services
	Agricultural Resources		Hazards & Hazardous Materials		Recreation
	Air Quality		Hydrology/Water Quality		Transportation/Traffic
	Biological Resources		Land Use/Planning		Tribal Resources
	Cultural Resources		Mineral Resources		Utilities/Service Systems
	Energy		Noise		Wildfire
	Geology/Soils		Population/Housing		Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

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.	X
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 "potential 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 potentially significant effects (a) have been analyzed 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.	

8-28-19

Signature Date

Benjamin Matlock City of Jurupa

Printed Name For

1) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

2) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

3) Must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 17, "Earlier Analysis," may be cross-referenced).

5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(d). In this case, a brief discussion should identify the following:

   (a) Earlier Analysis Used. Identify and state where they are available for review.

   (b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   (c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. **AESTHETICS.** Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

a) **Less Than Significant Impact**

Policy PR-4.7, Scenic Resources, of the City's 2016 General Plan states that the City will "Protect Yucaipa's scenic resources, including scenic corridors along roads and views of the hillsides, prominent ridgelines, canyons, and other significant natural features, to the extent practical." Resources identified in the General Plan includes the City's designated Scenic Corridors (Bryant Street, Yucaipa Boulevard, Wildwood Canyon Road, and Oak Glen Road) and the prominent hillsides, ridgelines, and open space areas that surround the City, including Crafton Hills and the San Bernardino National Forest.

The Project site is located towards the western edge and gateway of the City, with a substantial portion of the site that has frontage along Yucaipa Boulevard. The area of the site along Yucaipa Boulevard is currently vacant, with the topography sloping away from the roadway (Figure 8). The site the does not feature any unique open space features such as a prominent hillside or ridgeline that impact the existing visual quality of the site, nor any natural resources that contribute towards creating a scenic vista. Yucaipa Boulevard is currently undergoing roadway improvements as part of Phase I and II of the Yucaipa Boulevard Widening, 15th Street to Interstate 10, Project, which is anticipated to be completed by the end of the 2019 calendar year. All related curb, gutter, sidewalk improvements, and removal of powerpoles along Yucaipa Boulevard would be installed as a result of that project, which will also include a landscaped center roadway median. The proposed Project will include a landscaped setback that will enhance the roadway corridor, consistent with the City's policies for its designated Scenic Corridors. As such, the proposed Project would have a less than significant effect on scenic vistas.

Figure 8 – Yucaipa Boulevard Frontage, Prior to Current City Roadway Project (2016)



Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

b) **No Impact**

According to Caltrans Scenic Highway Program, there are no official state-designated scenic highways that exist within the City of Yucaipa. A portion of State Route 38 passes through the City of Yucaipa, and is an eligible state scenic highway that has not been officially designated; however, this section of roadway is located approximately five miles north from the proposed Project site. The City of Yucaipa has designated Bryant Street, Yucaipa Boulevard, Wildwood Canyon Road, and Oak Glen Road as scenic corridors within the City. The proposed Project is located along Yucaipa Boulevard, west of 18th Street, and therefore has frontage along a City-designed Scenic Corridor. The proposed Project will include a landscaped setback that will enhance the roadway corridor, consistent with the City's policies for its designated Scenic Corridors. However, as the site is not located along a state-designated scenic highway, the development of the Project would not create an adverse impact to resources along a scenic route.

c) **Less Than Significant Impact**

The Project is comprised of several lots that are vacant with the exception of three lots, which feature existing single-family residences (31479 Avenue E, 31514 Avenue E, and 31548 Avenue E). The Project site is surrounded by commercial uses to the north and west, and residential uses to the south and east. The site is located within an urbanized area within the western edge of the City. The proposed Project consists of the unified commercial development, including several restaurants, a fitness center, a movie theater, and a carwash, which are conditionally permitted uses within the CS (Service Commercial) Land Use District. The proposed Project will include a landscaped setback along Yucaipa Boulevard that will enhance the roadway corridor, consistent with the City's policies for its designated Scenic Corridors. The CS Land Use District permits a maximum structure height of 45 feet, which may be exceeded by no more than 50% for certain architectural features listed in Section 87.0405 of the Yucaipa Development Code. Compliance with the Development Code will be verified through the Architectural Review Process for each building. The proposed commercial structures, and their associated landscaping and architecture, are consistent with the applicable zoning and other regulations governing scenic quality. Therefore, development of the proposed Project would have a less than significant impact to the visual quality.

d) **Less Than Significant Impact**

Existing sources of light and glare include street lighting and lights from commercial, uses in the area, as well as from Interstate 10, which creates nighttime lighting from vehicles passing along the freeway, and also from the freeway and intersection lights. Additional lighting will occur due to the development of the Project. The commercial development will result in new sources of nighttime lighting, including, but not limited to: building-mounted lights, parking lot lighting, and illuminated signage. However, the amount of lighting will be similar to other commercial development along Yucaipa Boulevard. The Project will be required to comply with the City's Development Code, which contains general design standards that ensure new development and expansions of existing development will not have a negative impact upon surrounding land uses. As a Condition of Approval, all lights used to illuminate the site shall be hooded and designed so as to reflect away from adjoining properties and public thoroughfares. New lighting would also be reviewed by the City to ensure conformance with the 2016 California Building Code, Title 24 (California Code of Regulations), as well as the 2016 California Green Building Standard Code (Part 11 of Title 24, California Code of Regulations) such that only the minimum amount of lighting is used and no light spillage occurs. For these reasons, lighting and glare impacts from the proposed Project would be less than significant and no mitigation is required.

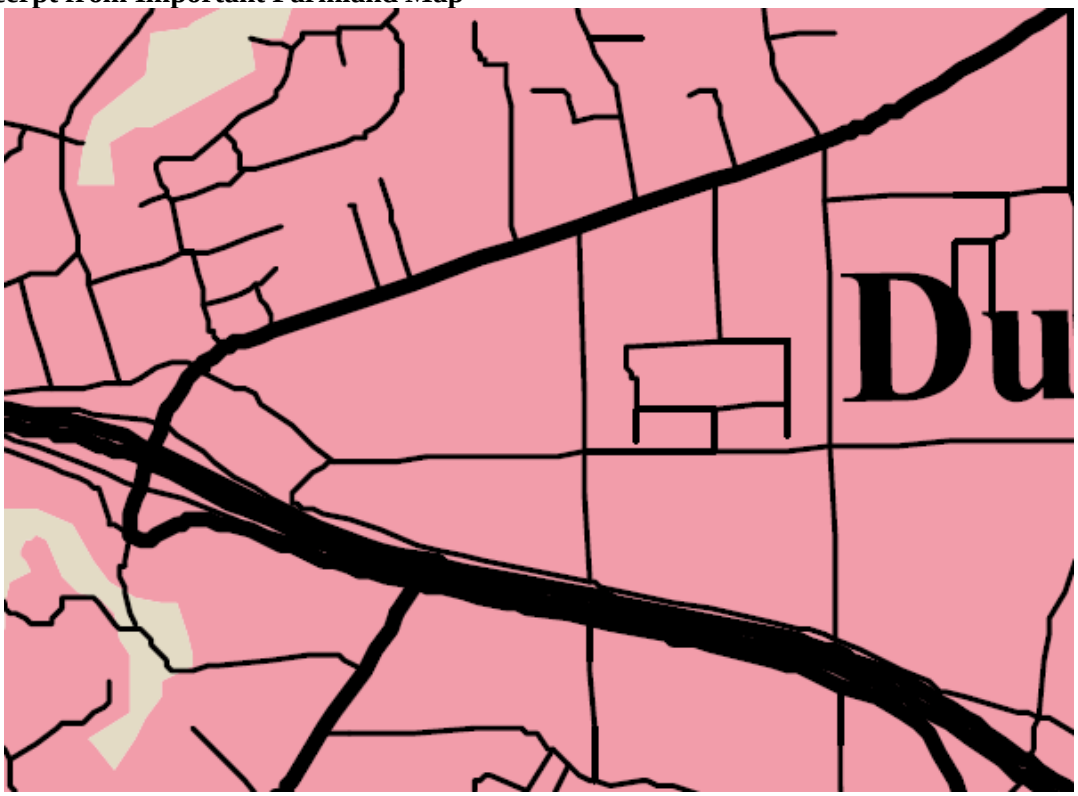
2. **AGRICULTURE RESOURCES**: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project?				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide				X

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use?				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (PRC 12220(g)), or Timberland zoned Timberland Production (GC 51104(g))				X
d) Result in the loss of forest land or conversion of forest lane to non-forest use?				X
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 or conversion of forest land to non-forest use?				X

a) **No Impact**

According to the State Dept. of Conservation Important Farmland Map, San Bernardino County 2012, Sheet 2 of 2, the proposed Project site is designated as "urban and built-up land" and does not contain any prime, unique, or important farmland (Figure 9). The Project site is located on several parcels that include vacant lots and three lots with existing single family residences. None of the lots that create the Project site feature any current agricultural activities, and development of the Project would not convert farmland to a non-agricultural use.

Figure 9 – Excerpt from Important Farmland Map



b) **No Impact**

The City of Yucaipa utilizes a "one map system" in which the General Plan Land Use Designations and Zoning Categories are the same and combined onto one map. The Project site is currently designated as CS (Service Commercial) and RM-10M (Multiple Residential), and the Project proposal includes a General Plan to designate the entire commercial site as CS. Both the CS and RM-10M Land Use Districts are not a zoning designation for agriculture

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

uses. In addition, there are no active Williamson Act contracts within the City of Yucaipa. The proposed development would be consistent with the CS Land Use Designation, and would not conflict with zoning for an agricultural use or a Williamson Act contract.

c) **No Impact**

As noted previously, the Project site is currently designated as CS (Service Commercial) and RM-10M (Multiple Residential), and the Project proposal includes a General Plan to designate the entire commercial site as CS. Both the CS and RM-10M Land Use Districts are not a zoning designation for forest land, and the proposed Project, including the extension of the CS designation, would not conflict with existing zoning for, or cause rezoning of, forest land.

d) **No Impact**

No forest land or timberland is located within the Project site. The surrounding Project area is generally urban in nature with commercial and residential-related land uses.

e) **No Impact**

As noted in items a-d above, the area is designated "urban and built up," and no portions of the area are currently farmed nor subject to Williamson Act contracts. In addition, no portion of the area is located within a forest area. As such, the proposed Project would not affect these resources.

3. **AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) 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?.			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

An Air Quality and Greenhouse Gas Assessment was prepared for the proposed Project by Salem Engineering Group in August, 2019. This report is summarized below and is included as Appendix A of this Initial Study.

a) **Less Than Significant Impact**

Air quality plans describe air pollution control strategies to be implemented by a city, county, or regional air district. The primary purpose of the air quality plans is to bring an area that does not attain federal and state air quality standards into compliance with those standards pursuant to the requirements of the Clean Air Act and California Clean Air Act. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the applicable air quality plan.

The proposed Project is within the South Coast Air Basin (Basin), and the South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control in the Basin. SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources, and responded to this requirement by preparing the 2016 Air Quality Management Plan (AQMP), an air quality management plan covering all portions of the Basin.

The regional emissions inventory for the South Coast Air Basin was compiled by SCAQMD, the San Bernardino Association of Governments (SANBAG), and the Southern California Association of Governments (SCAG), and is used

for the AQMP. Regional population, housing, and employment projections are based, in part, on the City's General Plan land use designations. The proposed Project includes GPA to extend the CS (Service Commercial) Land Use Designation along approximately 1.1 acres, which would permit the Land Use District boundary to align with the proposed Project boundary.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Based on the air quality modeling analysis that has been completed, neither short-term construction, nor long-term operation of the proposed Project will result in significant impacts based on SCAQMD regional and local thresholds of significance. The proposed Project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

Furthermore, the proposed Project is not anticipated to substantially exceed the AQMP assumptions for the project site and is consistent with the AQMP for the second criterion because the project site currently has a residential General Plan designation, and the change of General Plan Land Use Designation from a portion of the site from RM-10M (Multiple Residential) to CS (Service Commercial) will not substantially change the land use intensity the designation. Therefore, the Project will not conflict with or obstruct the implementation of the 2016 AQMP, and a less than significant impact will occur.

b, c) **Less Than Significant Impact**

The construction analysis includes estimating the construction equipment that would be used during each construction activity, the hours of use for that construction equipment, the quantities of earth and debris to be moved, and on-road vehicle trips (worker, soil hauling, and vendor trips). The assessment assumed that heavy construction equipment would be operating at the site for eight hours per day, five days per week during project construction. In addition, it was assumed that, in accordance with the requirements of the SCAQMD Rule 403, fugitive dust controls would be utilized during construction. It is assumed that the Project would be constructed in two key phases: Phase I consisting 14.4 acres in size along the western end of the site, and Phase II consisting of 6.81-acres in size along the eastern edge of the site.

Operational air pollutant emission impacts are those associated with stationary sources and mobile sources involving any Project-related activities. This Project would result in both stationary and mobile-source emissions, including a trip generation factors provided in Traffic Impact Analysis (Appendix G) prepared for the Project. Additionally, there would be emissions from area sources, such as landscape maintenance, and energy sources, such as building heating and cooling and solid waste handling.

To further evaluate the potential for significant impacts associated with the project, the SCAQMD's Final Localized Significance Threshold Methodology (SCAQMD 2008) can be considered to evaluate whether a project's emissions could cause a localized exceedance of an ambient air quality standard. The Localized Significance Threshold (LST) Methodology provides a look-up table for construction and operational emissions based on the emission rate, location, and distance from receptors, and provides a methodology for air dispersion modeling to evaluate whether a construction

or operation could cause an exceedance of an ambient air quality standard. Because this development is planned to disturb 3 – 5 acres during the earthwork and grading activities per day, the Project will be reviewed at the LST level of 5 acres, which applies to impacts from NO2, CO, PM2.5 and PM10 concentrations.

The results are as follows:

Construction - Maximum Daily Emissions

	VOC	NOx	CO	SO2	PM 10	PM 2.5
	LB/Day					
Phase I						
Summer Peak	39.2	7.4	23.6	0.05	4.4	2.4
Winter Peak	39.2	7.8	23.7	0.05	4.4	2.4
Phase II						
Summer Peak	33.7	5.9	23.6	0.05	4.4	2.4
Winter Peak	33.7	5.9	23.6	0.04	4.4	2.4
SCAQMD Threshold	75	100	550	150	150	55
LST	N/A	270	2075	N/A	14	9
Exceed?	**No**	**No**	**No**	**No**	**No**	**No**

Operation - Maximum Daily Emissions

	VOC	NOx	CO	SO2	PM 10	PM 2.5
Category	LB/Day					
Phase I						
Summer Peak	17.1	62.9	56.6	0.1	1.9	0.75
Winter Peak	16.15	61.4	66.1	0.1	1.9	0.75
Phase II						
Summer Peak	8.29	27.9	27.3	0.06	1.6	0.56
Winter Peak	7.8	27.4	31.2	0.06	1.6	0.56
Total Peak Combined	24.9	90.8	97.3	0.16	3.5	1.3
SCAQMD Threshold	55	55	550	150	150	55
LST	N/A	270	2075	N/A	4	3
Exceed?	**No**	**No**	**No**	**No**	**No**	**No**

The construction and operation of the Project would not exceed any air quality thresholds.

Construction related impacts would be reduced by the Air Qual The requirements for Rule 403 include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the lots, and maintaining effective cover over exposed areas. Engineering Department-specific Conditions of Approval includes provisions for Rule 403 that will apply during grading and building activities to minimize fugitive dust. Construction of the Project would also be subject to SCAQMD low VOC paint through Rule 1113 - Architectural Coatings, which limits the VOC content of architectural coatings used on projects in the SCAQMD.

Operational impacts would be minimized by adherence to the Building Code and Title 24 requirements. As such, impacts would be less than significant. Although it was not included in the analysis presented in Appendix A, the proposed

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

Project would help reduce VMTs and its associated mobile source emissions. Specifically, the Project would address current commercial leakage from residents leaving the City to visit the Project's proposed corporate tenants such as Chick-Fil-A, Chipotle, Panera Bread, and Chili's, which are currently located approximately 5 miles away from the City of Yucaipa.

d) **Less Than Significant Impact**

The SCAQMD CEQA Air Quality Handbook identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. During site improvement construction activities associated with the commercial development, there may be some level of odor exposure resulting from asphalt paving for the parking lot and exhaust from heavy-duty equipment. However, the limited duration and area involved in construction and paving activities would not result in significant levels of odors affecting a substantial number of people. Further, the restaurants proposed would be required to comply with SCAQMD Rule 402, which regulates nuisance odors from restaurant exhaust systems. As such, impacts would be less than significant.

4. **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?				X
b) Have a substantially adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U. S. Wildlife Service?				X
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan?				X

a-f) **No Impact**

The Project site is located within an urbanized area of the City of Yucaipa, and is surrounded by existing development, including commercial and residential development. In addition, Interstate 10 is located directly adjacent to the Project site, separated by a driveway for the existing Corky's/In-N-Out site. The Project site is not identified in Figure PR-5, Wildlife Corridors of the General Plan. A visual site investigation conducted by Staff confirmed that that the Project site has been previously disturbed, which is a result from discing for annual weed abatement, fill material stockpiling approved under Cases No. 10-016/CUP and 10-025/CUP, and the construction staging area for Phase I and II of the Yucaipa Boulevard Widening, 15th Street to Interstate 10, Project. Therefore does not feature any candidate, sensitive, or special status species; riparian habitat or other sensitive natural community; wetlands; and wildlife corridors. In addition, no Oak Trees, which are protected by the City pursuant to Section 89.0510, Oak Tree Conservation, are located onsite. The proposed Project would not conflict with any local policies or ordinances relating to biological resources, and no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved plans apply to the site. Therefore, the proposed Project would have no effect on biological resources.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. **CULTURAL RESOURCES**. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

A Phase I Cultural Resources Assessment was prepared by Archeological Associates, Inc. in April, 2019, to assess the potential impacts to cultural and tribal resources that could result of the Project. This report is summarized below and is included as Appendix B of this Initial Study. In addition, a Historic Evaluation of 31479 Avenue E was prepared by Rincon Consultants, Inc. in June 2019, and is included as Appendix C of this Initial Study

a) **No Impact**

The proposed Project is located on mostly vacant properties bounded by Yucaipa Boulevard to the north, Avenue E and Interstate 10 to the west, and 18th Street to the east. The records search and field survey did not identify the presence of any prehistoric or historic archaeological resources within the boundaries of the study area, and prior disturbances from past grading/filling activities further limits the potential for discoveries onsite. However, a historic period residence located at 31479 Avenue E will be demolished in conjunction with the proposed. The residence, which was built in 1946, and the detached shop building, which was constructed between 1949 and 1953, were found ineligible for listing in the National Register of Historic Places or the California Register of Historical Resources, and is therefore not considered a historic resource as defined by CEQA. As such, the Project site is not considered historic, and no impacts to historic resources would occur as part of development of the Project.

b) **Less Than Significant With Mitigation**

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process.

In accordance with AB 52 and SB 18 requirements, the City sent invitation letters to representatives of the Native American contacts provided by the NAHC on June 5, 2019, and to its AB 52 contacts on May 2, 2019, formally inviting tribes to consult with the City on the Project. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the City during the project planning process to identify and protect tribal cultural resources. A response letter was received from the San Manuel Band of Mission Indians and the Soboba Band of Luiseno Indians requesting consultation on June 4, 2019 and July 16, 2019 respectively. A letter was also received from the Morongo Band of Mission Indians and Torres Martinez Desert Cahuilla Indians noting that they did not wish to consult on the Project.

The Cultural Resources Assessment did not identify any resources to be onsite, noting that prior disturbances and negative records onsite limit the potential discovery of resources that could be onsite. Further, the proposed fill of materials would result in limited subsurface excavation for the proposed Project. However, land disturbing activities may have the potential to uncover such remnants from this history and result in an inadvertent discovery, and mitigation measures were recommended by the tribes to address the procedures necessary should any inadvertent discoveries occur. Based upon the consultation process, Mitigation Measures CR-1, CR-2, TRI-1, TRI-2, and TRI-3 were developed.

c) **Less Than Significant With Mitigation**

There are no known human remains on the site. A review of historic aerial photos and maps at Netronline.com was

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

conducted and did not identify possible cemeteries in the area, and therefore a low likelihood exists that human remains could be uncovered during ground-disturbing activities. However, there is always a possibility that unidentified human remains could be discovered during Project construction. Consistent with State law, if at any time during grading human remains are found, the Project is to be conditioned to halt work and contact made with the San Bernardino County Coroner's Office. Standard Conditions of Approval are included pertaining to State Health and Safety Code Section 7050.5. In addition, any discoveries of remains would also be assessed to determine if they are of Native American origin. Measure TRI-3 is included to reduce impacts to a less than significant level.

Mitigation Measures:

CR-1: In the event that pre-contact cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) and Soboba Band of Luiseno Indians (SBLI) shall be contacted, as detailed within TRI-1, if any such find occurs and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.

CR-2: If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to SMBMI and SBLI for review and comment, as detailed within TRI-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

TRI-3: In the event that human remains (or remains that may be human) are discovered at the project site during grading or earthmoving, the construction contractors shall immediately stop all activities within 100 feet of the find. The project proponent shall then inform the San Bernardino County Coroner and the City of Yucaipa Community Development Department immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the applicant shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC Section 5097). The coroner shall contact the NAHC to determine the most likely descendant(s)(MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains shall be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts.

The specific locations of Native American burials and reburials will be proprietary and not disclosed to the general public. The locations will be documented by the consulting archaeologist in conjunction with the various stakeholders and a report of findings will be filed with the San Bernardino County Museum.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052) determined in consultation between the project proponent and the MLD. In the event that the project proponent and the MLD are in disagreement regarding the disposition of the remains, State law will apply and the median and decision process will occur with the NAHC (see Public Resources Code Section 5097.98(e) and 5097.94(k)).

6. **Energy**. Would the Project?				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

a, b) **Less Than Significant Impact**

During construction, the Project would result in energy consumption through the combustion of fossil fuels used for worker vehicles and construction equipment, such as bulldozers, frontend loaders, forklifts, and cranes, and through the use of electricity to provide power for temporary construction buildings, lighting, and other sources. California Code of Regulations Title 13, Sections 2449(d)(3) and 2485, limits idling from both on-road and off-road diesel-powered equipment and is enforced by the California Air Resources Board. These limitations on idling of vehicles and equipment, and the requirements that equipment be properly maintained, would result in fuel savings. Idling limitation are also included as Best Management Practices to reduce noise-related impacts. Also, due to the cost of fuel, contractors and owners have a practical financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. Due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the Project would not result in wasteful, inefficient, and unnecessary consumption of energy. Further, there are no policies at the local level applicable to energy conservation specific to the construction phase. Therefore, it is anticipated that the construction phase of the Project would not conflict with State or local renewable or energy efficiency objectives

The operational phase of the Project would consume energy as part of building operations and transportation activities. Building operations for the Project would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, lighting, and electronics, as well as parking lot lighting. The various commercial buildings proposed would be designed and constructed in accordance with the State's Title 24 energy efficiency standards. These standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation. The Project would be required by State law to comply with these energy conservation standards. Operational energy would also be consumed during vehicle trips associated with the Project. Fuel consumption would be primarily related to vehicle use by employees and visitors associated with the proposed warehouses. The Project consists of the construction of the unified commercial center, which will feature corporate tenants that are not currently located in the City, including Chick-Fil-A, Chipotle, Panera Bread, and Chili's, as well as a movie theater. As such, the proposed Project would reduce the vehicle trips currently being generated by the residents of the area, which have to currently travel outside of the community to patronize those businesses. The parking lot would also include electric vehicle charging stations, which will incentivize the use of plug-in hybrid electric vehicles (PHEV) and battery electric vehicles (BEV). Therefore, the Project would not result in an inefficient, wasteful, or unnecessary use of energy. Operational energy impacts would be less than significant.

Further, the Project would provide consistency with the City's locally adopted GHG Reduction Plan. The new buildings would be built to meet or exceed all California Green Building Standards Codes (CALGreen Code) resulting in lower energy use and GHG emissions compared to older buildings. This would ensure project compliance with applicable CAP measures:

- State-1: Senate Bill 1078 (2002)/Senate Bill 107 (2006) and Senate Bill 2 (2011) Renewable Portfolio Standard
- State-2: Title 24 Standards for Non-Residential and Residential Buildings (Energy Efficiency Standards and CALGreen)
- State-3: AB 1109 (Huffman) Lighting Efficiency and Toxics Reduction Act

The landscaping would be low water-tolerant and energy-efficient, thus minimizing landscape water usage, and ensuring compliance with CAP measure Water-3. Thus, the Project would not Conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Operational energy impacts would be less than significant.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. **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? Refer to Division of Mines and Geology Special Publication 42.			X	
(ii) Strong seismic ground shaking?			X	
(iii) Seismic-related ground failure, including liquefaction?				X
(iv) Landslides?				X
(b) Result in substantial soil erosion or the loss of topsoil?			X	
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

Two Geotechnical Engineering Investigations were prepared for the proposed Project by Salem Engineering Group in August, 2018. Information from these reports are summarized below and is included as parts one and two of Appendix D, Geotechnical Engineering Investigation, of this Initial Study.

a)

i, ii. **Less Than Significant Impact**

The project site is not located within the boundaries of an Earthquake Fault Zone as defined by the State of California Alquist-Priolo Earthquake Fault Zoning Act. Therefore, the possibility of significant fault rupture on the Project site is considered to be low. However, Southern California is a seismically active area and Earthquake Fault Zones are found within the City of Yucaipa and within adjacent communities. As such, seismic shaking may occur, and seismic ground shaking and ground rupture due to movement of faults is a potential hazard in Yucaipa. The Project will be required to comply with the Yucaipa Municipal Code and seismic design parameters of the most current version of the California Building Code (CBC). The California Building Code provides procedures for earthquake-resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height, which is designed to mitigate earthquake hazards.

iii. **No Impact**

The Uniform Building Code (UBC) has identified groundwater within 50 feet of the surface as a potential problem for seismic-related ground failure, including liquefaction. According to the Yucaipa General Plan ground water can vary within the City from depths lower than 300 feet below surface elevation to as close as 40 feet. Based on San Bernardino County hazard maps and the City's Geologic Hazards Map, the Project site is not located in a zone of liquefaction susceptibility, and therefore the potential for liquefaction near the subject area is considered minimal.

iv. **No Impact**

Landslides can occur if areas of steep slopes consisting of unstable soils are disturbed by ground shaking and/or heavy rainfall. The Project site is also located on and surrounded by relatively flat land, with existing grade

changes proposed to be graded, compacted, and all slopes will be landscaped, consistent with the City's Standard Conditions of Approval, to ensure slope stability. The site is therefore not susceptible to seismically induced landslides.

b) **Less Than Significant Impact**

Grading and earthwork activities during construction would have the potential to expose soils to short-term erosion by wind and water. Development within the City is required to prepare an erosion control plan to minimize erosion during grading and construction, and such plan is required to be prepared in compliance with the Regional Water Quality Control Board (RWQCB) standards. In addition, the Project's excavation and grading activities will be required to be carried out pursuant to a National Pollutant Discharge Elimination System (NPDES) permit that requires adoption of an appropriate Storm Water Pollution Prevention Plan (SWPPP) and implementation of Best Management Practices (BMPs) to reduce erosion from storm water runoff. Land developers are required to provide the SWPPP and compliance with a Water Quality Management Plan (WQMP) prior to construction. These plans are a standard condition for projects over one (1) acre in size and are intended to minimize soil erosion and prevent the off-site discharge of pollutants. To control post construction erosion and pollution discharge and manage those facilities, a WQMP shall be filed as part of the issuance of building permits. The SWPPP and WQMP establish criteria for reducing sediment and water quality issues during construction and during the operational of the Project. A less than significant impact is anticipated with compliance with standard conditions of approval and no mitigation measures are required.

c-d) **No Impact**

See above items 6 (a) and (b). The Geologic Map of the Yucaipa 7.5' Quandrangle, prepared by the United States Geologic Survey (2003) identifies the Project site as featuring very young alluvial-fan deposits (latest Holocene), which consists of unconsolidated to slightly consolidated sand and sandy gravel deposits that form active parts of alluvial fan, and old and very old axial-valley deposits (late to early Pleistocene), which consists of moderately to well consolidated silt, sand, and gravel (Figure 10). The City's General Plan Exhibit S-1 does not identify that the site is within the City's Geologic Hazard Overlay (Figure 11). Due to the soil composition, and supported by the General Plan, the potential for liquefaction or landslide is minimal, and the site is not on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. In addition, expansive soil, as defined in Table 18-a-B of the Uniform Building Code, was not found onsite.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

Figure 10: Excerpt from Geologic Map of the Yucaipa 7.5' Quandrangle

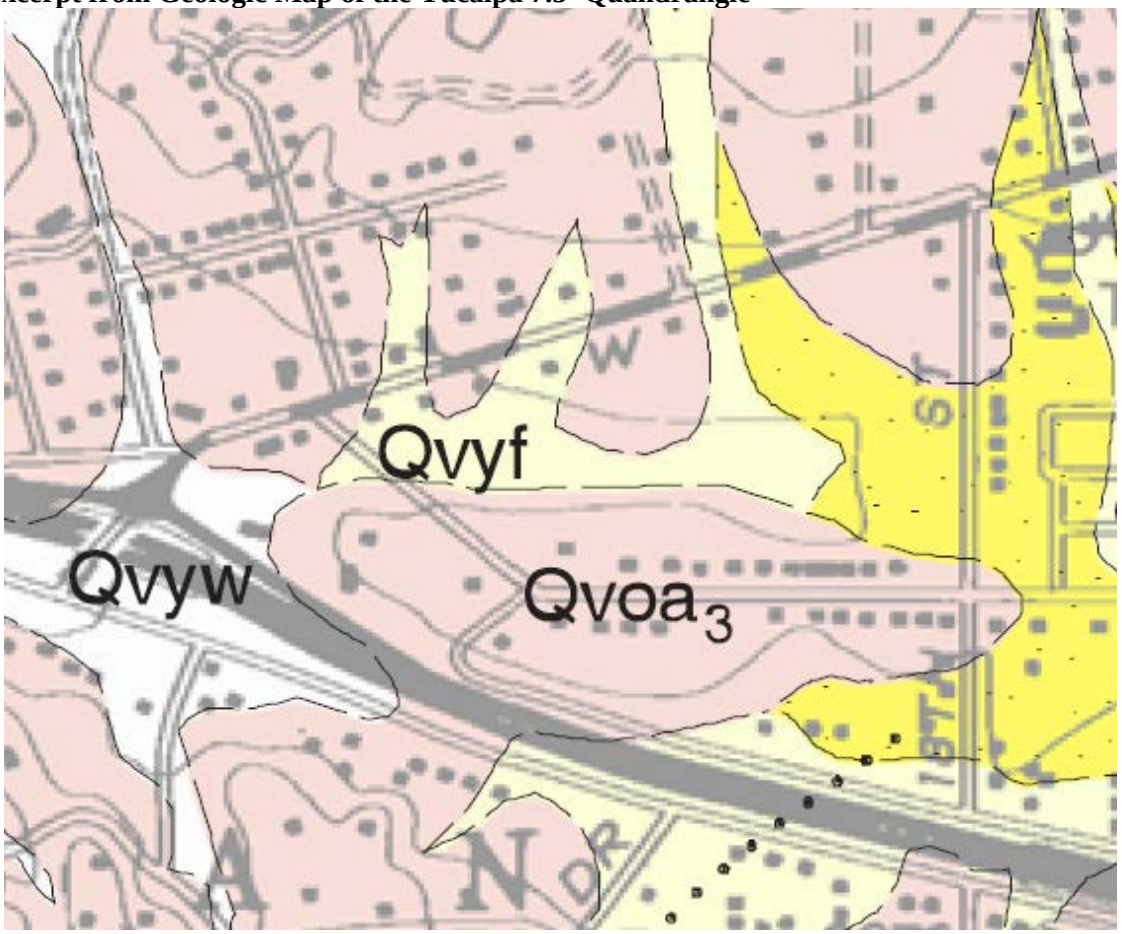


Figure 11: Excerpt from General Plan Exhibit S-1



Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

e) **No Impact**

The proposed Project will be required to connect to the Yucaipa Valley Water District (YVWD) sewer services that are available to the site, and will not utilize any septic tanks.

f) **Less than Significant Impact**

Figure PR-6 of the City's General Plan identifies portions of subject site being located within a Paleontological Resource Sensitivity Area. The proposed Project consists of the development of the unified commercial development Project. Due to the existing topography for the site, fill materials will be used to raise building pad elevations to provided better visibility for commercial tenants from Yucaipa Boulevard. Further, prior site disturbances have occurred, and no discoveries were made during those disturbances. However, there may be a potential for new resources to be discovered. As such, the Project would implement the City's Standard Condition of Approval which states:

> "Prior to grading, arrangements acceptable to the County Museum shall be made to have present during grading a qualified vertebrate paleontologist to monitor in the event paleontologic resources are encountered during rough grading. The monitor shall have the authority to temporarily suspend grading operations in the vicinity of such resources until they have been evaluated and appropriate data recovery measures implemented. The results of the monitoring shall be documented in writing and submitted to the County Museum for review prior to issuance of building permits. For more information, contact the County Museum at 909-307-2669."

8. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

An Air Quality and Greenhouse Gas Assessment was prepared for the proposed Project by Salem Engineering Group in August, 2019. This report is summarized below and is included as Appendix A of this Initial Study.

a, b) **Less than Significant Impact**

In September 2015, the City of Yucaipa adopted a Climate Action Plan (CAP) that includes GHG emission inventories, identifies the effectiveness of California initiatives to reduce GHG emissions, and identifies local measures to reduce GHG emissions. The City has selected a goal to reduce community-wide GHG emissions by 15 percent below 2008 Business as Usual (BAU) levels by the year 2020, consistent with AB 32, and ensures that the City is providing GHG reductions locally that will complement the state and international efforts of stabilizing climate change. The City is currently working with the San Bernardino County Transportation Authority (SBCTA) to develop an update to the CAP that would extend past the year of 2020.

On December 5, 2008, the SCAQMD Governing Board adopted the staff draft proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD has a threshold of a 30% reduction of CO2e (carbon dioxide equivalent). This threshold aligns with AB32 and the intent of the 30% reduction is to provide a feasible target objective, that will not only contribute to achieving the AB 32 target objective, but will also contribute to achieving the 2050 target of the Governor's Executive Order S-3-05, which establishes of target objective of reducing GHG emissions 80 percent below 1990 levels or a 90 percent reduction from current BAU estimates

The proposed Project would result in the development of approximately 24 gross acres into a unified commercial center. As the City's CAP is reaching its sunset period, the Project has been analyzed with a threshold of a 30% reduction of

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

CO2e is used to assess significance of greenhouse gas emissions as a Tier 4 threshold, which exceeds the CAP threshold of 15% below 2008 standards, and will contribute towards achieving the SCAQMD, AB32 and Governor's Executive Order S-3-05 target objective of reducing GHG emissions 80 percent below 1990 levels or a 90 percent reduction from current BAU estimates.

The proposed Project would generate an estimated total of 17,481 metric tons of CO2e emissions without any mitigation measures during operation. The unmitigated construction emissions is estimated at a total of 769.11. The SCAQMD recommends amortizing construction emissions over a period of 30 years to estimate the contribution of construction emissions to operational emissions over the project lifetime. Amortized over 30 years, the construction of the project will generate approximately 26 metric tons of CO2e on an annualized basis. The estimated unmitigated emission for this project is 17,507 metric tons of CO2e.

Based on the results of the CalEEMod Model, the Project provides site design measures that mitigate the GHG impacts, reducing the generated metric tons of CO2e emissions from 17,507 to 9,189, a reduction of 47%, which exceeds the 30% threshold. Thus, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs, and is not expected to have a significant cumulative impact on greenhouse gas emissions.

9. **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?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials 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?				X
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?				X
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) 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?			X	

a) **Less than Significant Impact**

The proposed Project consists of the development of a unified commercial center of approximately 24 gross acres, and would not directly involve the routine transport of hazardous materials. However, equipment used at the site during construction activities could utilize substances considered by regulatory bodies as hazardous, such as diesel fuel and gasoline from typical construction equipment, and would therefore have the potential to discharge hazardous materials during construction. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements, which the project construction activities are required to strictly adhere to. These regulations include: the federal Occupational Safety and Health Act (OSHA) and Hazardous Materials Transportation Act; Title 8 of the California Code of Regulations (CalOSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. This amount of hazardous material discharge during construction is expected to be less than significant, and the Project would be required to comply with applicable laws,

ordinances and procedures, and impacts would be less than significant through compliance with the aforementioned laws and requirements, and also through the implementation of a SWPPP and the WQMP requirements to prevent the off-site discharge of pollutants during construction and operation of the Project

During operation of the Project, potential hazardous materials would be limited to routine elements associated with a commercial development, including the use of yard fertilizers, and general purpose cleaners and solvents. The variety of materials that would be used to support the building operations for a fitness center, movie theater, restaurants, retail shop buildings, and a self-contained express carwash facility would not represent a significant hazard. Further, no hazardous materials will be transported to, or from, the site during Project construction or operation.

b) **Less than Significant Impact**

Three Project-specific Phase I Site Assessments and a Phase II Soil Vapor Sampling Report and Phase II Agricultural Soil Sampling were prepared for the proposed Project by Force in 2018 to assess the existing site conditions to determine if there were adverse environmental conditions that would impact the development of the site. The Phase I and II Site Assessments are provided as Parts 1-4 of Appendix E of this Initial Study and are summarized below.

The assessment found that the site had historically included agricultural uses dating back to 1938 to until 1968, which could have possible pesticide and/or herbicide impacts that could be upset. In addition, the site is adjacent to automotive repair uses and an existing fuel station with Underground Storage Tanks (USTs), which has the potential for shallow soils at the Site to be impacted by operations at the gas stations and associated auto repair businesses, and could also be upset by the development of the Site. The Phase II Soil Vapor Sampling Report and the Phase II Agricultural Soil Sampling was completed and concluded that these recognized environmental condition did not pose a risk, and that the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment

c) **No Impact**

The nearest school facilities to the Project site is the Yucaipa High School, located over one (1) mile northeast of the proposed Project, and Dunlap Elementary School, located over one (1) mile east of the proposed Project. As no schools are located within one-quarter mile from the Project, there will be no impacts related to an accidental release of hazardous materials. As noted in threshold a and b, the proposed commercial Project would not involve the handling of hazardous or acutely hazardous materials, substances, or waste.

d) **No Impact**

Government Code §65962.5 refers to the Hazardous Waste and Substances Site List, commonly known as the Cortese List, which is maintained by the Department of Toxic Substances Control (DTSC). The Cortese list contains hazardous waste and substance sites with known underground storage tanks (USTs) having a reportable release, solid waste disposal facilities from which there is a known migration, and sites with known toxic material identified through the abandoned site assessment program. According to the DTSC Envirostor Database, the Project site is not included on the Cortese List compiled pursuant to Government Code Section 65962.5.

e) **No Impact**

The Project site is not within two miles of an airport of any type. The nearest airport is Redlands Municipal Airport (REI), which is located over 4 miles northwest from the Project site. In addition, the Project is not within the Redlands Airport Land Use Compatibility Plan. No impacts would occur with the Project.

f) **No Impact**

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

The proposed Project site features roadway frontage along Yucaipa Boulevard, Avenue E, and 18th Street, which are existing paved roadways, and is within the immediate vicinity of Interstate 10. The development of the site would not impact access to users traveling along the public right-of-way as the roadway would serve as points of ingress and egress to the site, and the roadway would remain open to the public. Figure S-5 of the Yucaipa General Plan does designate Yucaipa Boulevard as a local evacuation route, which would not be impacted by the development of a unified commercial center. The internal circulation for the development has also been designed to comply with the California Fire Code. As such, the proposed Project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

g) **Less than Significant Impact**

The Project site is within an urbanized area, adjacent to existing residential development, and is not adjacent to wildland areas. However, the Project site is within the Fire Safety Review Area 2 according to the City General Plan, and would be subject to Fire Department conditions of approval to reduce fire related risks. In addition, the City has also adopted the most recent version of the California Building and Fire Codes, which includes sections on fire-resistant construction material requirements based on building use and occupancy. The construction requirements are a function of building size, purpose, type, materials, location, proximity to other structures, and the type of fire suppression systems installed. Many of these requirements are also included as part of the Project's Conditions of Approval as a uniformly applicable development policy, which includes provisions for adequate fire access, sprinkler water systems within indoor spaces, and placement of new fire hydrants at applicable intervals that meet the water flow requirements of the Fire Code. Through these standard requirements, impacts from fire-related hazards would be less than significant.

10. **HYDROLOGY AND WATER QUALITY**. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in a substantial erosion or siltation on- or off-site;			X	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
iii) 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; or			X	
iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

a) **Less Than Significant Impact**

The proposed Project has the potential to release water pollutants during the construction and operation phases, which would have the potential to violate water quality standards.

Construction:

Three general sources of potential short-term, construction-related stormwater pollution associated with the proposed

Project include: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earthmoving activities which, when not controlled, may generate soil erosion via storm runoff or mechanical equipment.

The proposed Project would disturb approximately 24 gross acres of land and therefore would be subject to the NPDES permit requirements during construction activities. Prior to issuance of building permits, the Project would be required to comply with all applicable NPDES requirements through adoption and implementation of a submitted SWPPP and WQMP during the construction and operational phases of the Project. The SWPPP shall identify erosion control BMPs to minimize pollutant discharges during construction activities, and would include stabilized construction entrances, sand bagging, designated concrete washout, tire wash racks, silt fencing, and curb cut/inlet protection. The structural and nonstructural BMPs, and other measures included in the SWPPP and WQMP, would address water quality and waste discharge concerns associated with the Project. Compliance with these requirements is included as standard Conditions of Approval for the Project. As part of the review process for these documents, the City also verifies that there is a financial mechanism in place to ensure the continued maintenance of the measures proposed as part of the WQMP. Further, documentation will be provided to ensure all construction-related plans, including grading and landscape plans, are consistent with each other. Impacts with regard to construction would be less than significant with implementation of existing regulations.

Operation:

The development of the Project would increase the amount of impervious areas onsite by replacing the vacant property with hardscape areas for a unified commercial development project, which includes all of the proposed building footprints, pedestrian-related pathways around the site, and the parking lot serving all of the users. Landscaping is proposed throughout the site as part of Project design. To address water quality issues, a variety of different design solutions are permitted by the RWQCB. It is expected that the preferred design solution will be the utilization of detention basin within the site to receive and filtrate the runoff generated from the impervious surfaces. It should be noted that the ultimate design of these basins may result in a slightly smaller scaled project, as several proposed building pads locations may be instead used for the detention basin location, as determined during the final engineering design process. Compliance with existing federal, State, and local regulations related to water quality, implementation of BMPs included in the Project construction SWPPP, and design recommendations in the WQMP, would result in less than significant impacts.

Waste water treatment for the Project area is provided by YVWD, and the proposed Project would be required to connect to the YVWD sewer collection and treatment system. The proposed Project would not generate hazardous wastewater that would require any special waste discharge permits. Impacts would be less than significant with implementation of existing regulations.

b) **Less Than Significant Impact**

The proposed Project will use potable water provided by Western Heights Water Company, and a Preliminary Service Evaluation letter has been provided by the District indicating that they will be able to serve the Project. No hazardous materials or other materials will be injected into groundwater supplies, and no wells are proposed for the Project which would have the potential to draw from the groundwater table. Further, the Project would not impact any existing groundwater recharge areas, or substantially reduce runoff to which recharge facilities would no longer be able to operate. Impacts would be less than significant.

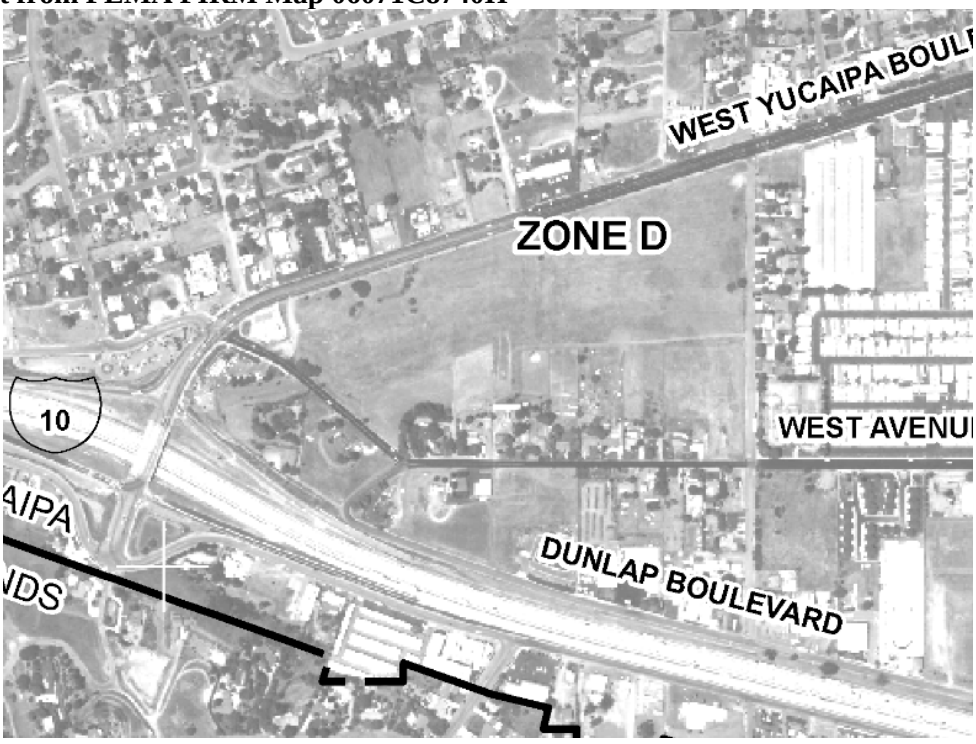
c) **Less Than Significant Impact**

The proposed Project is located on an approximately 24 gross acre site comprised of several properties, along the south side of Yucaipa Boulevard, east of 18th Street. The Project site is not located within a 100-year flood plain, based upon a

review of the latest FEMA Flood Insurance Rate Map (FIRM) Map, 06071C8740H, amended April 4, 2014 (Figure 12), and is not located adjacent to any streams or other floodway. Construction and operation of the proposed Project would result in the increase of the net area of impermeable surfaces on the site because the site is currently vacant. The Project will be conditioned to ensure the amount of runoff generated through the property will not be adversely affected by the construction and operation of the site.

As noted previously, the Project would be subject to NPDES permit requirements during construction activities. Prior to issuance of building permits, the Project would be required to comply with all applicable NPDES requirements through adoption and implementation of a submitted SWPPP and WQMP during the construction and operational phases of the Project. To address water quality and runoff issues, a variety of different design solutions are permitted by the RWQCB. It is expected that the preferred design solution will be the utilization of detention basin within the site to receive and filtrate the runoff generated from the impervious surfaces. It should be noted that the ultimate design of these basins may result in a slightly smaller scaled project, as proposed building pads locations may ultimately be used for the detention basin location, and will be determined during the final engineering design process. The drainage system design would be required to capture the storm runoff within the property, and would prevent substantial erosion or siltation on- or off-site, or any increase in the rate or amount of surface runoff that would create flood-related hazards. Implementation of the various structural and non-structural BMPs from the SWPPP and WQMP would also ensure that runoff water does not exceed the capacity of existing or planned stormwater drainage systems or result in significant pollution.

Figure 12: Excerpt from FEMA FIRM Map 06071C8740H



d) **No Impact**

Based on review of the 2016 General Plan and recent aerial photo maps, the proposed Project is not subject to the potential effects of a seiche, tsunami, or mudflows caused by such due to lack of upstream water bodies. The City of Yucaipa is located just northeast of the I-10 freeway and is over 55 miles east of the Pacific Ocean. As such, the City is not under threat of a tsunami, otherwise known as a seismic sea wave. Similarly, the potential for a seiche to occur is remote, given the limited number of large water bodies within Yucaipa and its sphere of influence. Therefore, no impact

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

is expected.

e) **Less Than Significant Impact**

On May 22, 2017, the City Council, adopted Resolution 2017-18, approving a Memorandum of Agreement (MOA) to form the Yucaipa Sub-Basin Groundwater Sustainability Agency (YGSA) with the Cities of Calimesa and Redlands; the South Mesa Water Company; the South Mountain Water Company; the Western Heights Water Company; the Yucaipa Valley Water District; the San Bernardino Valley Municipal Water District; and the San Gorgonio Pass Water Agency. The MOA was formally adopted by all agencies party to the Agreement, and was submitted to the State Department of Water Resources by the San Bernardino Valley Municipal Water District.

The Sustainable Groundwater Management Act (SGMA) provides the YSGA broad powers in the implementation of the YGSP and collaborative management of the Yucaipa Groundwater Sub-Basin. This includes the adoption of rules, regulations, ordinances and resolutions as may be necessary to manage and protect the basin. One of the many goals of the YSGA is the development of groundwater recharge projects. The City, in cooperation with the San Bernardino County Flood Control District, San Bernardino Valley Municipal Water District, and other partners and stakeholders have developed and constructed projects that capture and recharge storm flows for replenishment of the Yucaipa Basin. Future projects will also be developed to allow for active groundwater recharge opportunities. The proposed Project would not conflict with or obstruct implementation of the efforts of the YGSA.

The City is a municipal separate storm sewer system (MS4) stormwater permittee and participates with 20 other municipal agencies in the San Bernardino Valley region to establish Best Management Practices (BMPs) for residents, businesses, students, and governments in preventing and reducing stormwater pollution. Keeping pollutants out of stormwater is an integral component of a sustainable groundwater management program. Under the MS4 permit, the City requires new development to design and implement WQMPs that meet the San Bernardino County Technical Guideline threshold. As part of this project, a WQMP will be required to be reviewed and approved as part of the City's standard Condition of Approval. Implementation of the various structural and non-structural BMPs for the WQMP, and demonstrating that Low Impact Development (LID) concepts have been utilized, the Project would not conflict with or obstruct implementation of a water quality control plan.

11. **LAND USE AND PLANNING**. Would the project:				
a) Physically divide an established community?				X
b) Conflict with an 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?			X	

a) **No Impact**

Dividing an established community typically involves creating a physical barrier that changes the connectivity between areas of the community. The site is bounded by Yucaipa Boulevard to the north, Avenue E and Interstate 10 to the west, and 18th Street to the east, and would receive access from Yucaipa Boulevard, Avenue E, and 18th Street. The Project does not propose any action that would physically divide an established community.

b) **Less Than Significant Impact**

The proposed Project includes a GPA to extend the CS (Service Commercial) along approximately 1.1 acres on two parcels, which would permit the land use district to align with the proposed Project boundary (Figure 7). The two residential lots (APNs 0300-191-30, and 31) impacted by the proposed GPA would be subject to a Lot Line Adjustment to correspond to the proposed to the new Land Use Boundary, but the residences would remain. Subject to approval of

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

the GPA, the unified commercial center proposed as part of the Project is consistent with the CS General Plan and zoning designation and is conditionally permitted within this District. Improvements to the Project site are to occur consistent with adopted development standards and good planning practices. Grading and subsequent improvements would be undertaken consistent with appropriate City standards and drainage design criteria. Variances also are anticipated as part of the proposed Master Sign Plan to modify the Sign Code requirements to allow for larger freestanding/monument signs in lieu of monument signs along each parcel, and to allow for additional wall mounted signs. All signage, whether a Variance is or is not requested, will be subject to the City's requirements and Standard Condition of Approval for potential light and glare concerns. No policies or plans exist for avoiding or mitigating an environmental effect that have not been taken into consideration.

12. **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?				X
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?				X

a-b) **No Impact**

The City General Plan indicates the entire City is within an MRZ-3 (Mineral Resource Zone 3) classification, in which the significance of mineral deposit cannot be evaluated. No mining activities currently occur in the area, and no significant mineral resources are known to exist within the City of Yucaipa. Due to the size of the Project site and proximity to residential uses, the site is unlikely to be considered a viable site for mineral extraction.

13. **NOISE.** Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

A Noise Study was completed Rincon Consultants, Inc. in March, 2019, to examine the potential impacts from noise that could result from the Project. Information from this report is summarized below and is included as Appendix F, Noise Study, of this Initial Study.

a) **Less Than Significant Impact**

The Project site is adjacent to residential and commercial land uses. The residential land uses are considered noise sensitive land uses in the City General Plan. The General Plan and Municipal Code identify noise levels for various types of land uses, certain activities, and how noise levels are to be measured. The noise-related impacts for the Project have been assessed by those that would occur during construction and those that would occur during the operation of the Project.

Construction:

Section 87.0905(e) of the Municipal Code allows for "Temporary construction, repair, or demolition activities between 7am and 7pm, except Sundays and Federal holidays." While construction activities will periodically raise noise levels above their current levels, the level of noise increase is not expected to be substantial and will only occur during the

limited time associated with these activities. Two types of short-term noise impacts would occur during project construction: 1) equipment delivery and construction worker commutes; and 2) project construction operations.

The first type of short-term construction noise would result from transport of construction equipment and materials to the Project site and construction worker commutes. These activities would incrementally raise noise levels on access roads leading to the site, however, the transportation of the heavy equipment to be used for grading and construction activities would be moved on site just one time and would remain on site for the duration of each construction phase. This one-time trip occurrence would not significantly add to the daily traffic noise in the Project vicinity. The total number of daily vehicle trips for workers visiting the site would also be minimal when compared to existing traffic volumes on Yucaipa Boulevard, and the long-term noise level change associated with these trips would not be perceptible. Therefore, equipment transport noise and construction-related worker commute impacts would be short term and would not result in a noticeable noise increase.

The second type of short-term noise impact is related to noise generated during the site preparation, grading, building construction, architectural coating, and paving activities that would occur on the Project site. Maximum hourly noise levels are calculated to be 83 dBA Leq at 50 feet, as measured from the center of the construction site or activity, and would attenuate to approximately 77 dBA Leq along the southern property line, and lower at the residences located further south of the Project site. While construction-related short-term noise levels have the potential to be higher than existing ambient noise levels in the Project area under existing conditions, the noise impacts would no longer occur once Project construction is completed. As stated above, noise impacts associated with construction activities are regulated by the City's Municipal Code. In addition, construction-related noise impacts would remain below the 90 dBA Leq 1-hour construction noise level criteria as established by the FTA.

The following best management practices should be implemented to reduce short-term construction noise impacts.

The Project contractor shall implement the following measures during construction of the Project:

- Mufflers. During all project site excavation and grading, all construction equipment, fixed or mobile, should be operated with closed engine doors and should be equipped with properly operating and maintained mufflers consistent with manufacturers' standards.
- Stationary Equipment. All stationary construction equipment should be placed so that emitted noise is directed away from the nearest sensitive receptors.
- Equipment Staging Areas. Equipment staging should be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receptors.
- Electrically-Powered Tools and Facilities. Electrical power should be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities.
- Smart Back-up Alarms. Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels.
- Alternatively, back-up alarms should be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction.

Operation:

Noise impacts associated with the long-term operation of the Project must comply with the standards presented in the City's Municipal Code, described above. Noise associated with the Project features includes HVAC equipment, parking lot activities, drive through noise, and the car wash.

Parking Lot Activities. Parking lot noise, including engine sounds, car doors slamming, car alarms, loud music, and people conversing, would occur as a result of the proposed Project at the Project site and on nearby streets. The nearest sensitive receptors located approximately 50 feet sorth from the proposed parking areas could be exposed to a noise level of up to 71 dBA Lmax. It is not expected that the parking lot activities would occur during the more sensitive nighttime

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

hours and the potential noise levels would remain below the City's 75 dBA Lmax noise standard for residential uses; therefore, the proposed Project would comply with the City's standards. In addition, peak noise levels from parking lot noise would be intermittent when averaged over a one hour period and would be much lower than the existing noise levels in the project vicinity, which is dominated by traffic noise. Impacts would be within the requirements of the Development Code and are less than significant.

Carwash and HVAC Equipment. HVAC equipment could be a primary noise source associated with the proposed cultural resources/community services building. HVAC equipment is often mounted on rooftops, located on the ground, or located within mechanical rooms. The carwash would generate noise primarily from operation of drying fans at the exit of the car wash. Blowers and other mechanical equipment would be located within the car wash building, which would dampen and block noise. On-site operational noise level contours are provided in Figures 5, 6, and 7 of the Noise Study. Based on the analysis completed, noise levels with both HVAC and the car wash active during the same hour would not exceed the City noise level limits of 55 dBA Leq at residential property lines or 60 dBA Leq at nearby commercial property lines. Impacts would be within the requirements of the Development Code and are less than significant.

Drive Through Noise. Operation of the Project would generate noise through the idling of cars waiting in drive-through lines and the amplification from the drive through speaker boxes. The nearest residential property line to idling cars on the project site is located approximately 350 feet northeast of the fast-food restaurant drive-thru lane located in Area C. Based on the analysis completed, noise levels from vehicles idling would be approximately 33 dBA Lmax at the nearest residential property line, and approximately 43 dBA Lmax from the speaker box. Impacts would be within the requirements of the Development Code and are less than significant.

b) **Less Than Significant Impact**

Vibration related impacts would occur during the construction of the Project, as heavy equipment to be used for grading and construction activities traverse within the Project site. The nearest structures to the Project site are the existing residential uses located south of the site, with the nearest residence not affiliated with the Project located over 200 feet from the property line. The substantial distance between the residences and the Project would allow any groundbourne vibration to dissipate below the City's 0.2 in/sec PPV vibration standards.

c) **Less Than Significant Impact**

The Project site is not within two miles of an airport of any type. The nearest airport is Redlands Municipal Airport (REI), which is located approximately 4 miles northwest from the Project site. In addition, the Project is not within the Redlands Airport Land Use Compatibility Plan. No impacts would occur with development of the Project.

14. **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)?			X	
b) Displace substantial numbers of existing housing or housing, necessitating the construction of replacement housing elsewhere?			X	

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

a) **Less Than Significant Impact**

The proposed Project site is located within an area generally developed with single family residences and commercial parcels. The Project would result in the development of a new unified commercial center to serve residents within the City. The proposed Project is consistent with the land use designation for the site, subject to approval of the General Plan Amendment on approximately 1.1 acres, and was otherwise considered in the City's build-out envisioned by the General Plan that was adopted in 2016. As such, impacts are expected to be less than significant.

b) **Less Than Significant Impact**

There are three residences currently located on the subject site for the Project. The proposed Project would retain two of the residences (31514 and 31548 Avenue E) but would result in the demolition of a legal nonconforming residence located at 31479 Avenue E. Therefore, the development of the Project would result in the displacement of one residence. A single household would not represent a substantial number of existing housing or housing that would necessitate the construction of replacement housing elsewhere.

The proposed Project involves removing approximately 1.1 acres of a residential land use designation from the City's General Plan. However, the City has recently approved several General Plan Amendment requests to add additional Multiple Residential-designated land use areas, or to increase the permitted dwelling unit density, including Case Nos. 16-125, 17-024, and 17-072. The increased residential capacity provided by those Projects offsets the removal of a single legal nonconforming residential dwelling unit and the removal of approximately 1.1 acres of residentially-zoned property.

15. **PUBLIC SERVICES**. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Parks?				X
e) Other public facilities?			X	

a) **Less Than Significant Impact**

The City of Yucaipa is currently served by the California Department of Forestry (CAL FIRE). The Project site is accessible from Yucaipa Boulevard, Avenue E, and 18th Street, which are improved streets, and is located approximately one mile from the Crafton Hills Fire Station located at 32664 Yucaipa Boulevard. The proposed commercial center includes an internal circulation through the parking lot that has been designed consistent with existing City Engineering and Fire Department standards. Further, buildings within the Project would be required to adhere to the 2016 (or current) California Building Code (CBC) requirements, which include provisions for hydrants onsite, fire sprinklers within buildings, illuminated addresses on buildings, and fire suppression systems with commercial kitchens. The Project does not require unique or altered fire protection services to provide service to the site. As a standard condition of approval, developers are required to pay development impact fees for fire facilities, which are assessed from the details of proposed Project. The proposed Project would have a less than significant impact on fire protection services, and would not affect fire department service ratios or response times, nor would it require the construction of any new fire facilities.

b) **Less Than Significant Impact**

The San Bernardino County Sheriff's Department currently serves the Project site and surrounding area. As a standard

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

condition of approval, developers are required to pay development impact fees for Public facilities based upon the size of the Project site. The proposed Project would not require unique police protection services, since the site has been and will continue to be accessible from surrounding streets and the payment of development impact fees would off-set potential demands for increased facilities.

c) **No Impact**

The Yucaipa-Calimesa School District would serve future development in the area. The Project would not result in any residential growth to the area, and would therefore not result in additional students that would increase demand to the District. No impacts would therefore occur.

d) **No Impact**

The proposed Project is to establish a unified commercial center within the City, and would not establish any additional residential uses that would result in a direct or indirect increase in demand on area parks. No impacts would occur, and no mitigation is required

e) **Less Than Significant Impact**

Public facilities, such as libraries, are typically provided to serve a residential population. The Project would not establish any additional residential uses, and thus would not create an increase in the demand for other public facilities. Therefore, impacts to libraries and other public facilities would be less than significant.

16. **RECREATION.**				
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
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?				X

a-b) **No Impact**

See response to 14d. The Project consists of the development of a new unified commercial center within City of Yucaipa, and would not add any additional residences that would increase the demand for area parks. No impacts would occur.

17. **TRANSPORTATION/TRAFFIC.** Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures 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?		X		
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?		X		
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?				X
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?				X
e) Result in inadequate emergency access?				X

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with adopted policies or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

A Traffic Impact Analysis was completed IBI Group, Inc. in March, 2019, to examine the potential impacts from traffic that could result from the Project. Information from this report is summarized below and is included as Appendix G, Traffic Impact Analysis, of this Initial Study.

a, b) **Less Than Significant Impact**

The proposed Project is mostly consistent[1] with the City's General Plan Land Use Map, and the Transportation Element of the City's General Plan identifies the transportation needs to meet the land use pattern described within the General Plan. The land use pattern proposed will not substantially change the projected increase in vehicle trips that has been provided for within the General Plan, as the proposed Project consists of a commercial development consistent with the requirements of the CS (Service Commercial) Land Use Designation. The City of Yucaipa is currently completing the construction of Phase I and II of the Yucaipa Boulevard Widening, 15th Street to Interstate 10, Project, which will widen Yucaipa Boulevard from a 4-lane roadway to a 6-lane roadway, consistent with the General Plan.

To assess project-related impacts, 6 study area intersections were developed to provide a focused analysis of the Project's potential traffic impacts. The intersections were selected based on their locations within the network, located within key access points for the proposed Project where the most traffic volumes would be expected. The intersections are as follows:

1. Yucaipa Blvd and Interstate 10 (I-10) Eastbound On-Ramp
2. Yucaipa Blvd and I-10 Westbound On-Ramp
3. Yucaipa Blvd and Avenue E
4. Chinaberry Lane and Yucaipa Blvd
5. 18th Street and Yucaipa Blvd
6. Avenue E and Dunlap Blvd.

In addition, the following roadway segments were analyzed:

1. Yucaipa Blvd between Avenue E and WB I-10 Ramp
2. Yucaipa Blvd between Avenue E and 18th Street
3. Yucaipa Blvd between Avenue E and 17th Street
4. Avenue E between Yucaipa Blvd and Dunlap Blvd
5. Dunlap Blvd south of Avenue E
6. Avenue E between Dunlap Blvd and 18th Street
7. Avenue E between 18th Street and 17th Street
8. Yucaipa Blvd between 18th Street and Tennessee Street
9. 18th Street between Avenue E and Yucaipa Blvd

The following freeway mainline segments were selected for analysis:

1. I-10 Freeway south of Yucaipa Blvd to Live Oak Canyon Road
2. I-10 Freeway north of Yucaipa Blvd to Wabash Road

The traffic analysis for the Yucaipa Pointe development included the following scenarios:

- Existing Year (2018) – No Project

[1] The GPA to re-designate 1.1 acres would not create a notable change in the traffic-related demand.

- Future Year (2020) – No Project
- Existing Year (2018) – With Project
- Future Year (2020) – With Project

Future (Year 2020) was selected as it coincides with the anticipated opening year of the proposed project. An analysis of the AM and PM peak hour for each scenario is included in this report. The AM peak period is between 7:00AM and 9:00AM and the PM peak period is between 4:00PM and 6:00PM.

Under existing and future "No Project" conditions, all roadway, freeway, and intersections operate at satisfactory LOS (LOS C or better), with the exception of the intersection of Yucaipa Blvd and Avenue E, which operates at LOS E in the PM peak hour. However, with the future Project conditions, all roadway, freeway, and intersections operate at satisfactory LOS (LOS C or better), with the exception of the intersection of Yucaipa Blvd and Avenue E, which operates at LOS D in the AM peak hour and LOS F in the PM peak hour. The Project would cause the delay at intersections already operating at unacceptable levels to increase or cause intersections operating at acceptable to become unacceptable. **Mitigation Measure TRA-1** is recommend to either achieve acceptable LOS or to achieve at least the pre-project LOS.

In addition, the current Project conditions would also have a substandard volume-to-capacity (V/C) ratio at the Yucaipa Blvd segment between Avenue E and WB I-10 Ramp for existing year with Project, which is a result of the incomplete roadway improvements and striping that are currently under construction. The future Project conditions, where the roadway improvements have been completed, would have acceptable V/C ratios. As part of the analysis, the proposed intersection improvements to intersection of Avenue E and Dunlap Blvd were assessed as having either a roundabout or all way stop configuration, with an all way stop configuration providing a better LOS of A rather than B. Due to the better LOS, and the topographical limitations at the intersection, the Project applicant has indicated that they will complete improvements for an all way stop in lieu of a roundabout.

Based on the queuing analysis, the anticipated queue lengths developed by vehicles entering and exiting the driveways would not exceed their respective lane queuing capacity with the exception of the westbound Left Turn from Yucaipa Blvd into the proposed development at the primary full access driveway (referenced as A7), where the evaluation showed that the proposed left turn pocket of 200 feet provided by the site plan is not adequate. It is recommended that the left turn pocket be extended to a minimum of 250 feet to mitigate the queuing effect. The median on Yucaipa Blvd has been re-designed to reflect a left turn pocket of 250 feet to ensure adequate queuing space is provided. The analysis did not find any other driveways that would exceed the capacity and cause a spillover onto to the street network or within the site.

With implementation of **Mitigation Measure TRA-1**, the Project would have less than significant impacts. The City of Yucaipa is currently working with the San Bernardino County Transit Authority to develop traffic-related Vehicle Miles Traveled thresholds for assessment pursuant to CEQA Guidelines Section 15064.3, subdivision (b), and no thresholds have yet been adopted. However, the Project consists of the construction of the unified commercial center, which will feature corporate tenants that are not currently located in the City, including Chick-Fil-A, Chipotle, Panera Bread, and Chili's, as well as a movie theater. It is expected that the proposed Project would reduce the vehicle trips currently being generated by the residents of the area as they currently have to travel outside of the community to patronize those businesses.

c) **No Impact**

Project site is not within close proximity to an airport of any type. The nearest airport is Redlands Municipal Airport (REI), which is located 4 miles northwest from the Project site. The maximum height permitted within the CS Land Use District Development is 45 feet, and the distance of the Project from airports would mean that structures would not impact any flight patterns.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

d) **No Impact**

The proposed Project is located adjacent to existing paved streets. The Project does not include any potential land uses that would create roadway hazards (e.g. farm equipment along highways) that would create roadway hazards. The Project would not provide any offsite roadway improvements that could substantially increase hazards due to a design feature. The site driveways and Project improvements would be designed with a minimum width of 24 (26-30 proposed) feet to provide adequate sight distance for residents entering and exiting the site. Sight distance at Project access points would comply with applicable City of Yucaipa/California Department of Transportation sight distance standards. In addition, the proposed would construct roadway improvements at the intersection of Avenue E and Dunlap Boulevard to improve the design of that intersection.

e) **No Impact**

The proposed Project site features roadway frontage along Yucaipa Boulevard, Avenue E, and 18th Street, which are existing paved roadways, and is within the immediate vicinity of Interstate 10. The development of the site would not impact access to users traveling along the public right-of-way as the roadway would serve as points of ingress and egress to the site, and the roadway would remain open to the public. Figure S-5 of the Yucaipa General Plan does designate Yucaipa Boulevard as a local evacuation route, which would not be impacted by the development of a unified commercial center. The internal circulation for the development has also been designed to comply with the California Fire Code, and the proposed parking lot drive aisles range from a width of 26-30 feet that will provide adequate access to facilitate the ingress and egress for fire vehicles. As such, the proposed Project will not result in inadequate emergency access.

f) **No Impact**

The proposed Project will not affect future opportunities to provide alternative transportation modes. As part of the Project, enhanced pedestrian features would be provided onsite for patrons, and sidewalk improvements would be completed around the Project site. The Project will also be conditioned to provide bicycle parking at the different building pad locations.

Mitigation Measure:

TRA-1: Yucaipa Blvd/Avenue E: Optimization of existing signal timing to provide a longer overall cycle length with additional green time allocated to the westbound left and northbound left turn movements would mitigate the impact at this location.

18. **TRIBAL RESOURCES.** Would the project:				
a) Cause a substantial adverse change in the significance of a Tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

A Phase I Cultural Resources Assessment was prepared by Archeological Associates, Inc. in April, 2019, to assess the potential impacts to cultural and tribal resources that could result of the Project. This report is summarized below and is included as Appendix B of this Initial Study. In addition, a Historic Evaluation of 31479 Avenue E was prepared by Rincon Consultants, Inc. in June 2019, and is included as Appendix C of this Initial Study

i) **No Impact**

The proposed Project is located on several parcels, which are mostly vacant with the exception of three parcels that feature existing single family residences. The evaluation prepared for the site found that there are no known historical or tribal resources onsite, and a records investigation did not reference any known resources onsite. As such, the site, including the residence proposed for demolition, is not considered historic, and no impacts to resources eligible for listing in the California Register of Historical Resources would occur. In addition, the City of Yucaipa does not have a local register of historical resources, and no impacts would therefore occur as part of development of the Project

ii) **Less Than Significant With Mitigation**

Conducting consultation early in the CEQA process allows tribal governments, public lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process.

In accordance with AB 52 and SB 18 requirements, the City sent invitation letters to representatives of the Native American contacts provided by the NAHC on June 5, 2019, and to its AB 52 contacts on May 2, 2019, formally inviting tribes to consult with the City on the Project. The intent of the consultations is to provide an opportunity for interested Native American contacts to work together with the City during the project planning process to identify and protect tribal cultural resources. A response letter was received from the San Manuel Band of Mission Indians and the Soboba Band of Luiseno Indians requesting consultation on June 4, 2019 and July 16, 2019 respectively. A letter was also received from the Morongo Band of Mission Indians and Torres Martinez Desert Cahuilla Indians noting that they did not wish to consult on the Project.

Archaeological research in the area indicates the Project area appears to have been inhabited by the Mountain Serrano, but is also within the boundaries of traditional Cahuilla territory, which lies within the geographic center of Southern California and the Cocopa-Maricopa Trail, a major prehistoric trade route that linked the Colorado Desert with the Pacific Coast. Further, the name “Yucaipa” is a form of the Serrano word, “Yucaipat.” Given the territory’s close proximity to the Cocopa-Maricopa Trail, interactions with surrounding tribes were extensive. Due to this history, areas within the City may have sensitivity to cultural and tribal resources. However, the subject site is not identified in Figure PR-6 of the City’s General Plan as being located within a Cultural Sensitivity Area.

The Cultural Resources Assessment did not identify any resources to be onsite, noting that prior disturbances and negative records onsite limit the potential discovery of resources that could be onsite. Further, the proposed fill of materials would result in limited subsurface excavation for the proposed Project. However, land disturbing activities may have the potential to uncover such remnants from this history and result in an inadvertent discovery, and mitigation measures were recommended by the tribes to address the procedures necessary should any inadvertent discoveries occur. Based upon the consultation process, the mitigation measures are as follows:

Mitigation Measures:

TRI-1: The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) and Soboba Band of Luiseno Indians (SBLI) shall be contacted, as detailed in CR-1, of any pre-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI and SBLI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI and/or SBLI for the remainder of the project, should SMBMI or SBLI elect to place a monitor on-site.

TRI-2: Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to SMBMI and SBLI. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI and SBLI throughout the life of the project.

TRI-3: In the event that human remains (or remains that may be human) are discovered at the project site during grading or earthmoving, the construction contractors shall immediately stop all activities within 100 feet of the find. The project proponent shall then inform the San Bernardino County Coroner and the City of Yucaipa Community Development Department immediately, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined as those of Native American origin, the applicant shall comply with the state relating to the disposition of Native American burials that fall within the jurisdiction of the Native American Heritage Commission (NAHC) (PRC Section 5097). The coroner shall contact the NAHC to determine the most likely descendant(s)(MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains shall be overseen by the MLD to determine the most appropriate means of treating the human remains and any associated grave artifacts.

The specific locations of Native American burials and reburials will be proprietary and not disclosed to the general public. The locations will be documented by the consulting archaeologist in conjunction with the various stakeholders and a report of findings will be filed with the San Bernardino County Museum.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052) determined in consultation between the project proponent and the MLD. In the event that the project proponent and the MLD are in disagreement regarding the disposition of the remains, State law will apply and the median and decision process will occur with the NAHC (see Public Resources Code Section 5097.98(e) and 5097.94(k)).

19. **UTILITIES AND SERVICE SYSTEMS.** Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the waste water 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?			X	
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

a-c) **Less Than Significant Impact**

Western Heights Water Company (WHWC) provides potable water, and the Yucaipa Valley Water District (YVWD)

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

provides wastewater treatment facilities for the Project site. The WHWC is in a controlled overdraft condition since the water table has dropped due to prior years of drought. However, infrastructure improvements have been developed to increase their storage capabilities to meet the demand of future residents and businesses based on the City's General Plan. This includes several recharge facilities developed by the City of Yucaipa. In addition, the Yucaipa Boulevard Widening, 15th Street to Interstate 10, Project included coordination with all utility companies, including the WHWC and the YVWD to expand and update their infrastructure within the Dunlap area, which would serve the proposed Project. As part of the Project application, the applicant had obtained a Preliminary Service Evaluation letter from WHWC and YVWD noting that they would be able to accommodate the required water and sewer needs of the proposed Project. The Project would not require the expansion of their facilities. As such, impacts will be less than significant.

The proposed Project will result in an incremental increase in the amount of storm water runoff from the property. The proposed development will require new storm water drainage facilities to capture the additional runoff that is generated, which will be provided for by on-site drainage detention basins. As a condition of Project approval and prior to this issuance of grading permits, the Project is required to submit a SWPPP and WQMP that describes BMPs and site design measures that will be implemented to minimize site runoff that is created. Therefore, the impact would be less than significant.

Other utilities, including electric power, natural gas, or telecommunications facilities, are provided along Yucaipa Boulevard, and no substantive changes are necessary to connect to those utilities.

d, e) Solid waste services in the City of Yucaipa are provided through a contract with Burrtec, and disposed of within the San Timoteo Sanitary Landfill. As a part of the contract, the disposal service company is required to comply with all appropriate regulations. According to information from the CalRecycle website, operated by the State of California, this landfill has an average annual capacity of 500,000 to 749,999 tons per year, and has a remaining capacity of over 13 million cubic yards and a daily landfill capacity is 2,000 tons per day. Considering the availability of landfill capacity, project solid waste disposal needs can be adequately met without a significant impact on the capacity of the nearest and optional, more distant, landfills. Therefore, it is not expected that the proposed project would impact the City's compliance with state-mandated (AB 939) waste diversion requirements. As a standard condition of approval, any new commercial, industrial, or institutional uses shall implement the approved "Solid Waste Recycling Plan." In addition, the proposed restaurants are subject to the requirements of AB 1826, which mandates organic recycling. The City is currently in compliance with the provisions of the law through its contract with Burrtec. Further, the City would provide enforcement of the law to ensure compliance with the organic recycling efforts.

20. **WILDFIRE.** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

a) **No Impact**

The proposed Project site features roadway frontage along Yucaipa Boulevard, Avenue E, and 18th Street, which are

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

existing paved roadways, and is within the immediate vicinity of Interstate 10. The development of the site would not impact access to users traveling along the public right-of-way as the roadway would serve as points of ingress and egress to the site, and the roadway would remain open to the public. Figure S-5 of the Yucaipa General Plan does designate Yucaipa Boulevard as a local evacuation route, which would not be impacted by the development of a unified commercial center. The internal circulation for the development has also been designed to comply with the California Fire Code. As such, the proposed Project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

b-d) **Less Than Significant Impact**

The Project site is located on a relatively flat property within an urbanized area and adjacent to existing development, and is not adjacent to wildland areas. However, the Project site is within the Fire Safety Review Area 2 according to the City General Plan, and would be subject to Fire Department conditions of approval to reduce fire related risks. In addition, the City has also adopted the most recent version of the CBC, which includes sections on fire-resistant construction material requirements based on building use and occupancy. The construction requirements are a function of building size, purpose, type, materials, location, proximity to other structures, and the type of fire suppression systems installed. Many of these requirements are also included as part of the Project's Conditions of Approval as a uniformly applicable development policy, which includes provisions for adequate fire access, sprinkler water systems within indoor spaces, and placement of new fire hydrants at applicable intervals that meet the water flow requirements of the CBC. Through these standard requirements, impacts from fire-related hazards would be less than significant. There are no other factors onsite that would exacerbate wildfire risks, or slopes that would pose significant risks, such as post-fire slope instability, or downstream flooding or landslides.

21. **MANDATORY FINDINGS OF SIGNIFICANCE.**				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to 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?		X		
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 the past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

a) **Less Than Significant Impact with Mitigation**

The proposed Project will not result in significant impacts that have the potential to degrade the quality of the environment. The Project site does not feature any critical natural habitat, and would cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. In addition, no significant cultural resources were identified onsite, and the Project would therefore not eliminate important examples of the major periods of California history or prehistory. However, there is also a potential for cultural resources to be discovered during site grading activities, and mitigation measures are included as a cautionary measure to address any impacts if an inadvertent discovery is made.

b) **Less Than Significant Impact with Mitigation**

The proposed Project is consistent with the City's General Plan. As such, the cumulative effects were evaluated as part of the City's General Plan EIR. Therefore, development of the proposed Project would be consistent with the assumptions of current long-range planning for the provision of utilities, service systems and public services in the City of Yucaipa. The evaluation of proposed Project utilized a variety of topical sections, including: agriculture, biology, cultural, air quality, geology/soils, greenhouse gases, hydrology, land use, noise, land use, mineral resources, population and housing, recreation, traffic, utilities and services. The analysis of the Project did not identify potential significant or cumulative impacts that could not be mitigated to a level that is less than significant.

c) **Less Than Significant Impact with Mitigation**

The proposed Project will be constructed consistent with existing City regulations, standards, and processes, and those of other agencies. The topical issues discussed within this document did not identify the potential for adverse effects due, in part, to the incorporation of mitigation measures that would reduce the potential impact to less than significant.

SUPPORTING INFORMATION SOURCES:

1. City of Yucaipa General Plan, 2016
2. City of Yucaipa General Plan EIR, 2016
3. City of Yucaipa Development Code (as amended)
4. Caltrans Web Site for Scenic Highways, www.dot.ca.gov.
5. California State Department of Conservation for farmland mapping, www.consrv.ca.gov.
6. California Department of Toxic Substances Control, www.dtsc.ca.gov.
7. State Water Resources Control Board.
8. Cal Fire Mapping, www.fire.ca.gov.
9. Yucaipa, CA U.S.G.S. Map

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

Appendix List:

Appendix A – Air Quality and Greenhouse Gas Analysis
Appendix B – Cultural Resources Assessment
Appendix C – 31479 Avenue E Historic Resource Evaluation
Appendix D – Geotechnical Engineering Investigation Reports
Appendix E – Phase I and II Site Assessment
Appendix F – Noise Study
Appendix G – Yucaipa Pointe Traffic Impact Analysis

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AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

PROPOSED RETAIL COMMERCIAL DEVELOPMENT – PHASE I & II
SWC YUCAIPA BOULEVARD & 18TH STREET
YUCAIPA, CALIFORNIA

SALEM PROJECT NO. 3-418-1026
MARCH 1, 2019
REVISED AUGUST 2019

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Job No. 3-418-1026

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May 1, 2019 Job No. 3-418-1026
Revised August 2019

AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

PROPOSED RETAIL COMMERCIAL DEVELOPMENT – PHASE 1 & II
SWC YUCAIPA BOULEVARD AND 18TH STREET
YUCAIPA, CALIFORNIA

1.0 INTRODUCTON

This report presents an assessment of potential air quality and greenhouse gas (GHG) impacts associated with the proposed retail project to be constructed at the SWC Yucaipa Boulevard and 18th Street, California (subject property). At this time the following improvements are planned for Phase I and Phase II:

Site Development is approximately 993,603 square feet (22.81 acres) to be final graded and will be developed in two phases, as shown below:

Phase I
- 34,000 sf Heath Club
- 5,800 sf Restaurant
- 6,065 sf Fast Food
- 3,000 sf Fast Food
- 3,500 sf Fast Food
- 4,300 sf Fast Food
- 2,800 sf Restaurant
- 4,800 sf Fast Food
- 3,779 sf Car Wash
- 7,100 sf Fast Food
- 2,000 sf Fast Food
- 562 space Parking Lot

Phase II
- 39,000 sf Movie Theater
- 8,400 sf Restaurant
- 5,000 sf Restaurant
- 5,000 sf Fast Food
- 1,000 sf Restaurant
- 2,000 sf Shops
- 373 space Parking Lot

GHG impacts will be attributable to emissions associated with construction and operational emissions including traffic and energy use. This report presents an evaluation of existing conditions at the subject property, thresholds of significance, and potential air quality and GHG impacts associated with construction and operation of the project.

2.0 EXISTING CONDITIONS

2.1 Current Development

The subject property is currently vacant field with offsite improvement surrounding the property. New offsite and onsite improvements will be required to allow for site development, building, and vehicle and pedestrian access to the new site development.

2.2 Regulatory Setting

The United States Environmental Protection Agency (EPA) defines air quality by ambient air concentrations of specific pollutants that have been shown to be of concern with respect to health and welfare of the general public. The EPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the EPA to establish National Ambient Air

Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated.
In response, the EPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The Federal CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. More stringent California Ambient Air Quality Standards (CAAQS) have been adapted by the California Air Resources Board (ARB) for the six criteria pollutants through the California Clean Air Act of 1988 (CCAA). The CCAA also established California Ambient Air Quality Standards (CAAQS) for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles (see Table 1 for NAAQS and CAAQS.)

Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "Nonattainment Areas" for that pollutant. In September 1997, the EPA promulgated 8-hour O_3 and 24-hour and annual $PM_{2.5}$ national standards. As a result, this action has initiated a new planning process to monitor and evaluate emission control measures for these pollutants.

The South Coast Air Basin (SCAB) is classified as an Extreme Nonattainment Area for the NAAQS for O_3 for all Averaging Times and a Nonattainment Area for the NAAQS $PM_{2.5}$ for all Averaging times. The SCAB is also designated as a Maintenance Area for the NAAQS for CO and NO_2. The SCAB is also considered a Serious Nonattainment Area for the CAAQS pollutant PM_{10}. The area is considered unclassified or Attainment for all other NAAQS and CAAQS for the other criteria pollutants.

The California ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS.

The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The South Coast Air Quality Management District (SCAQMD) is the local agency responsible for the administration and enforcement of air quality regulations for the SCAB.

The SCAQMD and the Southern California Association of Governments (SCAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SCAB. The most recently adopted air quality plan in the SCAB is the 2016 Air Quality Management Plan (AQMP), which was adopted by the Board in March 2017.

Table 1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

TABLE 1
Ambient Air Quality Standards

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS CONCENTRATION	CALIFORNIA STANDARDS METHODS	NATIONAL STANDARDS PRIMARY	NATIONAL STANDARDS SECONDARY	NATIONAL STANDARDS METHOD
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry			Ultraviolet Photometry
	8 hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 µg/m^3)	—	Non-Dispersive Infrared Spectroscopy (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 µg/m^3)	—	
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm (56 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m3)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m^3)		0.100 ppm (188 µg/m^3)	-	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)		Pararosaniline
	3 hours	--			0.5 ppm (1300 µg/m^3)	
	1 hour	0.25 ppm (655 µg/m^3)		75ppb (196 µg/m^3)		
	Annual	-		0.030 ppm (for certain areas)	-	
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	150 µg/m^3	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3				
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	Inertial Separation and Gravimetric Analysis
	24 hours			35 µg/m^3	35 µg/m3	
Sulfates	24 hours	25 µg/m^3	Ion Chromatography	No National Standards		
Lead	30-day Average	1.5 µg/m^3	Atomic Absorption			Atomic Absorption
	Calendar Quarter			1.5 µg/m^3	1.5 µg/m^3	
	3-Month Rolling			0.15 µg/m^3	0.15 µg/m^3	
Hydrogen Sulfide	1 hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence	No National Standards		
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m^3)	Gas Chromatography	No National Standards		

ppm= parts per million; µg/m^3 = micrograms per cubic meter ; mg/m^3= milligrams per cubic meter Source: California Air Resources Board, www.arb.ca.gov, 2016

3.0 THRESHOLDS OF SIGNIFICANCE

The SCAQMD has adopted CEQA significance thresholds as of 2015 (SCAQMD 2015), which provide guidance on the requirements for evaluating potential air quality impacts and on thresholds of significance under CEQA. The SCAQMD has identified numerical emission thresholds for significance for construction and operation for a project. The project-level numerical thresholds are summarized in Table 2.

TABLE 2
SCAQMD Significance Thresholds

POLLUTANT	CONSTRUCTION	OPERATION
Criteria Pollutants Mass Daily Thresholds		
NO_X	100 lbs/day	55 lbs/day
ROG (VOC)	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
TAC, AHM, and Odor Thresholds		
Toxic Air Contaminants (TACs)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 (in areas ≥ 1 in a million) Chronic and Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO_2 eq for industrial facilities	
Ambient Air Quality for Criteria Pollutants		
NO2 1-hour average Annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10 24-hour average Annual geometric mean	10.4 $\mu g/m^3$ construction & 2.5 $\mu g/m^3$ operation 1.0 $\mu g/m^3$	
PM2.5 24-hour average	10.4 $\mu g/m^3$ construction & 2.5 $\mu g/m^3$ operation	
SO2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 $\mu g/m^3$ (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average Rolling 3-month average Quarterly average	1.5 $\mu g/m^3$ (state) 0.15 $\mu g/m^3$ (federal) 1.5 $\mu g/m^3$ (federal)	

$\mu g/m^3$ = microgram per cubic meter; ppm = parts per million; MT = Metric Ton

To further evaluate the potential for significant impacts associated with the project, the SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD 2008) can be considered to evaluate whether a project's emissions could cause a localized exceedance of an ambient air quality standard. The Localized Significance Threshold (LST) Methodology provides a look-up table for construction and operational emissions based on the emission rate, location, and distance from receptors, and provides a methodology for air dispersion modeling to evaluate whether a construction or operation could cause an exceedance of an ambient air quality standard. The LST lookup tables (SCAQMD 2009) are applicable only to sources that are five acres or less in site disturbance per day. Because this development is planned to disturb 3 – 5 acres during the earthwork and grading activities per day the project will be reviewed at the LST level of 5 acres.

The subject site in Phase I is 14.4 acres in size and in Phase II is 6.81acres in size, the screening air dispersion modeling approach used to assess the significance of localized construction impacts on receptors in the project vicinity using the 5-acre disturbance values in all cases. The LST Methodology only applied to impacts to NO_2, CO, $PM_{2.5}$ and PM_{10} concentrations.

According to the LST Methodology, the project is in Source Receptor Area, 35 East San Bernardino Valley. LSTs for the Project are shown in Table 3, based on the disturbance per day and the distance to the nearest receptor.

Based on a review of the site location and aerial maps of the vicinity, the distance to the nearest receptor is estimated to be 25 meters. The LSTs for a 5-acre disturbance per day and 25-meter distance were used to evaluate the potential significance of impacts.

TABLE 3
SCAQMD Localized Significance Thresholds for Construction and Operation, lb/day

Project Site	Area of disturbance	Distance to Nearest Receptor, Meters	Pollutant					
			NOX*	CO*	PM10 Const	PM10 Operation	PM2.5 Const	P2.5 Operation
Retail Shopping Center	5	25	270	2075	14	4	9	3

*Construction or Operation - The impacts associated with construction and operation of the project were evaluated for significance based on these significance criteria.

4.0 IMPACTS

The proposed retail Development improvements to be constructed include both construction and operational impacts. Construction impacts include emissions associated with site grading/preparation, utilities installation, construction of a building, and paving. Operational impacts include emissions associated with the project, including traffic, at full build-out. Phase I and Phase II construction is summarized in Table 4 below.

TABLE 4
Construction Summary for Project Site – Phase I

AREA DISTURBED	CONSTRUCTION SUMMARY	PARKING SPACES	APPROXIMATE DURATION
34,000 sf	Health Club	-	6 Months
5,800 sf	Restaurant	-	4 Months
6,065 sf	Fast Food	-	4 Months
3,000 sf	Fast Food	-	4 Months
3,500 sf	Fast Food	-	4 Months
4,300 sf	Fast Food	-	4 Months
2,800 sf	Restaurant	-	4 Months
4,800 sf	Fast Food	-	4 Months
3,779 sf	Car Wash	-	4 Months
7,100 sf	Restaurant	-	4 Months
2,000 sf	Fast Food	-	4 Months
5.5+/- acre	Parking Lot	562	4 Months

Construction Summary for Project Site – Phase II

AREA DISTURBED	CONSTRUCTION SUMMARY	PARKING SPACES	APPROXIMATE DURATION
39,000 sf	Movie Theater	-	6 Months
8,400 sf	Restaurant	-	4 Months
5,000 sf	Restaurant	-	4 Months
5,000 sf	Fast Food	-	4 Months
1,000 sf	Restaurant	-	4 Months
2,000 sf	Shops	-	4 Months
3.5+/-acre	Parking Lot	373	4 Months

4.1 Construction

Emissions of pollutants such as fugitive dust that are generated during construction are generally highest near the construction site. Emissions from the construction phase of the project were estimated through the use of the CalEEMod Model (ENVIRON 2014). It was assumed that heavy construction equipment would be operating at the site for eight hours per day, five days per week during project construction. In addition, it was assumed that, in accordance with the requirements of the SCAQMD Rule 403, fugitive dust controls would be utilized during construction, including watering of active sites a minimum of three times daily and all disturbed soil will be mitigated with soil stabilators or ground cover throughout the grading activities.

The other mitigation measures that will be used during construction are as follows;

1. zero-emissions or near-zero emission on-road haul trucks such as heavy-duty trucks with natural gas engines that meet the CARB's adopted optional NOx emissions standard at 0.02 grams per brake horsepower-hour (g/bhp-hr), if and when feasible. At a minimum, require that construction vendors, contractors, and/or haul truck operators commit to using 2010 model year trucks (e.g., material delivery trucks and soil import/export) that meet CARB's 2010 engine emissions standards at 0.01 g/bhp-hr of particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions or newer, cleaner trucks.
2. All trucks hauling dirt, sand, soil or other loose materials are to be covered, or should maintain at least two feet of freeboard in accordance with California Vehicle Code Section 23114 (freeboard means vertical space between the top of the load and top of the trailer).

For the purpose of estimating emissions from the application of architectural coatings, it was assumed that water-based coatings that would be compliant with SCAQMD Regulations would be used for both exterior and interior surfaces. Within the CalEEMod Model, this assumption was included by assigning all architectural coating a no or low VOC content.

Tables 5 and 6 provide summaries of the emission estimates for construction and operation of all proposed site improvements. These projected emissions assume standard measures are implemented to reduce emissions, as calculated with the CalEEMod Model, and are compared to the regional and localized significance thresholds. The localized significance thresholds are applicable only to on-site emissions and do not consider emissions occurring on roadways during travel to and from the site. Refer to Appendix A for detailed model output files.

Table 5 includes projected emissions for all steps of construction, averaged over the project's projected construction duration. These steps include: Grading Site, Site Preparation, Building Construction, Paving, and Architectural Coatings. Note that projected emissions for all pollutants during construction are below both the SCAQMD's Air Quality Significance Thresholds as well as the Localized Significance Thresholds.

During Construction diesel-fired equipment will be operated and will result in the release of diesel particulate matter which is a listed carcinogen and toxic air contaminant in the State of California. The earthwork phase is the phase of construction in which the majority of diesel-fired equipment will be used. Because this duration is very short it is expected that the release of diesel will not have a negative impact to surrounding receptors.

Construction of the project would be short-term and temporary. Thus the emissions associated with construction would not result in a significant impact on the ambient air quality. Because emissions are less than the significance levels, they would not conflict or obstruct the implementation of the AQMP or applicable portions of the SIP. Project construction would also not result in emission of any odor compounds that would cause a nuisance or significant impact to nearby receptors. The impacts associated with Project construction are therefore not considered significant.

Project construction would also not result in emission of any odor compounds that would cause a nuisance or significant impact to nearby receptors. The impacts associated with Project construction are therefore not considered significant.

Construction of the project would be short-term and temporary, therefore a cumulatively increase in the surrounding emissions associated with the area would not result in a significant impact on the ambient air quality. In addition because emissions are less than the significance levels they do not expose sensitive receptors to substantial pollutant concentrations.

Based on the above project analyst of the construction phase, the project construction phase will not conflict or obstruct the implementation of the AQMP or applicable portions of the SIP.

TABLE 5
Estimated Construction Emissions
Annual LBS/Day (unless otherwise shown)

EMISSION SOURCE	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Significance Criteria	75	100	550	150	150	55
Localized Significance Thresholds	-	270	2075	-	14	9
Project Construction Emissions Phase I						
Retail Development Summer Peak	39.2	7.4	23.6	0.053	4.4	2.4
Retail Development Winter Peak	39.2	7.8	23.7	0.052	4.35	2.4
Project Construction Emissions Phase II						
Retail Development Summer Peak	33.7	5.98	23.6	0.045	4.4	2.42
Retail Development Winter Peak	33.7	5.99	23.6	0.044	4.4	2.42
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

4.2 Operational Impacts

The main operational impacts associated with the Project would be impacts associated with traffic. Minor impacts would be associated with energy use and area sources.

To address whether the Project would result in emissions that would violate any air quality standard or contribute substantially to an existing or proposed air quality violation, the emissions associated with Project-generated traffic and area sources were compared with the SCAQMD's quantitative significance criteria. Default trip generation rates in the CalEEMod Model were modified based on the traffic study and the trip rate distance was modified to show more accurate distances traveled to estimate emissions from vehicles traveling to and from the project development. The CalEEMod Model contains emission factors from the EMFAC2014 model, which is the latest version of the Caltrans emission factor model for on-road traffic. Project-related traffic was assumed to be comprised of a mixture of vehicles in accordance with the CalEEMod Model default outputs for traffic. This assumption includes light duty autos and light duty trucks (i.e., small trucks, SUVs, and vans) as well as medium- and heavy-duty vehicles that may be traveling to the facility to make deliveries. For conservative purposes, emission factors representing the vehicle mix for 2021 and 2022were used to estimate emissions as 2021 Phase I and 2022 Phase II were assumed to be the first year of full operation; based on the results of the EMFAC2014 model for subsequent years, emissions would decrease on an annual basis from 2021 and 2022 onward due to phase-out of higher polluting vehicles and implementation of more stringent emission standards that are taken into account in the EMFAC2014 model. Emissions associated with area sources (energy use and landscaping activities) were estimated using the default assumptions in the CalEEMod Model.

Table 6 below presents the results of the CalEEMod emission calculations in lbs/day for operations, as an annual average considering the project's design features, along with a comparison with the SCAQMD Air Quality Significance Thresholds for Operations. The calculation assumed that the project would be constructed to current Title 24 buildings standards, and would use low-flow plumbing fixtures.

TABLE 6
Estimated Operational Emissions, LBS/Day (unless otherwise shown)

EMISSION SOURCE	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Significance Criteria, Operations	55	55	550	150	150	55
Localized Significance thresholds	-	270	2075	-	4	3
Project Construction Emissions Phase I						
Retail Development Summer Peak	17.1	62.9	56.6	0.11	1.89	0.75
Retail Development Winter Peak	16.15	61.4	66.1	0.11	1.9	0.75
Project Construction Emissions Phase II						
Retail Development Summer Peak	8.29	27.85	27.32	0.0629	1.6	0.56
Retail Development Winter Peak	7.8	27.39	31.17	0.0587	1.6	0.56
Significant?	*No*	*No*	*No*	*No*	*No*	*No*

Based on the estimates of the emissions associated with project operations, the emissions are below the significance criteria. In addition because the emissions are less than the significance levels, they would not conflict or obstruct the implementation of the AQMP or applicable portions of the SIP. It should be noted that the emissions from vehicles are projected to decrease with time due to phase-out of older, more polluting vehicles and increasingly stringent emissions standards.

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." It is not anticipated that the project would have a significant impact on traffic in the area, and no intersections would degrade to unacceptable levels. The intersections in the project area would therefore operate at an acceptable LOS and would not experience CO "hot spots" because traffic congestion would not result. This has been confirmed in the traffic study for this project and development.

In reviewing the project data, location and area a cumulatively increase in the surrounding emissions associated with the area would not result in a significant impact on the ambient air quality. In addition because emissions are less than the significance levels they do not expose sensitive receptors to substantial pollutant concentrations.

Based on the above project analyst of the operational phase, the project will not conflict or obstruct the implementation of the AQMP or applicable portions of the SIP.

4.3 Odors

During construction, diesel equipment operating at the site may generate some nuisance odors; however, due to the distance of sensitive receptors to the project site and the temporary nature of construction, odors associated with project construction would not be significant.

Land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations. These land uses are not proposed for the retail project in Yucaipa, CA. Odor impacts would not be significant.

5.0 GREENHOUSE GAS EVALUATION

According to the California Natural Resources Agency, "due to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis." According to Appendix G of the CEQA Guidelines, the following criteria may be considered to establish the significance of GHG emissions:

Would the project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency, consistent with the provisions in Section 15064. Section 15064.4 further provides that a lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

- Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
- Rely on a qualitative analysis or performance based standards.

Section 15064.4 also advises a lead agency to consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

1. The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

On December 5, 2008, the SCAQMD Governing Board adopted the staff draft proposal for an interim GHG significance threshold for projects where the SCAQMD is lead agency. The SCAQMD has a threshold of a 30% reduction of CO2e (carbon dioxide equivalent). This threshold aligns with AB32 and the intent of the 30% reduction is to provide a feasible target objective, that will not only contribute to achieving the AB 32 target objective, but will also contribute to achieving the 2050 target of the Governor's Executive Order S-3-05, which establishes of target objective of reducing GHG emissions 80 percent below 1990 levels or a 90 percent reduction from current BAU estimates.

The City of Yucaipa prepared this Climate Action Plan (CAP) that was adopted in September 14, 2015. based upon the information within the Plan and relies on the San Bernardino County Regional GHG Reduction Plan and certification of the Programmatic EIR for the Plan occurred in March 2014 Programmatic EIR, with an addendum for the modifications to make it specific to Yucaipa for environmental review of the CAP. The City has developed its implementation and monitoring program to carry the GHG reduction measures forward and included those within this CAP.

The City has selected a goal to reduce their community GHG emissions by 15% below 2008 baseline levels by the year 2020. The City has selected this goal based on what the City considers feasible given the local conditions. This Climate Action Plan will sunset in 2020 however the City will continue monitor and report GHG finding behind 2020 in order to review and monitor AB32 target objective and the Governor's Executive Order S-3-05

For the purpose of this evaluation, a threshold of 30% reduction of CO2e is used to assess significance of greenhouse gas emissions as this requirement will exceed the City of Yucaipa threshold of 15% below 2008

standards and SCAQMD, AB32 and Governor's Executive Order S-3-05 which establishes which establishes of target objective of reducing GHG emissions 80 percent below 1990 levels or a 90 percent reduction from current BAU estimates.

The proposed project would generate an estimated total of 17,481 metric tons of CO_2e emissions without any mitigation measures during operation. The unmitigated construction emissions is estimated at a total of 769.11. The SCAQMD recommends amortizing construction emissions over a period of 30 years to estimate the contribution of construction emissions to operational emissions over the project lifetime. Amortized over 30 years, the construction of the project will generate approximately 26 metric tons of CO_2e on an annualized basis. The estimated unmitigated emission for this project is 17,507 metric tons of CO2e.

Based on the results of the CalEEMod Model, the project will provide mitigation measures reducing the generated metric tons of CO_2e emissions from 17,507 to 9,189. This is a reduction of 47% which exceeds current state and federal requirements. The reduction measures include site selection measures in which the site is surrounded by commercial, industrial and residential uses and is approximately four miles from Yucaipa downtown (Uptown) area, other improvements include improvements to intersections to provide traffic calming measures which will allow pedestrian features, improved walkability design, sidewalks on-site and offsite, future buildout for EV charging stations and building solar panels.

This level exceeds the 30% reduction of metric tons of CO_2e emissions for residential and commercial land uses. Therefore, the proposed project is not expected to have a significant cumulative impact on greenhouse gas emissions.

6.0 CONCLUSIONS

The air quality and GHG analysis for the proposed project in Yucaipa, CA evaluated emissions associated with both the construction and operation of the project. Emissions associated with construction and operation were compared with significance thresholds developed by the SCAQMD, which provide a conservative means of evaluating whether project emissions would cause a significant impact on the ambient air quality or whether further evaluation is warranted. Emissions associated with construction and operation are below the significance thresholds for all phases and pollutants. Thus the emissions associated with construction and operation of the project would not result in a significant impact.

7.0 REFERENCES

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- SCAQMD. 2008. Localized Significance Threshold Methodology.
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- SCAQMD. 2014. CEQA Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2
- U.S. EPA. 2006. *The U.S. Inventory of Greenhouse Gas Emissions and Sinks: Fast Facts.* www.epa.gov/climatechange/emissions/downloads06/06FastFacts.pdf.

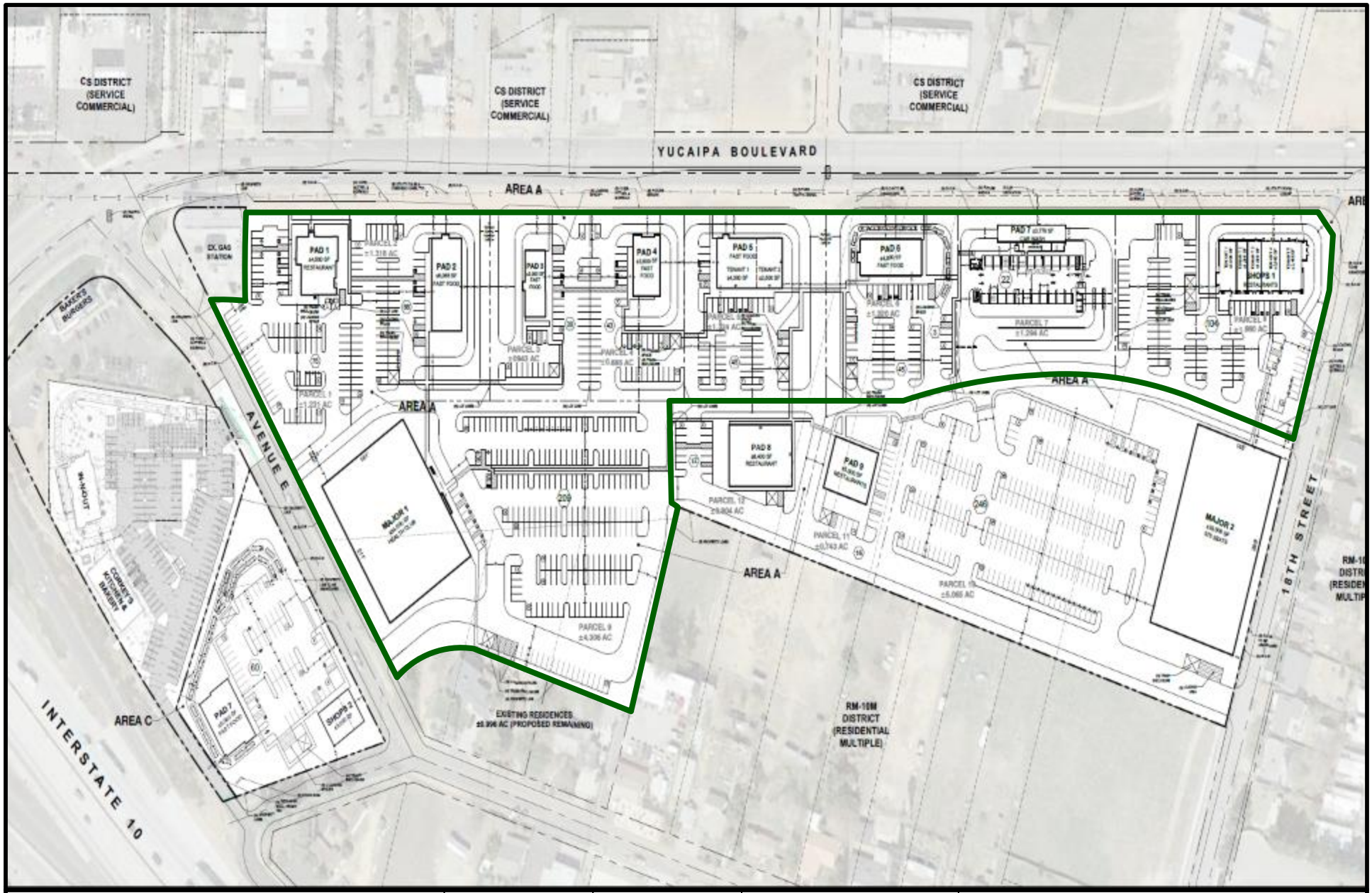
We appreciate the opportunity to assist you with this project. If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully submitted,

SALEM Engineering Group, Inc.

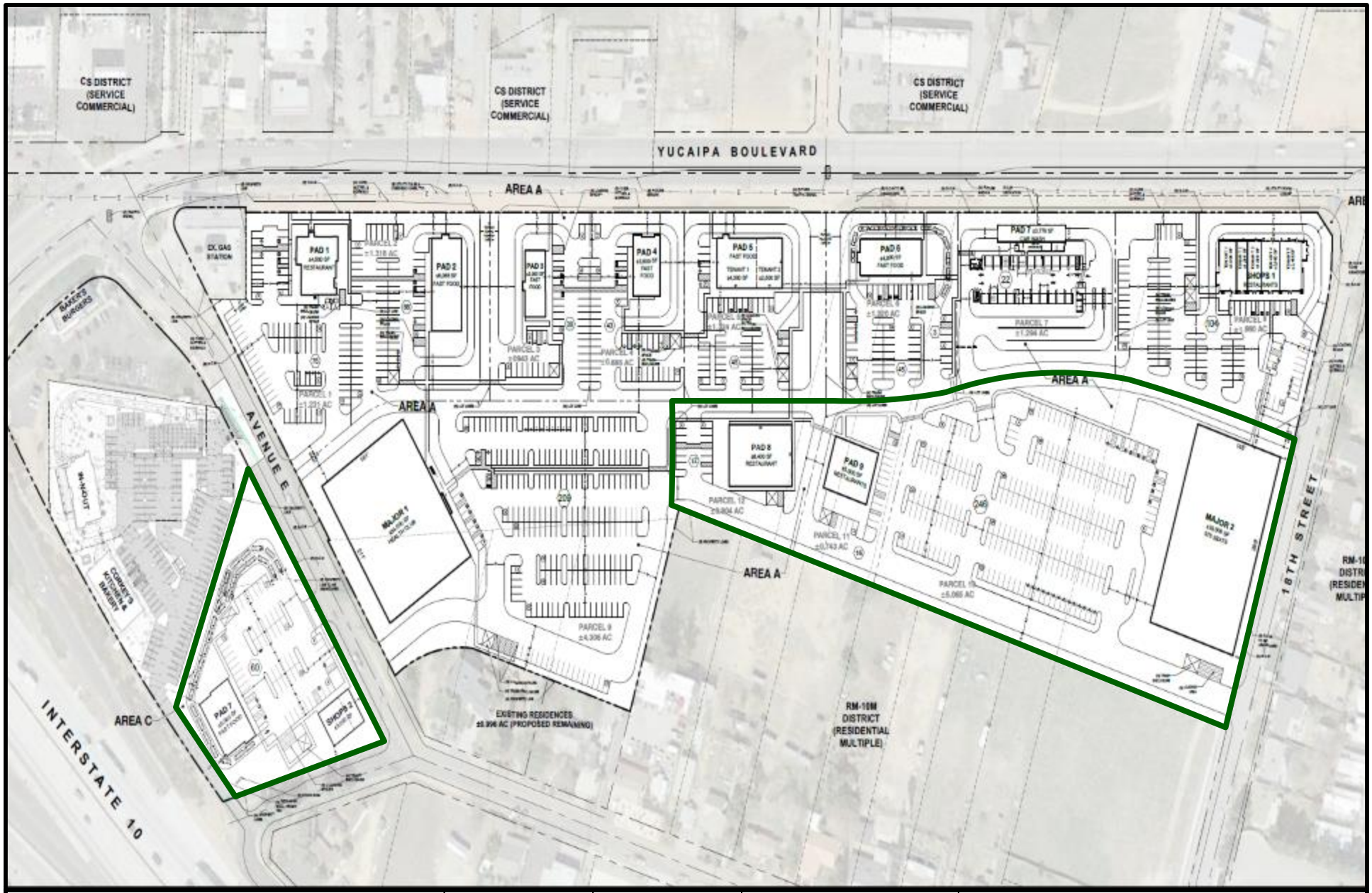
Roy Arnold, PE
Project Engineer

R. Sammy Salem, MS, PE
Principal Engineer



SITE LOCATION MAP	SCALE: NTS	DATE: March 2019	
PROPOSED COMMERCIAL DEVELOPMENT - PHASE I **SWC YUCAIPA BOULEVARD & 18TH STREET** **YUCAIPA, CALIFORNIA**	DRAWN BY: BR	APPROVED BY: MR	
	PROJECT NO. 3-418-1026	FIGURE NO. 1	

SALEM engineering group, inc.



SITE LOCATION MAP	SCALE: NTS	DATE: March 2019		
PROPOSED COMMERCIAL DEVELOPMENT - PHASE II **SWC YUCAIPA BOULEVARD & 18TH STREET** **YUCAIPA, CALIFORNIA**	DRAWN BY: BR	APPROVED BY: MR	N	SALEM engineering group, inc.
	PROJECT NO. 3-418-1026	FIGURE NO. 2		

APPENDIX

A

Yucaipa Retail Shopping Center Phase I AQA

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	2.80	1000sqft	0.06	2,800.00	0
High Turnover (Sit Down Restaurant)	5.80	1000sqft	0.13	5,800.00	0
Fast Food Restaurant with Drive Thru	4.80	1000sqft	0.11	4,800.00	0
Automobile Care Center	3.78	1000sqft	0.09	3,780.00	0
High Turnover (Sit Down Restaurant)	7.10	1000sqft	0.16	7,100.00	0
Fast Food Restaurant with Drive Thru	2.00	1000sqft	0.05	2,000.00	0
Fast Food Restaurant with Drive Thru	6.07	1000sqft	0.14	6,070.00	0
Parking Lot	562.00	Space	5.06	224,800.00	0
Health Club	34.00	1000sqft	0.78	34,000.00	0
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Fast Food Restaurant with Drive Thru	4.30	1000sqft	0.10	4,300.00	0
Fast Food Restaurant with Drive Thru	3.50	1000sqft	0.08	3,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - The trip rate has been updated per the TIA traffic study
The trip distance has been updated to actual distance traveled in area

Construction Off-road Equipment Mitigation - Project will use tier 4 equipment and will require zero or non-zero equipment
Project will follow fugtive dust requirements, spend grading activities during high wind events

Mobile Land Use Mitigation -

Area Mitigation - Contractor will use no to very low VOCs

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	DV_TP	51.00	61.00
tblVehicleTrips	DV_TP	21.00	31.00
tblVehicleTrips	DV_TP	39.00	49.00
tblVehicleTrips	DV_TP	20.00	30.00
tblVehicleTrips	PR_TP	21.00	11.00
tblVehicleTrips	PR_TP	29.00	19.00
tblVehicleTrips	PR_TP	52.00	42.00
tblVehicleTrips	PR_TP	37.00	27.00

tblVehicleTrips	ST_TR	722.03	496.12
tblVehicleTrips	ST_TR	158.37	112.18
tblVehicleTrips	SU_TR	542.72	496.12
tblVehicleTrips	SU_TR	131.84	112.18
tblVehicleTrips	WD_TR	127.15	112.18

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9642	40.5464	22.4309	0.0534	18.2675	2.0459	20.3134	9.9840	1.8823	11.8663						
2022	39.1884	20.3634	21.8008	0.0528	1.7220	0.8272	2.5492	0.4638	0.7782	1.2420						
Maximum	**39.1884**	**40.5464**	**22.4309**	**0.0534**	**18.2675**	**2.0459**	**20.3134**	**9.9840**	**1.8823**	**11.8663**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.2549	7.7580	23.6604	0.0534	4.3587	0.2277	4.4223	2.3600	0.2276	2.4234						
2022	39.1884	7.4413	23.0966	0.0528	1.1428	0.1200	1.2628	0.3216	0.1188	0.4405						
Maximum	**39.1884**	**7.7580**	**23.6604**	**0.0534**	**4.3587**	**0.2277**	**4.4223**	**2.3600**	**0.2276**	**2.4234**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.28**	**75.05**	**-5.71**	**0.00**	**72.48**	**87.90**	**75.13**	**74.33**	**86.98**	**78.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Energy	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						
Mobile	15.2426	61.8166	62.3379	0.1303	4.6655	0.1246	4.7902	1.2483	0.1157	1.3640						
Total	**17.4232**	**65.0385**	**65.1092**	**0.1497**	**4.6655**	**0.3697**	**5.0352**	**1.2483**	**0.3607**	**1.6090**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Energy	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						
Mobile	14.9267	59.7066	53.8066	0.0946	1.5513	0.0983	1.6496	0.4151	0.0911	0.5062						
Total	**17.1074**	**62.9285**	**56.5779**	**0.1140**	**1.5513**	**0.3434**	**1.8947**	**0.4151**	**0.3362**	**0.7512**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.81**	**3.24**	**13.10**	**23.85**	**66.75**	**7.12**	**62.37**	**66.75**	**6.81**	**53.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	1/29/2022	2/25/2022	5	20	
6	Architectural Coating	Architectural Coating	2/26/2022	3/25/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 5.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 115,725; Non-Residential Outdoor: 38,575; Striped Parking Area: 13,488 (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
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	126.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411						
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0633	0.0411	0.5651	1.6700e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456						
Total	**0.0633**	**0.0411**	**0.5651**	**1.6700e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**						

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7845	4.7700	23.0953	0.0388		0.2264	0.2264		0.2264	0.2264						
Total	**0.7845**	**4.7700**	**23.0953**	**0.0388**		**0.2264**	**0.2264**		**0.2264**	**0.2264**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0633	0.0411	0.5651	1.6700e-003	0.1094	1.2300e-003	0.1106	0.0302	1.1400e-003	0.0313						
Total	**0.0633**	**0.0411**	**0.5651**	**1.6700e-003**	**0.1094**	**1.2300e-003**	**0.1106**	**0.0302**	**1.1400e-003**	**0.0313**						

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809						
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0760	0.0493	0.6781	2.0000e-003	0.2012	1.4800e-003	0.2027	0.0534	1.3600e-003	0.0547						
Total	**0.0760**	**0.0493**	**0.6781**	**2.0000e-003**	**0.2012**	**1.4800e-003**	**0.2027**	**0.0534**	**1.3600e-003**	**0.0547**						

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2275	0.0000	4.2275	2.3238	0.0000	2.3238						
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621						
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**4.2275**	**0.0621**	**4.2896**	**2.3238**	**0.0621**	**2.3859**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0760	0.0493	0.6781	2.0000e-003	0.1312	1.4800e-003	0.1327	0.0362	1.3600e-003	0.0376						
Total	**0.0760**	**0.0493**	**0.6781**	**2.0000e-003**	**0.1312**	**1.4800e-003**	**0.1327**	**0.0362**	**1.3600e-003**	**0.0376**						

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671						
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5523**	**1.1599**	**7.7123**	**3.3675**	**1.0671**	**4.4346**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0633	0.0411	0.5651	1.6700e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456						
Total	**0.0633**	**0.0411**	**0.5651**	**1.6700e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**						

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5333	0.0000	1.5333	0.7880	0.0000	0.7880						
Off-Road	0.3632	1.5737	17.7527	0.0296		0.0484	0.0484		0.0484	0.0484						
Total	**0.3632**	**1.5737**	**17.7527**	**0.0296**	**1.5333**	**0.0484**	**1.5817**	**0.7880**	**0.0484**	**0.8364**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0633	0.0411	0.5651	1.6700e-003	0.1094	1.2300e-003	0.1106	0.0302	1.1400e-003	0.0313						
Total	**0.0633**	**0.0411**	**0.5651**	**1.6700e-003**	**0.1094**	**1.2300e-003**	**0.1106**	**0.0302**	**1.1400e-003**	**0.0313**						

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013						
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1364	4.6734	1.1090	0.0125	0.3136	9.4100e-003	0.3230	0.0903	9.0000e-003	0.0993						
Worker	0.5319	0.3450	4.7467	0.0140	1.4084	0.0104	1.4188	0.3735	9.5500e-003	0.3831						
Total	**0.6682**	**5.0184**	**5.8557**	**0.0265**	**1.7220**	**0.0198**	**1.7418**	**0.4638**	**0.0186**	**0.4824**						

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5867	2.7396	17.6822	0.0269		0.1120	0.1120		0.1120	0.1120						
Total	**0.5867**	**2.7396**	**17.6822**	**0.0269**		**0.1120**	**0.1120**		**0.1120**	**0.1120**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1364	4.6734	1.1090	0.0125	0.2242	9.4100e-003	0.2336	0.0683	9.0000e-003	0.0773						
Worker	0.5319	0.3450	4.7467	0.0140	0.9186	0.0104	0.9290	0.2533	9.5500e-003	0.2628						
Total	**0.6682**	**5.0184**	**5.8557**	**0.0265**	**1.1428**	**0.0198**	**1.1626**	**0.3216**	**0.0186**	**0.3402**						

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612						
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1279	4.4361	1.0481	0.0124	0.3136	8.1500e-003	0.3218	0.0903	7.8000e-003	0.0981						
Worker	0.4989	0.3116	4.3893	0.0135	1.4084	0.0101	1.4185	0.3735	9.2700e-003	0.3828						
Total	**0.6268**	**4.7477**	**5.4374**	**0.0259**	**1.7220**	**0.0182**	**1.7402**	**0.4638**	**0.0171**	**0.4809**						

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5608	2.6936	17.6592	0.0269		0.1018	0.1018		0.1018	0.1018						
Total	**0.5608**	**2.6936**	**17.6592**	**0.0269**		**0.1018**	**0.1018**		**0.1018**	**0.1018**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1279	4.4361	1.0481	0.0124	0.2242	8.1500e-003	0.2324	0.0683	7.8000e-003	0.0761						
Worker	0.4989	0.3116	4.3893	0.0135	0.9186	0.0101	0.9287	0.2533	9.2700e-003	0.2626						
Total	**0.6268**	**4.7477**	**5.4374**	**0.0259**	**1.1428**	**0.0182**	**1.1611**	**0.3216**	**0.0171**	**0.3387**						

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225						
Paving	0.6629					0.0000	0.0000		0.0000	0.0000						
Total	**1.7657**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456						
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**						

3.6 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374						
Paving	0.6629					0.0000	0.0000		0.0000	0.0000						
Total	**0.9433**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1094	1.2000e-003	0.1106	0.0302	1.1000e-003	0.0313						
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1094**	**1.2000e-003**	**0.1106**	**0.0302**	**1.1000e-003**	**0.0313**						

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	38.8849					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817						
Total	**39.0894**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0990	0.0618	0.8709	2.6800e-003	0.2794	2.0000e-003	0.2814	0.0741	1.8400e-003	0.0760						
Total	**0.0990**	**0.0618**	**0.8709**	**2.6800e-003**	**0.2794**	**2.0000e-003**	**0.2814**	**0.0741**	**1.8400e-003**	**0.0760**						

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	38.8849					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817						
Total	**39.0894**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0990	0.0618	0.8709	2.6800e-003	0.1823	2.0000e-003	0.1843	0.0503	1.8400e-003	0.0521						
Total	**0.0990**	**0.0618**	**0.8709**	**2.6800e-003**	**0.1823**	**2.0000e-003**	**0.1843**	**0.0503**	**1.8400e-003**	**0.0521**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.9267	59.7066	53.8066	0.0946	1.5513	0.0983	1.6496	0.4151	0.0911	0.5062						
Unmitigated	15.2426	61.8166	62.3379	0.1303	4.6655	0.1246	4.7902	1.2483	0.1157	1.3640						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	89.66	89.66	44.91	22,012	7,319
Fast Food Restaurant with Drive Thru	2,381.38	2,381.38	2381.38	280,317	93,205
Fast Food Restaurant with Drive Thru	992.24	992.24	992.24	116,799	38,836
Fast Food Restaurant with Drive Thru	3,011.45	3,011.45	3011.45	354,484	117,866
Fast Food Restaurant with Drive Thru	1,488.36	1,488.36	1488.36	175,198	58,253
Fast Food Restaurant with Drive Thru	2,133.32	2,133.32	2133.32	251,117	83,496
Fast Food Restaurant with Drive Thru	1,736.42	1,736.42	1736.42	204,398	67,962
Health Club	1,119.62	709.58	908.82	479,341	159,381
High Turnover (Sit Down Restaurant)	314.10	314.10	314.10	47,714	15,865
High Turnover (Sit Down Restaurant)	650.64	650.64	650.64	98,837	32,863
High Turnover (Sit Down Restaurant)	796.48	796.48	796.48	120,990	40,229
Parking Lot	0.00	0.00	0.00		
Total	14,713.67	14,303.63	14,458.11	2,151,208	715,277

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	4.00	2.00	2.00	33.00	48.00	19.00	11	61	28
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Health Club	4.00	2.00	2.00	16.90	64.10	19.00	42	49	9
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Fast Food Restaurant with Drive Thru	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Health Club	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
High Turnover (Sit Down Restaurant)	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Parking Lot	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						
NaturalGas Unmitigated	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	336.472	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003						
Fast Food Restaurant with Drive Thru	1498.3	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112						
Fast Food Restaurant with Drive Thru	2247.45	0.0242	0.2203	0.1851	1.3200e-003		0.0168	0.0168		0.0168	0.0168						
Fast Food Restaurant with Drive Thru	2622.03	0.0283	0.2571	0.2159	1.5400e-003		0.0195	0.0195		0.0195	0.0195						
Fast Food Restaurant with Drive Thru	3221.35	0.0347	0.3158	0.2653	1.8900e-003		0.0240	0.0240		0.0240	0.0240						
Fast Food Restaurant with Drive Thru	3595.92	0.0388	0.3525	0.2961	2.1200e-003		0.0268	0.0268		0.0268	0.0268						
Fast Food Restaurant with Drive Thru	4547.34	0.0490	0.4458	0.3745	2.6700e-003		0.0339	0.0339		0.0339	0.0339						
Health Club	3026.47	0.0326	0.2967	0.2492	1.7800e-003		0.0226	0.0226		0.0226	0.0226						
High Turnover (Sit Down Restaurant)	2097.62	0.0226	0.2057	0.1728	1.2300e-003		0.0156	0.0156		0.0156	0.0156						
High Turnover (Sit Down Restaurant)	4345.07	0.0469	0.4260	0.3578	2.5600e-003		0.0324	0.0324		0.0324	0.0324						
High Turnover (Sit Down Restaurant)	5318.97	0.0574	0.5215	0.4380	3.1300e-003		0.0396	0.0396		0.0396	0.0396						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.3544**	**3.2213**	**2.7059**	**0.0193**		**0.2448**	**0.2448**		**0.2448**	**0.2448**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.336472	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003						
Fast Food Restaurant with Drive Thru	2.62203	0.0283	0.2571	0.2159	1.5400e-003		0.0195	0.0195		0.0195	0.0195						
Fast Food Restaurant with Drive Thru	3.22135	0.0347	0.3158	0.2653	1.8900e-003		0.0240	0.0240		0.0240	0.0240						
Fast Food Restaurant with Drive Thru	3.59592	0.0388	0.3525	0.2961	2.1200e-003		0.0268	0.0268		0.0268	0.0268						
Fast Food Restaurant with Drive Thru	4.54734	0.0490	0.4458	0.3745	2.6700e-003		0.0339	0.0339		0.0339	0.0339						
Fast Food Restaurant with Drive Thru	1.4983	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112						
Fast Food Restaurant with Drive Thru	2.24745	0.0242	0.2203	0.1851	1.3200e-003		0.0168	0.0168		0.0168	0.0168						
Health Club	3.02647	0.0326	0.2967	0.2492	1.7800e-003		0.0226	0.0226		0.0226	0.0226						
High Turnover (Sit Down Restaurant)	2.09762	0.0226	0.2057	0.1728	1.2300e-003		0.0156	0.0156		0.0156	0.0156						
High Turnover (Sit Down Restaurant)	4.34507	0.0469	0.4260	0.3578	2.5600e-003		0.0324	0.0324		0.0324	0.0324						
High Turnover (Sit Down Restaurant)	5.31897	0.0574	0.5215	0.4380	3.1300e-003		0.0396	0.0396		0.0396	0.0396						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.3544**	**3.2213**	**2.7059**	**0.0193**		**0.2448**	**0.2448**		**0.2448**	**0.2448**						

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Unmitigated	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2131					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6072					0.0000	0.0000		0.0000	0.0000						
Landscaping	6.0800e-003	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Total	**1.8263**	**6.0000e-004**	**0.0654**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2131					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6072					0.0000	0.0000		0.0000	0.0000						
Landscaping	6.0800e-003	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Total	**1.8263**	**6.0000e-004**	**0.0654**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Yucaipa Retail Shopping Center Phase I AQA

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	2.80	1000sqft	0.06	2,800.00	0
High Turnover (Sit Down Restaurant)	5.80	1000sqft	0.13	5,800.00	0
Fast Food Restaurant with Drive Thru	4.80	1000sqft	0.11	4,800.00	0
Automobile Care Center	3.78	1000sqft	0.09	3,780.00	0
High Turnover (Sit Down Restaurant)	7.10	1000sqft	0.16	7,100.00	0
Fast Food Restaurant with Drive Thru	2.00	1000sqft	0.05	2,000.00	0
Fast Food Restaurant with Drive Thru	6.07	1000sqft	0.14	6,070.00	0
Parking Lot	562.00	Space	5.06	224,800.00	0
Health Club	34.00	1000sqft	0.78	34,000.00	0
Fast Food Restaurant with Drive Thru	3.00	1000sqft	0.07	3,000.00	0
Fast Food Restaurant with Drive Thru	4.30	1000sqft	0.10	4,300.00	0
Fast Food Restaurant with Drive Thru	3.50	1000sqft	0.08	3,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Vehicle Trips - The trip rate has been updated per the TIA traffic study
The trip distance has been updated to actual distance traveled in area

Construction Off-road Equipment Mitigation - Project will use tier 4 equipment and will require zero or non-zero equipment
Project will follow fugtive dust requirements, spend grading activities during high wind events

Mobile Land Use Mitigation -

Area Mitigation - Contractor will use no to very low VOCs

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	DV_TP	51.00	61.00
tblVehicleTrips	DV_TP	21.00	31.00
tblVehicleTrips	DV_TP	39.00	49.00
tblVehicleTrips	DV_TP	20.00	30.00
tblVehicleTrips	PR_TP	21.00	11.00
tblVehicleTrips	PR_TP	29.00	19.00
tblVehicleTrips	PR_TP	52.00	42.00
tblVehicleTrips	PR_TP	37.00	27.00

tblVehicleTrips	ST_TR	722.03	496.12
tblVehicleTrips	ST_TR	158.37	112.18
tblVehicleTrips	SU_TR	542.72	496.12
tblVehicleTrips	SU_TR	131.84	112.18
tblVehicleTrips	WD_TR	127.15	112.18

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.9712	40.5510	22.0818	0.0522	18.2675	2.0459	20.3134	9.9840	1.8823	11.8663						
2022	39.1978	20.3751	21.4741	0.0516	1.7220	0.8275	2.5495	0.4638	0.7785	1.2423						
Maximum	**39.1978**	**40.5510**	**22.0818**	**0.0522**	**18.2675**	**2.0459**	**20.3134**	**9.9840**	**1.8823**	**11.8663**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.3113	7.7758	23.6031	0.0522	4.3587	0.2277	4.4223	2.3600	0.2276	2.4234						
2022	39.1978	7.4530	22.7699	0.0516	1.1428	0.1203	1.2631	0.3216	0.1191	0.4407						
Maximum	**39.1978**	**7.7758**	**23.6031**	**0.0522**	**4.3587**	**0.2277**	**4.4223**	**2.3600**	**0.2276**	**2.4234**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.16**	**75.00**	**-6.47**	**0.00**	**72.48**	**87.89**	**75.13**	**74.33**	**86.97**	**78.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Energy	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						
Mobile	14.2803	60.4927	70.8986	0.1204	4.6655	0.1302	4.7957	1.2483	0.1210	1.3693						
Total	**16.4610**	**63.7145**	**73.6698**	**0.1398**	**4.6655**	**0.3752**	**5.0408**	**1.2483**	**0.3660**	**1.6144**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Energy	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						
Mobile	13.9740	58.2640	63.3209	0.0866	1.5513	0.1039	1.6552	0.4151	0.0964	0.5115						
Total	**16.1547**	**61.4859**	**66.0921**	**0.1059**	**1.5513**	**0.3489**	**1.9002**	**0.4151**	**0.3415**	**0.7565**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.86**	**3.50**	**10.29**	**24.23**	**66.75**	**7.01**	**62.30**	**66.75**	**6.71**	**53.14**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/4/2021	1/29/2021	5	20	
2	Site Preparation	Site Preparation	1/30/2021	2/12/2021	5	10	
3	Grading	Grading	2/13/2021	3/12/2021	5	20	
4	Building Construction	Building Construction	3/13/2021	1/28/2022	5	230	
5	Paving	Paving	1/29/2022	2/25/2022	5	20	
6	Architectural Coating	Architectural Coating	2/26/2022	3/25/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 5.06

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 115,725; Non-Residential Outdoor: 38,575; Striped Parking Area: 13,488 (Architectural Coating – sqft)

OffRoad Equipment

Yucaipa Retail Shopping Center Phase I AQA - South Coast AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

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	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	126.00	49.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411						
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456						
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**						

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7845	4.7700	23.0953	0.0388		0.2264	0.2264		0.2264	0.2264						
Total	**0.7845**	**4.7700**	**23.0953**	**0.0388**		**0.2264**	**0.2264**		**0.2264**	**0.2264**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1094	1.2300e-003	0.1106	0.0302	1.1400e-003	0.0313						
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1094**	**1.2300e-003**	**0.1106**	**0.0302**	**1.1400e-003**	**0.0313**						

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809						
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0830	0.0539	0.6094	1.8700e-003	0.2012	1.4800e-003	0.2027	0.0534	1.3600e-003	0.0547						
Total	**0.0830**	**0.0539**	**0.6094**	**1.8700e-003**	**0.2012**	**1.4800e-003**	**0.2027**	**0.0534**	**1.3600e-003**	**0.0547**						

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2275	0.0000	4.2275	2.3238	0.0000	2.3238						
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621						
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**4.2275**	**0.0621**	**4.2896**	**2.3238**	**0.0621**	**2.3859**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0830	0.0539	0.6094	1.8700e-003	0.1312	1.4800e-003	0.1327	0.0362	1.3600e-003	0.0376						
Total	**0.0830**	**0.0539**	**0.6094**	**1.8700e-003**	**0.1312**	**1.4800e-003**	**0.1327**	**0.0362**	**1.3600e-003**	**0.0376**						

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671						
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**6.5523**	**1.1599**	**7.7123**	**3.3675**	**1.0671**	**4.4346**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1677	1.2300e-003	0.1689	0.0445	1.1400e-003	0.0456						
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1677**	**1.2300e-003**	**0.1689**	**0.0445**	**1.1400e-003**	**0.0456**						

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5333	0.0000	1.5333	0.7880	0.0000	0.7880						
Off-Road	0.3632	1.5737	17.7527	0.0296		0.0484	0.0484		0.0484	0.0484						
Total	**0.3632**	**1.5737**	**17.7527**	**0.0296**	**1.5333**	**0.0484**	**1.5817**	**0.7880**	**0.0484**	**0.8364**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0692	0.0450	0.5078	1.5600e-003	0.1094	1.2300e-003	0.1106	0.0302	1.1400e-003	0.0313						
Total	**0.0692**	**0.0450**	**0.5078**	**1.5600e-003**	**0.1094**	**1.2300e-003**	**0.1106**	**0.0302**	**1.1400e-003**	**0.0313**						

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013						
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1435	4.6586	1.2410	0.0122	0.3136	9.7100e-003	0.3233	0.0903	9.2900e-003	0.0996						
Worker	0.5811	0.3776	4.2656	0.0131	1.4084	0.0104	1.4188	0.3735	9.5500e-003	0.3831						
Total	**0.7246**	**5.0362**	**5.5066**	**0.0252**	**1.7220**	**0.0201**	**1.7421**	**0.4638**	**0.0188**	**0.4826**						

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5867	2.7396	17.6822	0.0269		0.1120	0.1120		0.1120	0.1120						
Total	**0.5867**	**2.7396**	**17.6822**	**0.0269**		**0.1120**	**0.1120**		**0.1120**	**0.1120**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1435	4.6586	1.2410	0.0122	0.2242	9.7100e-003	0.2339	0.0683	9.2900e-003	0.0776						
Worker	0.5811	0.3776	4.2656	0.0131	0.9186	0.0104	0.9290	0.2533	9.5500e-003	0.2628						
Total	**0.7246**	**5.0362**	**5.5066**	**0.0252**	**1.1428**	**0.0201**	**1.1629**	**0.3216**	**0.0188**	**0.3405**						

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612						
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1347	4.4184	1.1735	0.0120	0.3136	8.4200e-003	0.3220	0.0903	8.0500e-003	0.0983						
Worker	0.5465	0.3410	3.9372	0.0126	1.4084	0.0101	1.4185	0.3735	9.2700e-003	0.3828						
Total	**0.6812**	**4.7594**	**5.1107**	**0.0247**	**1.7220**	**0.0185**	**1.7405**	**0.4638**	**0.0173**	**0.4811**						

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5608	2.6936	17.6592	0.0269		0.1018	0.1018		0.1018	0.1018						
Total	**0.5608**	**2.6936**	**17.6592**	**0.0269**		**0.1018**	**0.1018**		**0.1018**	**0.1018**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.1347	4.4184	1.1735	0.0120	0.2242	8.4200e-003	0.2326	0.0683	8.0500e-003	0.0764						
Worker	0.5465	0.3410	3.9372	0.0126	0.9186	0.0101	0.9287	0.2533	9.2700e-003	0.2626						
Total	**0.6812**	**4.7594**	**5.1107**	**0.0247**	**1.1428**	**0.0185**	**1.1613**	**0.3216**	**0.0173**	**0.3390**						

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225						
Paving	0.6629					0.0000	0.0000		0.0000	0.0000						
Total	**1.7657**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456						
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**						

3.6 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374						
Paving	0.6629					0.0000	0.0000		0.0000	0.0000						
Total	**0.9433**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1094	1.2000e-003	0.1106	0.0302	1.1000e-003	0.0313						
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1094**	**1.2000e-003**	**0.1106**	**0.0302**	**1.1000e-003**	**0.0313**						

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	38.8849					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817						
Total	**39.0894**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1084	0.0677	0.7812	2.5000e-003	0.2794	2.0000e-003	0.2814	0.0741	1.8400e-003	0.0760						
Total	**0.1084**	**0.0677**	**0.7812**	**2.5000e-003**	**0.2794**	**2.0000e-003**	**0.2814**	**0.0741**	**1.8400e-003**	**0.0760**						

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	38.8849					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817						
Total	**39.0894**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.1084	0.0677	0.7812	2.5000e-003	0.1823	2.0000e-003	0.1843	0.0503	1.8400e-003	0.0521						
Total	**0.1084**	**0.0677**	**0.7812**	**2.5000e-003**	**0.1823**	**2.0000e-003**	**0.1843**	**0.0503**	**1.8400e-003**	**0.0521**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	13.9740	58.2640	63.3209	0.0866	1.5513	0.1039	1.6552	0.4151	0.0964	0.5115						
Unmitigated	14.2803	60.4927	70.8986	0.1204	4.6655	0.1302	4.7957	1.2483	0.1210	1.3693						

4.2 Trip Summary Information

Yucaipa Retail Shopping Center Phase I AQA - South Coast AQMD Air District, Winter

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	89.66	89.66	44.91	22,012	7,319
Fast Food Restaurant with Drive Thru	2,381.38	2,381.38	2381.38	280,317	93,205
Fast Food Restaurant with Drive Thru	992.24	992.24	992.24	116,799	38,836
Fast Food Restaurant with Drive Thru	3,011.45	3,011.45	3011.45	354,484	117,866
Fast Food Restaurant with Drive Thru	1,488.36	1,488.36	1488.36	175,198	58,253
Fast Food Restaurant with Drive Thru	2,133.32	2,133.32	2133.32	251,117	83,496
Fast Food Restaurant with Drive Thru	1,736.42	1,736.42	1736.42	204,398	67,962
Health Club	1,119.62	709.58	908.82	479,341	159,381
High Turnover (Sit Down Restaurant)	314.10	314.10	314.10	47,714	15,865
High Turnover (Sit Down Restaurant)	650.64	650.64	650.64	98,837	32,863
High Turnover (Sit Down Restaurant)	796.48	796.48	796.48	120,990	40,229
Parking Lot	0.00	0.00	0.00		
Total	14,713.67	14,303.63	14,458.11	2,151,208	715,277

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Automobile Care Center	4.00	2.00	2.00	33.00	48.00	19.00	11	61	28
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Health Club	4.00	2.00	2.00	16.90	64.10	19.00	42	49	9
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Fast Food Restaurant with Drive Thru	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Health Club	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
High Turnover (Sit Down Restaurant)	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896
Parking Lot	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						
NaturalGas Unmitigated	0.3543	3.2213	2.7059	0.0193		0.2448	0.2448		0.2448	0.2448						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	336.472	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003						
Fast Food Restaurant with Drive Thru	1498.3	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112						
Fast Food Restaurant with Drive Thru	2247.45	0.0242	0.2203	0.1851	1.3200e-003		0.0168	0.0168		0.0168	0.0168						
Fast Food Restaurant with Drive Thru	2622.03	0.0283	0.2571	0.2159	1.5400e-003		0.0195	0.0195		0.0195	0.0195						
Fast Food Restaurant with Drive Thru	3221.35	0.0347	0.3158	0.2653	1.8900e-003		0.0240	0.0240		0.0240	0.0240						
Fast Food Restaurant with Drive Thru	3595.92	0.0388	0.3525	0.2961	2.1200e-003		0.0268	0.0268		0.0268	0.0268						
Fast Food Restaurant with Drive Thru	4547.34	0.0490	0.4458	0.3745	2.6700e-003		0.0339	0.0339		0.0339	0.0339						
Health Club	3026.47	0.0326	0.2967	0.2492	1.7800e-003		0.0226	0.0226		0.0226	0.0226						
High Turnover (Sit Down Restaurant)	2097.62	0.0226	0.2057	0.1728	1.2300e-003		0.0156	0.0156		0.0156	0.0156						
High Turnover (Sit Down Restaurant)	4345.07	0.0469	0.4260	0.3578	2.5600e-003		0.0324	0.0324		0.0324	0.0324						
High Turnover (Sit Down Restaurant)	5318.97	0.0574	0.5215	0.4380	3.1300e-003		0.0396	0.0396		0.0396	0.0396						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.3544**	**3.2213**	**2.7059**	**0.0193**		**0.2448**	**0.2448**		**0.2448**	**0.2448**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.336472	3.6300e-003	0.0330	0.0277	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003						
Fast Food Restaurant with Drive Thru	2.24745	0.0242	0.2203	0.1851	1.3200e-003		0.0168	0.0168		0.0168	0.0168						
Fast Food Restaurant with Drive Thru	2.62203	0.0283	0.2571	0.2159	1.5400e-003		0.0195	0.0195		0.0195	0.0195						
Fast Food Restaurant with Drive Thru	3.22135	0.0347	0.3158	0.2653	1.8900e-003		0.0240	0.0240		0.0240	0.0240						
Fast Food Restaurant with Drive Thru	3.59592	0.0388	0.3525	0.2961	2.1200e-003		0.0268	0.0268		0.0268	0.0268						
Fast Food Restaurant with Drive Thru	4.54734	0.0490	0.4458	0.3745	2.6700e-003		0.0339	0.0339		0.0339	0.0339						
Fast Food Restaurant with Drive Thru	1.4983	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112						
Health Club	3.02647	0.0326	0.2967	0.2492	1.7800e-003		0.0226	0.0226		0.0226	0.0226						
High Turnover (Sit Down Restaurant)	2.09762	0.0226	0.2057	0.1728	1.2300e-003		0.0156	0.0156		0.0156	0.0156						
High Turnover (Sit Down Restaurant)	4.34507	0.0469	0.4260	0.3578	2.5600e-003		0.0324	0.0324		0.0324	0.0324						
High Turnover (Sit Down Restaurant)	5.31897	0.0574	0.5215	0.4380	3.1300e-003		0.0396	0.0396		0.0396	0.0396						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Total		**0.3544**	**3.2213**	**2.7059**	**0.0193**		**0.2448**	**0.2448**		**0.2448**	**0.2448**						

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Unmitigated	1.8263	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2131					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6072					0.0000	0.0000		0.0000	0.0000						
Landscaping	6.0800e-003	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Total	**1.8263**	**6.0000e-004**	**0.0654**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**						

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2131					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.6072					0.0000	0.0000		0.0000	0.0000						
Landscaping	6.0800e-003	6.0000e-004	0.0654	0.0000		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004						
Total	**1.8263**	**6.0000e-004**	**0.0654**	**0.0000**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Yucaipa Retail Shopping Center Phase I AQA

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	8.40	1000sqft	0.19	8,400.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Parking Lot	373.00	Space	3.36	149,200.00	0
Fast Food Restaurant with Drive Thru	5.00	1000sqft	0.11	5,000.00	0
High Turnover (Sit Down Restaurant)	1.00	1000sqft	0.02	1,000.00	0
Strip Mall	2.00	1000sqft	0.05	2,000.00	0
Movie Theater (No Matinee)	39.00	1000sqft	0.90	39,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Yucaipa Retail Shopping Center Phase I AQA - South Coast AQMD Air District, Summer

Project Characteristics -

Land Use -

Vehicle Trips - The trip rate has been updated per the TIA traffic study
The trip distance has been updated to actual distance traveled in area
Movie Theater use adjusted to show matinee traffice emissions

Construction Off-road Equipment Mitigation - Project will use tier 4 equipment and will require zero or non-zero equipment
Project will follow fugtive dust requirements, spend grading activities during high wind events

Mobile Land Use Mitigation -

Area Mitigation - Contractor will use no to very low VOCs

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	50	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	DV_TP	17.00	27.00
tblVehicleTrips	DV_TP	21.00	31.00
tblVehicleTrips	DV_TP	40.00	50.00

tblVehicleTrips	DV_TP	20.00	30.00
tblVehicleTrips	PR_TP	66.00	56.00
tblVehicleTrips	PR_TP	29.00	19.00
tblVehicleTrips	PR_TP	45.00	35.00
tblVehicleTrips	PR_TP	37.00	27.00
tblVehicleTrips	ST_TR	99.28	78.06
tblVehicleTrips	ST_TR	722.03	496.12
tblVehicleTrips	ST_TR	158.37	112.18
tblVehicleTrips	SU_TR	81.90	78.06
tblVehicleTrips	SU_TR	542.72	496.12
tblVehicleTrips	SU_TR	131.84	112.18
tblVehicleTrips	WD_TR	127.15	112.18

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2414	33.1280	21.1166	0.0450	18.2675	1.6140	19.8815	9.9840	1.4849	11.4689						
2023	33.6698	16.9089	19.7302	0.0443	1.2012	0.7092	1.9104	0.3235	0.6672	0.9907						
Maximum	**33.6698**	**33.1280**	**21.1166**	**0.0450**	**18.2675**	**1.6140**	**19.8815**	**9.9840**	**1.4849**	**11.4689**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.9979	5.9894	23.6084	0.0450	4.3587	0.2047	4.4223	2.3600	0.2046	2.4234						
2023	33.6698	5.1753	21.1275	0.0443	0.7972	0.1025	0.8996	0.2243	0.1018	0.3261						
Maximum	**33.6698**	**5.9894**	**23.6084**	**0.0450**	**4.3587**	**0.2047**	**4.4223**	**2.3600**	**0.2046**	**2.4234**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**6.08**	**77.69**	**-9.52**	**0.00**	**73.52**	**86.78**	**75.58**	**74.93**	**85.76**	**77.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4176	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Energy	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						
Mobile	7.0922	27.4384	33.0796	0.0838	4.2701	0.0705	4.3406	1.1425	0.0653	1.2078						
Total	**8.7042**	**29.2052**	**34.6076**	**0.0944**	**4.2701**	**0.2049**	**4.4750**	**1.1425**	**0.1997**	**1.3422**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2693	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Energy	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						
Mobile	6.8314	26.0833	25.7961	0.0523	1.4198	0.0498	1.4696	0.3799	0.0461	0.4260						
Total	**8.2950**	**27.8501**	**27.3241**	**0.0629**	**1.4198**	**0.1842**	**1.6041**	**0.3799**	**0.1805**	**0.5604**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.70**	**4.64**	**21.05**	**33.43**	**66.75**	**10.07**	**64.16**	**66.75**	**9.61**	**58.25**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
3	Grading	Grading	2/5/2022	2/16/2022	5	8	
4	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	
5	Paving	Paving	1/5/2023	1/30/2023	5	18	
6	Architectural Coating	Architectural Coating	1/31/2023	2/23/2023	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 3.36

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 90,600; Non-Residential Outdoor: 30,200; Striped Parking Area: 8,952 (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
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	88.00	34.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553						
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456						
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**						

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7574	4.5332	23.0859	0.0388		0.2035	0.2035		0.2035	0.2035						
Total	**0.7574**	**4.5332**	**23.0859**	**0.0388**		**0.2035**	**0.2035**		**0.2035**	**0.2035**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1094	1.2000e-003	0.1106	0.0302	1.1000e-003	0.0313						
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1094**	**1.2000e-003**	**0.1106**	**0.0302**	**1.1000e-003**	**0.0313**						

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836						
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547						
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**						

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2275	0.0000	4.2275	2.3238	0.0000	2.3238						
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621						
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**4.2275**	**0.0621**	**4.2896**	**2.3238**	**0.0621**	**2.3859**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.1312	1.4400e-003	0.1327	0.0362	1.3200e-003	0.0375						
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.1312**	**1.4400e-003**	**0.1327**	**0.0362**	**1.3200e-003**	**0.0375**						

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656						
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**6.5523**	**0.9409**	**7.4932**	**3.3675**	**0.8656**	**4.2331**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456						
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**						

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5333	0.0000	1.5333	0.7880	0.0000	0.7880						
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484						
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**1.5333**	**0.0484**	**1.5817**	**0.7880**	**0.0484**	**0.8364**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1094	1.2000e-003	0.1106	0.0302	1.1000e-003	0.0313						
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1094**	**1.2000e-003**	**0.1106**	**0.0302**	**1.1000e-003**	**0.0313**						

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612						
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0887	3.0781	0.7273	8.5900e-003	0.2176	5.6600e-003	0.2233	0.0627	5.4100e-003	0.0681						
Worker	0.3484	0.2176	3.0655	9.4300e-003	0.9836	7.0300e-003	0.9907	0.2609	6.4800e-003	0.2673						
Total	**0.4372**	**3.2958**	**3.7928**	**0.0180**	**1.2012**	**0.0127**	**1.2139**	**0.3235**	**0.0119**	**0.3354**						

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5608	2.6936	17.6592	0.0269		0.1018	0.1018		0.1018	0.1018						
Total	**0.5608**	**2.6936**	**17.6592**	**0.0269**		**0.1018**	**0.1018**		**0.1018**	**0.1018**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0887	3.0781	0.7273	8.5900e-003	0.1556	5.6600e-003	0.1612	0.0474	5.4100e-003	0.0528						
Worker	0.3484	0.2176	3.0655	9.4300e-003	0.6416	7.0300e-003	0.6486	0.1769	6.4800e-003	0.1834						
Total	**0.4372**	**3.2958**	**3.7928**	**0.0180**	**0.7972**	**0.0127**	**0.8098**	**0.2243**	**0.0119**	**0.2362**						

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584						
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0662	2.3271	0.6552	8.3200e-003	0.2176	2.6200e-003	0.2202	0.0627	2.5000e-003	0.0652						
Worker	0.3276	0.1969	2.8309	9.0700e-003	0.9836	6.8500e-003	0.9905	0.2609	6.3100e-003	0.2672						
Total	**0.3938**	**2.5240**	**3.4862**	**0.0174**	**1.2012**	**9.4700e-003**	**1.2107**	**0.3235**	**8.8100e-003**	**0.3323**						

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5385	2.6513	17.6413	0.0269		0.0930	0.0930		0.0930	0.0930						
Total	**0.5385**	**2.6513**	**17.6413**	**0.0269**		**0.0930**	**0.0930**		**0.0930**	**0.0930**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0662	2.3271	0.6552	8.3200e-003	0.1556	2.6200e-003	0.1582	0.0474	2.5000e-003	0.0499						
Worker	0.3276	0.1969	2.8309	9.0700e-003	0.6416	6.8500e-003	0.6484	0.1769	6.3100e-003	0.1832						
Total	**0.3938**	**2.5240**	**3.4862**	**0.0174**	**0.7972**	**9.4700e-003**	**0.8066**	**0.2243**	**8.8100e-003**	**0.2331**						

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025						
Paving	0.4891					0.0000	0.0000		0.0000	0.0000						
Total	**1.4072**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0745	0.0448	0.6434	2.0600e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607						
Total	**0.0745**	**0.0448**	**0.6434**	**2.0600e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4300e-003**	**0.0607**						

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3076	1.5032	13.9949	0.0189		0.0507	0.0507		0.0507	0.0507						
Paving	0.4891					0.0000	0.0000		0.0000	0.0000						
Total	**0.7967**	**1.5032**	**13.9949**	**0.0189**		**0.0507**	**0.0507**		**0.0507**	**0.0507**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0745	0.0448	0.6434	2.0600e-003	0.1458	1.5600e-003	0.1474	0.0402	1.4300e-003	0.0416						
Total	**0.0745**	**0.0448**	**0.6434**	**2.0600e-003**	**0.1458**	**1.5600e-003**	**0.1474**	**0.0402**	**1.4300e-003**	**0.0416**						

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.4111					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**33.6028**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0670	0.0403	0.5791	1.8600e-003	0.2012	1.4000e-003	0.2026	0.0534	1.2900e-003	0.0547						
Total	**0.0670**	**0.0403**	**0.5791**	**1.8600e-003**	**0.2012**	**1.4000e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**						

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.4111					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**33.6028**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0670	0.0403	0.5791	1.8600e-003	0.1312	1.4000e-003	0.1326	0.0362	1.2900e-003	0.0375						
Total	**0.0670**	**0.0403**	**0.5791**	**1.8600e-003**	**0.1312**	**1.4000e-003**	**0.1326**	**0.0362**	**1.2900e-003**	**0.0375**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.8314	26.0833	25.7961	0.0523	1.4198	0.0498	1.4696	0.3799	0.0461	0.4260						
Unmitigated	7.0922	27.4384	33.0796	0.0838	4.2701	0.0705	4.3406	1.1425	0.0653	1.2078						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	3,044.34	3,044.34	3044.34	1,434,587	477,000
Fast Food Restaurant with Drive Thru	2,480.60	2,480.60	2480.60	291,997	97,089
Strip Mall	88.64	84.08	40.86	33,168	11,028
High Turnover (Sit Down Restaurant)	942.31	942.31	942.31	143,143	47,595
High Turnover (Sit Down Restaurant)	560.90	560.90	560.90	85,204	28,330
High Turnover (Sit Down Restaurant)	112.18	112.18	112.18	17,041	5,666
Parking Lot	0.00	0.00	0.00		
Total	7,228.97	7,224.41	7,181.19	2,005,140	666,709

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	4.00	2.00	2.00	1.80	79.20	19.00	56	27	17
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Strip Mall	4.00	2.00	2.00	16.60	64.40	19.00	35	50	15
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Movie Theater (No Matinee)	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Fast Food Restaurant with Drive Thru	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Strip Mall	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
High Turnover (Sit Down Restaurant)	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Parking Lot	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						
NaturalGas Unmitigated	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	3745.75	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	3745.75	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	6292.87	0.0679	0.6170	0.5182	3.7000e-003		0.0469	0.0469		0.0469	0.0469						
High Turnover (Sit Down Restaurant)	749.151	8.0800e-003	0.0735	0.0617	4.4000e-004		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003						
Movie Theater (No Matinee)	3471.53	0.0374	0.3404	0.2859	2.0400e-003		0.0259	0.0259		0.0259	0.0259						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Strip Mall	12.1644	1.3000e-004	1.1900e-003	1.0000e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005						
Total		**0.1943**	**1.7664**	**1.4838**	**0.0106**		**0.1343**	**0.1343**		**0.1343**	**0.1343**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	3.74575	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	3.74575	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	6.29287	0.0679	0.6170	0.5182	3.7000e-003		0.0469	0.0469		0.0469	0.0469						
High Turnover (Sit Down Restaurant)	0.749151	8.0800e-003	0.0735	0.0617	4.4000e-004		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003						
Movie Theater (No Matinee)	3.47153	0.0374	0.3404	0.2859	2.0400e-003		0.0259	0.0259		0.0259	0.0259						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Strip Mall	0.0121644	1.3000e-004	1.1900e-003	1.0000e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005						
Total		**0.1943**	**1.7664**	**1.4838**	**0.0106**		**0.1343**	**0.1343**		**0.1343**	**0.1343**						

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2693	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Unmitigated	1.4176	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1648					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.2488					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.1000e-003	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Total	**1.4176**	**4.0000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0165					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.2488					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.1000e-003	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Total	**1.2694**	**4.0000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Yucaipa Retail Shopping Center Phase I AQA

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	8.40	1000sqft	0.19	8,400.00	0
High Turnover (Sit Down Restaurant)	5.00	1000sqft	0.11	5,000.00	0
Parking Lot	373.00	Space	3.36	149,200.00	0
Fast Food Restaurant with Drive Thru	5.00	1000sqft	0.11	5,000.00	0
High Turnover (Sit Down Restaurant)	1.00	1000sqft	0.02	1,000.00	0
Strip Mall	2.00	1000sqft	0.05	2,000.00	0
Movie Theater (No Matinee)	39.00	1000sqft	0.90	39,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Yucaipa Retail Shopping Center Phase I AQA - South Coast AQMD Air District, Winter

Project Characteristics -

Land Use -

Vehicle Trips - The trip rate has been updated per the TIA traffic study
The trip distance has been updated to actual distance traveled in area
Movie Theater use adjusted to show matinee traffice emissions

Construction Off-road Equipment Mitigation - Project will use tier 4 equipment and will require zero or non-zero equipment
Project will follow fugtive dust requirements, spend grading activities during high wind events

Mobile Land Use Mitigation -

Area Mitigation - Contractor will use no to very low VOCs

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	10
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	100	10
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	50	10
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	10
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	40
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	40
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	11.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CC_TL	8.40	2.00
tblVehicleTrips	CC_TL	8.40	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CNW_TL	6.90	2.00
tblVehicleTrips	CNW_TL	6.90	1.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	CW_TL	16.60	4.00
tblVehicleTrips	CW_TL	16.60	2.00
tblVehicleTrips	DV_TP	17.00	27.00
tblVehicleTrips	DV_TP	21.00	31.00
tblVehicleTrips	DV_TP	40.00	50.00

tblVehicleTrips	DV_TP	20.00	30.00
tblVehicleTrips	PR_TP	66.00	56.00
tblVehicleTrips	PR_TP	29.00	19.00
tblVehicleTrips	PR_TP	45.00	35.00
tblVehicleTrips	PR_TP	37.00	27.00
tblVehicleTrips	ST_TR	99.28	78.06
tblVehicleTrips	ST_TR	722.03	496.12
tblVehicleTrips	ST_TR	158.37	112.18
tblVehicleTrips	SU_TR	81.90	78.06
tblVehicleTrips	SU_TR	542.72	496.12
tblVehicleTrips	SU_TR	131.84	112.18
tblVehicleTrips	WD_TR	127.15	112.18

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.2482	33.1322	21.0628	0.0441	18.2675	1.6140	19.8815	9.9840	1.4849	11.4689						
2023	33.6764	16.9125	19.4984	0.0435	1.2012	0.7093	1.9106	0.3235	0.6674	0.9909						
Maximum	**33.6764**	**33.1322**	**21.0628**	**0.0441**	**18.2675**	**1.6140**	**19.8815**	**9.9840**	**1.4849**	**11.4689**						

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.0359	5.9976	23.5546	0.0441	4.3587	0.2047	4.4223	2.3600	0.2046	2.4234						
2023	33.6764	5.1788	20.8957	0.0435	0.7972	0.1026	0.8997	0.2243	0.1019	0.3263						
Maximum	**33.6764**	**5.9976**	**23.5546**	**0.0441**	**4.3587**	**0.2047**	**4.4223**	**2.3600**	**0.2046**	**2.4234**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.99**	**77.67**	**-9.59**	**0.00**	**73.52**	**86.78**	**75.58**	**74.93**	**85.76**	**77.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4176	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Energy	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						
Mobile	6.6173	27.0620	36.1113	0.0780	4.2701	0.0724	4.3425	1.1425	0.0671	1.2096						
Total	**8.2292**	**28.8288**	**37.6393**	**0.0886**	**4.2701**	**0.2068**	**4.4769**	**1.1425**	**0.2016**	**1.3440**						

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2693	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Energy	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						
Mobile	6.3642	25.6250	29.6431	0.0481	1.4198	0.0517	1.4716	0.3799	0.0479	0.4278						
Total	**7.8279**	**27.3918**	**31.1711**	**0.0587**	**1.4198**	**0.1862**	**1.6060**	**0.3799**	**0.1824**	**0.5622**						

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.88**	**4.98**	**17.18**	**33.80**	**66.75**	**9.98**	**64.13**	**66.75**	**9.53**	**58.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/4/2022	5	5	
3	Grading	Grading	2/5/2022	2/16/2022	5	8	
4	Building Construction	Building Construction	2/17/2022	1/4/2023	5	230	
5	Paving	Paving	1/5/2023	1/30/2023	5	18	
6	Architectural Coating	Architectural Coating	1/31/2023	2/23/2023	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 3.36

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 90,600; Non-Residential Outdoor: 30,200; Striped Parking Area: 8,952 (Architectural Coating – sqft)

OffRoad Equipment

Yucaipa Retail Shopping Center Phase I AQA - South Coast AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	88.00	34.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553						
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456						
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**						

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7574	4.5332	23.0859	0.0388		0.2035	0.2035		0.2035	0.2035						
Total	**0.7574**	**4.5332**	**23.0859**	**0.0388**		**0.2035**	**0.2035**		**0.2035**	**0.2035**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1094	1.2000e-003	0.1106	0.0302	1.1000e-003	0.0313						
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1094**	**1.2000e-003**	**0.1106**	**0.0302**	**1.1000e-003**	**0.0313**						

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307						
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836						
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547						
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**						

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.2275	0.0000	4.2275	2.3238	0.0000	2.3238						
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621						
Total	**0.4656**	**2.0175**	**20.8690**	**0.0380**	**4.2275**	**0.0621**	**4.2896**	**2.3238**	**0.0621**	**2.3859**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.1312	1.4400e-003	0.1327	0.0362	1.3200e-003	0.0375						
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.1312**	**1.4400e-003**	**0.1327**	**0.0362**	**1.3200e-003**	**0.0375**						

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675						
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656						
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**6.5523**	**0.9409**	**7.4932**	**3.3675**	**0.8656**	**4.2331**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456						
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**						

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5333	0.0000	1.5333	0.7880	0.0000	0.7880						
Off-Road	0.3632	1.5737	17.7527	0.0297		0.0484	0.0484		0.0484	0.0484						
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**1.5333**	**0.0484**	**1.5817**	**0.7880**	**0.0484**	**0.8364**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1094	1.2000e-003	0.1106	0.0302	1.1000e-003	0.0313						
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1094**	**1.2000e-003**	**0.1106**	**0.0302**	**1.1000e-003**	**0.0313**						

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612						
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0934	3.0658	0.8143	8.3500e-003	0.2176	5.8400e-003	0.2235	0.0627	5.5900e-003	0.0682						
Worker	0.3817	0.2382	2.7498	8.8200e-003	0.9836	7.0300e-003	0.9907	0.2609	6.4800e-003	0.2673						
Total	**0.4751**	**3.3040**	**3.5640**	**0.0172**	**1.2012**	**0.0129**	**1.2141**	**0.3235**	**0.0121**	**0.3356**						

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5608	2.6936	17.6592	0.0269		0.1018	0.1018		0.1018	0.1018						
Total	**0.5608**	**2.6936**	**17.6592**	**0.0269**		**0.1018**	**0.1018**		**0.1018**	**0.1018**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0934	3.0658	0.8143	8.3500e-003	0.1556	5.8400e-003	0.1614	0.0474	5.5900e-003	0.0530						
Worker	0.3817	0.2382	2.7498	8.8200e-003	0.6416	7.0300e-003	0.6486	0.1769	6.4800e-003	0.1834						
Total	**0.4751**	**3.3040**	**3.5640**	**0.0172**	**0.7972**	**0.0129**	**0.8100**	**0.2243**	**0.0121**	**0.2364**						

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584						
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0697	2.3122	0.7200	8.0900e-003	0.2176	2.7400e-003	0.2204	0.0627	2.6200e-003	0.0653						
Worker	0.3600	0.2154	2.5344	8.4800e-003	0.9836	6.8500e-003	0.9905	0.2609	6.3100e-003	0.2672						
Total	**0.4297**	**2.5276**	**3.2544**	**0.0166**	**1.2012**	**9.5900e-003**	**1.2108**	**0.3235**	**8.9300e-003**	**0.3324**						

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5385	2.6513	17.6413	0.0269		0.0930	0.0930		0.0930	0.0930						
Total	**0.5385**	**2.6513**	**17.6413**	**0.0269**		**0.0930**	**0.0930**		**0.0930**	**0.0930**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0697	2.3122	0.7200	8.0900e-003	0.1556	2.7400e-003	0.1583	0.0474	2.6200e-003	0.0500						
Worker	0.3600	0.2154	2.5344	8.4800e-003	0.6416	6.8500e-003	0.6484	0.1769	6.3100e-003	0.1832						
Total	**0.4297**	**2.5276**	**3.2544**	**0.0166**	**0.7972**	**9.5900e-003**	**0.8067**	**0.2243**	**8.9300e-003**	**0.2333**						

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025						
Paving	0.4891					0.0000	0.0000		0.0000	0.0000						
Total	**1.4072**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0818	0.0490	0.5760	1.9300e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607						
Total	**0.0818**	**0.0490**	**0.5760**	**1.9300e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4300e-003**	**0.0607**						

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3076	1.5032	13.9949	0.0189		0.0507	0.0507		0.0507	0.0507						
Paving	0.4891					0.0000	0.0000		0.0000	0.0000						
Total	**0.7967**	**1.5032**	**13.9949**	**0.0189**		**0.0507**	**0.0507**		**0.0507**	**0.0507**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0818	0.0490	0.5760	1.9300e-003	0.1458	1.5600e-003	0.1474	0.0402	1.4300e-003	0.0416						
Total	**0.0818**	**0.0490**	**0.5760**	**1.9300e-003**	**0.1458**	**1.5600e-003**	**0.1474**	**0.0402**	**1.4300e-003**	**0.0416**						

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.4111					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**33.6028**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0736	0.0441	0.5184	1.7400e-003	0.2012	1.4000e-003	0.2026	0.0534	1.2900e-003	0.0547						
Total	**0.0736**	**0.0441**	**0.5184**	**1.7400e-003**	**0.2012**	**1.4000e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**						

3.7 Architectural Coating - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	33.4111					0.0000	0.0000		0.0000	0.0000						
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708						
Total	**33.6028**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**						

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						
Worker	0.0736	0.0441	0.5184	1.7400e-003	0.1312	1.4000e-003	0.1326	0.0362	1.2900e-003	0.0375						
Total	**0.0736**	**0.0441**	**0.5184**	**1.7400e-003**	**0.1312**	**1.4000e-003**	**0.1326**	**0.0362**	**1.2900e-003**	**0.0375**						

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.3642	25.6250	29.6431	0.0481	1.4198	0.0517	1.4716	0.3799	0.0479	0.4278						
Unmitigated	6.6173	27.0620	36.1113	0.0780	4.2701	0.0724	4.3425	1.1425	0.0671	1.2096						

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Movie Theater (No Matinee)	3,044.34	3,044.34	3044.34	1,434,587	477,000
Fast Food Restaurant with Drive Thru	2,480.60	2,480.60	2480.60	291,997	97,089
Strip Mall	88.64	84.08	40.86	33,168	11,028
High Turnover (Sit Down Restaurant)	942.31	942.31	942.31	143,143	47,595
High Turnover (Sit Down Restaurant)	560.90	560.90	560.90	85,204	28,330
High Turnover (Sit Down Restaurant)	112.18	112.18	112.18	17,041	5,666
Parking Lot	0.00	0.00	0.00		
Total	7,228.97	7,224.41	7,181.19	2,005,140	666,709

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Movie Theater (No Matinee)	4.00	2.00	2.00	1.80	79.20	19.00	56	27	17
Fast Food Restaurant with Drive	2.00	1.00	1.00	2.20	78.80	19.00	19	31	50
Strip Mall	4.00	2.00	2.00	16.60	64.40	19.00	35	50	15
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
High Turnover (Sit Down	2.00	1.00	1.00	8.50	72.50	19.00	27	30	43
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Movie Theater (No Matinee)	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Fast Food Restaurant with Drive Thru	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Strip Mall	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
High Turnover (Sit Down Restaurant)	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Parking Lot	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						
NaturalGas Unmitigated	0.1943	1.7664	1.4838	0.0106		0.1343	0.1343		0.1343	0.1343						

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	3745.75	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	3745.75	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	6292.87	0.0679	0.6170	0.5182	3.7000e-003		0.0469	0.0469		0.0469	0.0469						
High Turnover (Sit Down Restaurant)	749.151	8.0800e-003	0.0735	0.0617	4.4000e-004		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003						
Movie Theater (No Matinee)	3471.53	0.0374	0.3404	0.2859	2.0400e-003		0.0259	0.0259		0.0259	0.0259						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Strip Mall	12.1644	1.3000e-004	1.1900e-003	1.0000e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005						
Total		**0.1943**	**1.7664**	**1.4838**	**0.0106**		**0.1343**	**0.1343**		**0.1343**	**0.1343**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	3.74575	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	3.74575	0.0404	0.3672	0.3085	2.2000e-003		0.0279	0.0279		0.0279	0.0279						
High Turnover (Sit Down Restaurant)	6.29287	0.0679	0.6170	0.5182	3.7000e-003		0.0469	0.0469		0.0469	0.0469						
High Turnover (Sit Down Restaurant)	0.749151	8.0800e-003	0.0735	0.0617	4.4000e-004		5.5800e-003	5.5800e-003		5.5800e-003	5.5800e-003						
Movie Theater (No Matinee)	3.47153	0.0374	0.3404	0.2859	2.0400e-003		0.0259	0.0259		0.0259	0.0259						
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						
Strip Mall	0.0121644	1.3000e-004	1.1900e-003	1.0000e-003	1.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005						
Total		**0.1943**	**1.7664**	**1.4838**	**0.0106**		**0.1343**	**0.1343**		**0.1343**	**0.1343**						

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2693	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Unmitigated	1.4176	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1648					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.2488					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.1000e-003	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Total	**1.4176**	**4.0000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0165					0.0000	0.0000		0.0000	0.0000						
Consumer Products	1.2488					0.0000	0.0000		0.0000	0.0000						
Landscaping	4.1000e-003	4.0000e-004	0.0442	0.0000		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004						
Total	**1.2694**	**4.0000e-004**	**0.0442**	**0.0000**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX

B

Increase Density

Yucaipa Area = 28.31 sq. miles

Job Units, Yucaipa= 22,997

Housing Units, Yucaipa= 19,539

Area of Square Mile in ½ Mile Radius= .79 sq. miles

Job Units for Project

Jobs Units per Square Mile Radius = (22,997/28.31) * .79 = 641.73 Job Units /502.4 = 1.27 unit/acre

Housing Units for Project

Housing Units per Square Mile Radius= (19539/28.31)*.79= 545.24 Housing Units/502.4= 1.08 unit/acre

Walkability Design

3 way intersections 56*3=168

4 way intersections 10*4=40

Intersection density 208/.79=263

Improve Destination Accessibility

Site selection; site is approximately four miles from downtown/uptown area

Improve Pedestrian Network

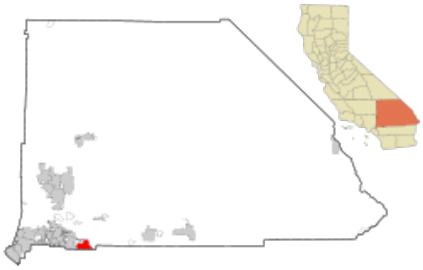
Pedestrian accommodations will be provided within the project site and connecting off-site

Traffic Calming Measures

Street and intersections improvements will be required as described in the traffic study and as required by the City Engineering department

Coordinates: 34°02′01″N 117°02′35″W

Yucaipa, California

Yucaipa, California	
City	
City of Yucaipa	
 Yucaipa City Hall, with San Bernardino Peak in the background	
 Location in San Bernardino County and the state of California	
 Location in the United States ◉ Show map of southern California ○ Show map of California ○ Show map of the United States ○ Show all	
Coordinates: 34°02′01″N 117°02′35″W	
Country	United States
State	California
County	San Bernardino
Incorporated	November 27, 1989[1]
Government	
• Type	Council-Manager

• **Mayor**	Greg Bogh[2]
Area[3]	
• **Total**	28.39 sq mi (73.53 km^2)
• **Land**	28.39 sq mi (73.53 km^2)
• **Water**	0.00 sq mi (0.00 km^2) 0.02%
Elevation	2,618 ft (798 m)
Population (2010)	
• **Total**	51,367
• **Estimate** (2017)[4]	53,683
• **Density**	1,877.67/sq mi (724.98/km^2)
Time zone	UTC-8 (PST)
• **Summer (DST)**	UTC-7 (PDT)
ZIP code	92399
Area code(s)	909
FIPS code	06-87042 (https://factfinder.census.gov/bkmk/table/1.0/en/DEC/10_DP/DPDP1/1600000US0687042)
GNIS feature ID	1652818 (https://geonames.usgs.gov/apex/f?p=gnispq:3:::NO::P3_FID:1652818)
Website	yucaipa.org (http://yucaipa.org)

Yucaipa (/juːˈkaɪpə/ *yoo-KY-pə*) is a city located 10 miles (16 km) east of San Bernardino, in San Bernardino County, California, United States. The population was 51,367 at the 2010 census, up from 41,207 at the 2000 census. According to San Bernardino County, the projected population in 2012 is 58,187.

DP04

SELECTED HOUSING CHARACTERISTICS
2013-2017 American Community Survey 5-Year Estimates

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

A processing error was found in the Year Structure Built estimates since data year 2008. For more information, please see the errata note #110.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Versions of this table are available for the following years:

2017
2016
2015
2014
2013
2012
2011
2010

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Subject	Yucaipa city, California			
	Estimate	Margin of Error	Percent	Percent Margin of Error
HOUSING OCCUPANCY				
Total housing units	19,539	+/-518	19,539	(X)
Occupied housing units	18,038	+/-461	92.3%	+/-1.8
Vacant housing units	1,501	+/-379	7.7%	+/-1.8
Homeowner vacancy rate	1.7	+/-1.0	(X)	(X)
Rental vacancy rate	3.3	+/-2.1	(X)	(X)
UNITS IN STRUCTURE				
Total housing units	19,539	+/-518	19,539	(X)
1-unit, detached	13,158	+/-551	67.3%	+/-2.2
1-unit, attached	286	+/-132	1.5%	+/-0.7
2 units	583	+/-260	3.0%	+/-1.3
3 or 4 units	467	+/-169	2.4%	+/-0.9
5 to 9 units	334	+/-159	1.7%	+/-0.8
10 to 19 units	76	+/-61	0.4%	+/-0.3
20 or more units	399	+/-123	2.0%	+/-0.6
Mobile home	4,227	+/-364	21.6%	+/-1.8
Boat, RV, van, etc.	9	+/-14	0.0%	+/-0.1
YEAR STRUCTURE BUILT				
Total housing units	19,539	+/-518	19,539	(X)
Built 2014 or later	153	+/-99	0.8%	+/-0.5
Built 2010 to 2013	313	+/-164	1.6%	+/-0.8
Built 2000 to 2009	3,235	+/-359	16.6%	+/-1.7
Built 1990 to 1999	1,915	+/-322	9.8%	+/-1.6
Built 1980 to 1989	2,480	+/-465	12.7%	+/-2.4
Built 1970 to 1979	3,307	+/-360	16.9%	+/-1.9
Built 1960 to 1969	3,778	+/-404	19.3%	+/-2.0
Built 1950 to 1959	2,435	+/-335	12.5%	+/-1.7
Built 1940 to 1949	1,185	+/-294	6.1%	+/-1.5
Built 1939 or earlier	738	+/-193	3.8%	+/-1.0

DP03

SELECTED ECONOMIC CHARACTERISTICS
2013-2017 American Community Survey 5-Year Estimates

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

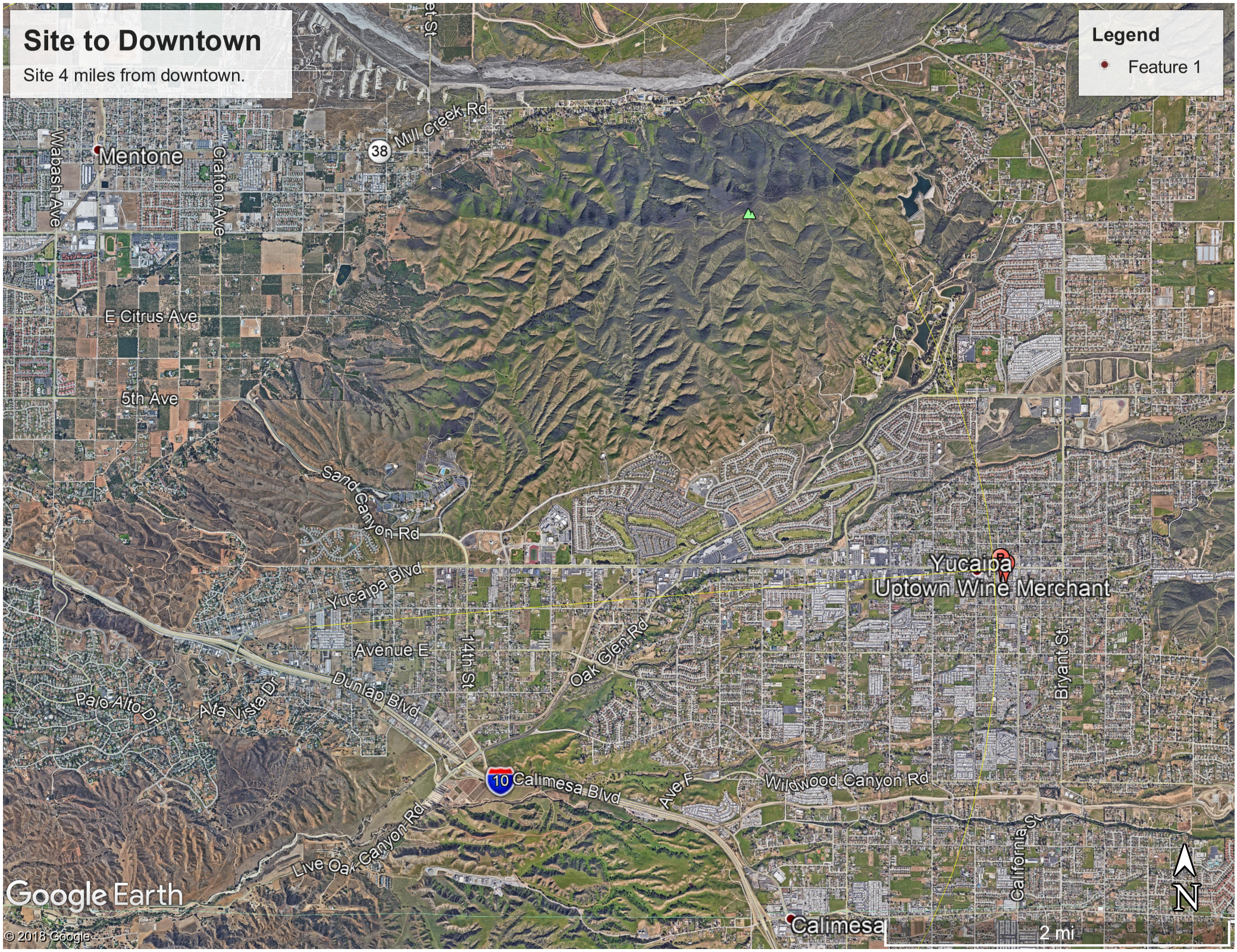
Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Versions of this table are available for the following years:

2017
2016
2015
2014
2013
2012
2011
2010

1 - 137 of 137

Subject	Yucaipa city, California			
	Estimate	Margin of Error	Percent	Percent Margin of Error
EMPLOYMENT STATUS				
Population 16 years and over	41,046	+/-596	41,046	(X)
In labor force	24,689	+/-894	60.1%	+/-2.0
Civilian labor force	24,682	+/-895	60.1%	+/-2.0
Employed	22,997	+/-902	56.0%	+/-2.1
Unemployed	1,685	+/-290	4.1%	+/-0.7
Armed Forces	7	+/-12	0.0%	+/-0.1
Not in labor force	16,357	+/-833	39.9%	+/-2.0
Civilian labor force	24,682	+/-895	24,682	(X)
Unemployment Rate	(X)	(X)	6.8%	+/-1.2
Females 16 years and over	21,714	+/-664	21,714	(X)
In labor force	11,285	+/-709	52.0%	+/-2.8
Civilian labor force	11,285	+/-709	52.0%	+/-2.8
Employed	10,623	+/-693	48.9%	+/-2.8
Own children of the householder under 6 years	4,662	+/-589	4,662	(X)
All parents in family in labor force	2,881	+/-603	61.8%	+/-10.3
Own children of the householder 6 to 17 years	8,323	+/-647	8,323	(X)
All parents in family in labor force	5,217	+/-591	62.7%	+/-6.0
COMMUTING TO WORK				
Workers 16 years and over	22,651	+/-897	22,651	(X)
Car, truck, or van -- drove alone	18,718	+/-942	82.6%	+/-2.7
Car, truck, or van -- carpooled	2,206	+/-420	9.7%	+/-1.8
Public transportation (excluding taxicab)	82	+/-64	0.4%	+/-0.3
Walked	335	+/-190	1.5%	+/-0.8
Other means	503	+/-198	2.2%	+/-0.9


Site to Downtown
Site 4 miles from downtown.
Legend
Feature 1
Mentone
Wabash Ave
Crafton Ave
38
Mill Creek Rd
E Citrus Ave
5th Ave
Sand Canyon Rd
Yucaipa Blvd
Yucaipa
Uptown Wine Merchant
Avenue E
14th St
Oak Glen Rd
Bryant St
Palo Alto Dr
Alta Vista Dr
Dunlap Blvd
10
Calimesa Blvd
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Live Oak Canyon Rd
California St
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Tennessee Ln
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Glady's Ln
Ohio Ct
Crafton Hills Dr
Teal Ct
Oak Wood Cir
Emerald View Dr
Campus Dr
Sierra Linda St
Overcrest Dr
Crilly Ln
Yucaipa Blvd
Hampton Rd
Cypher Columbus Transcontinental Hwy
Outer 10 Hwy S
10
Avenue E
Dunlap Blvd
Redlands Fwy
Ross Pl
17th St
Gold Hill Grade
Gold Hill Ln
Gold Hill
Knoll Dr
Mesa Dr
Highview Ln
Florida St
Hilltop Dr
Bar Ru Ln
Thomas Rd
Kendall Way
18th St
16th St
Avenue N
Highview Dr
South Ln
Palo Alto Dr
E Sunset Dr N
Sunset Dr S
Valley View Ln
Serrano Dr
Maple Ct
15th St
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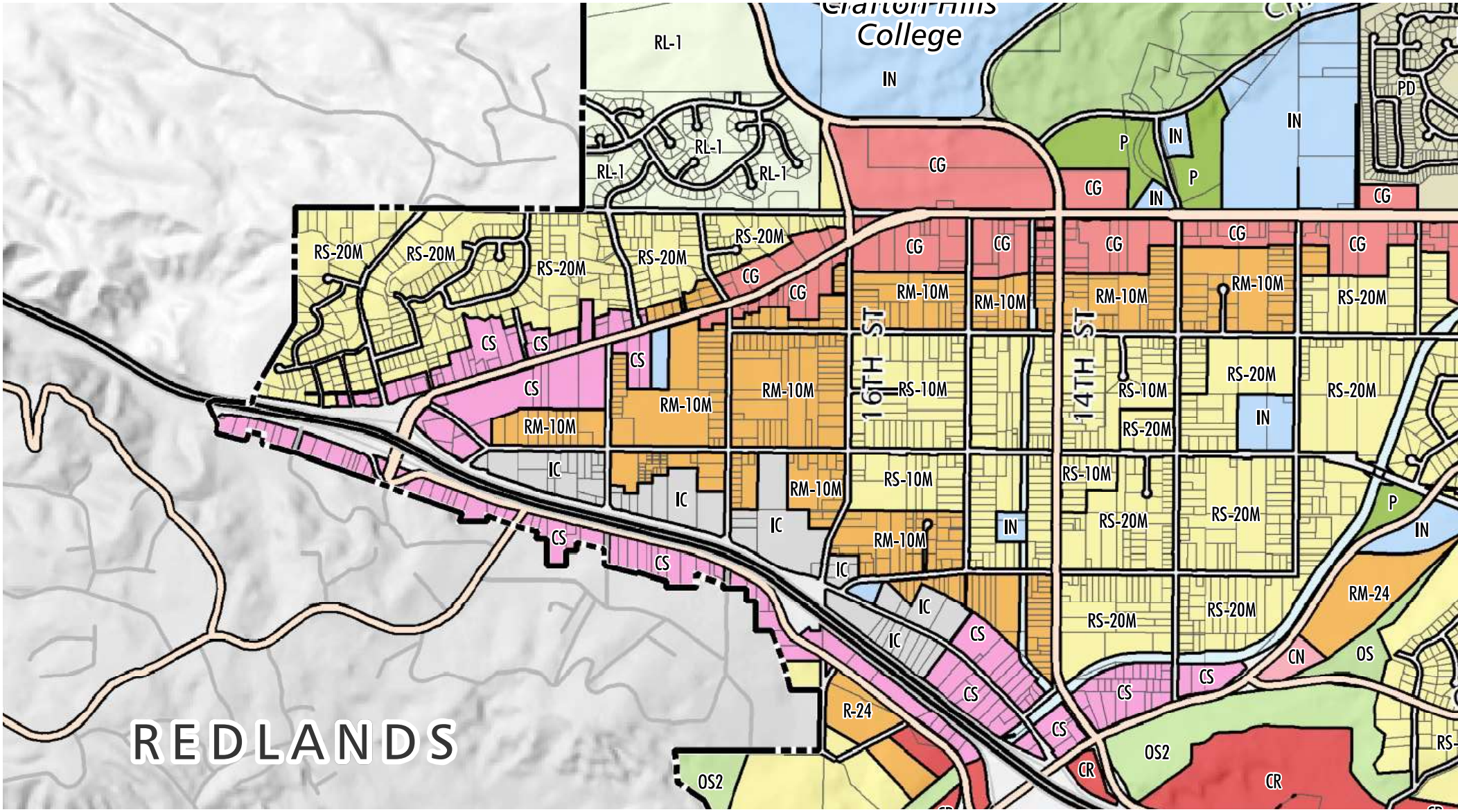
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RL-1
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RS-20M
RM-10M
RS-10M
CS
IC
16TH ST
14TH ST
RM-24
CN
OS
OS2
CR
R-24
REDLANDS

PHASE I CULTURAL RESOURCES ASSESSMENT OF A 26±ACRE PROPOSED COMMERCIAL DEVELOPMENT SITE LOCATED IMMEDIATELY SOUTHWEST OF THE INTERSECTION OF YUCAIPA BOULEVARD AND 18TH STREET, CITY OF YUCAIPA, SAN BERNARDINO COUNTY

by

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Archaeological Associates
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Fax: (951) 244-0084
archaeological_associates@hotmail.com

for

Ms. Maria G. Ruvalcaba
Branch Manager, Project Manager
Salem Engineering Group, Inc.
13355 Noel Road, Suite 1100
Dallas, Texas 75240

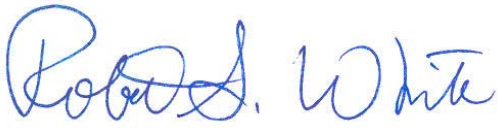
APNs: 0300-191-01, -02, -17, -18, -28, -29, -30, -31 & 0300-192-07 & -08

Unsectioned portion of Township 2 South, Range 2 West, SBBM
Yucaipa 7.5' Quadrangle, 1996

Revised
April 17, 2019

KEYWORDS: Phase I Survey, City of Yucaipa, Yucaipa Blvd., San Bernardino County.

CERTIFICATION: I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.



.....
Robert S. White
Principal Investigator

NATIONAL ARCHAEOLOGICAL DATA BASE INFORMATION

Author:	Robert S. White
Consulting Firm:	Archaeological Associates P.O. Box 180 Sun City, CA 92586 Tel (951) 244-1783 Fax (949) 244-0084 archaeological_associates@hotmail.com
Report Date:	February 1, 2019
Report Title:	Phase I Cultural Resources Assessment of a 26±Acre Proposed Development Site Located Immediately Southwest of the Intersection of Yucaipa Boulevard and 18th Street, City of Yucaipa, San Bernardino County
Prepared for:	Ms. Maria G. Ruvalcaba Branch Manager, Project Manager Salem Engineering Group, Inc. 13355 Noel Road, Suite 1100 Dallas, Texas 75240
USGS Quadrangle:	*Yucaipa* 7.5', California, 1996
Study Area:	26± acres total: (APNs: 0300-191-01, -02, -17, -18, -28, -29, -30, -31 & 0300-192-07 & -08) located in an unsectioned portion of Township 2 South, Range 2 West, SBBM.
Keywords:	Phase I Cultural Resources Assessment, City of Yucaipa, Yucaipa Boulevard, San Bernardino County, CA **Positive Results**

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MANAGEMENT SUMMARY

At the request of Salem Engineering Group, Inc., Archaeological Associates has undertaken a Phase I Cultural Resources Assessment of 26±acres of partially developed land. The property is identified as APNs: 0300-191-01, -02, -17, -18, -28, -29, -30, -31 & 0300-192-07 & -08 located southwest of the intersection of Yucaipa Boulevard and 18th Street in the City of Yucaipa. Avenue E transects the southwest end of the property from northwest to southeast. Presently, mixed use commercial-retail is planned for the project area.

The purpose of this study was to identify all potentially significant cultural resources situated within the boundaries of the study area. This information is needed since adoption of the proposed development plan could result in adverse effects upon locations of archaeological or historical importance. All field notes, background research and photographs are in the possession of Archaeological Associates.

The records search and field survey failed to indicate the presence of any prehistoric or historic archaeological resources within the boundaries of the study area. The property has been heavily disturbed by past grading/filling activities. Given the negative results of the current assessment, no additional work in conjunction with prehistoric or historic archaeological resources is recommended for the project. Monitoring of future earth-disturbing activities connected with development of the property is not warranted or recommended as the chance of encountering buried archaeological deposits is considered low.

Records indicate that the three historic period residences located at 31479, 31514 and 31548 Avenue E have not been previously evaluated for historical and architectural significance. However, only the residence located at 31479 Avenue E will be demolished in conjunction with the proposed undertaking. The remaining residences will remain occupied. Therefore, it is recommend that only the residence at 31479 Avenue E be evaluated for significance under criteria based on the California Environmental Quality Act (CEQA), as amended in 2015, which includes criteria for eligibility to the California Register of Historical Resources (CRHR).

In the event that human remains are encountered during the course of any future development, California State Law (*Health and Safety Code Section 7050.5 and Section 5079.98 of the Public Resources Code*) states that no further earth disturbance shall occur at the location of the find until the San Bernardino County Coroner has been notified. If the remains are determined

to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD).

I. INTRODUCTION

The following report was written for the Salem Engineering Group, Inc. by Archaeological Associates. It describes the results of a Phase I Cultural Resources Assessment of 26+ acres of partially developed land identified as APNs: 0300-191-01, -02, -17, -18, -28, -29, -30, -31 & 0300-192-07 & -08. The study area is located in the City of Yucaipa adjacent to the south side of Yucaipa Boulevard and the west side of 18th Street. Avenue E transects the southwest end of the property from northwest to southeast. Presently, mixed use commercial-retail is planned for the project area.

The purpose of this undertaking was to identify all potentially significant cultural resources situated within the study area. This information is needed since adoption of a future development plan could result in adverse effects upon locations of archaeological or historical importance. Our assessment consisted of: (1) records searches conducted to determine whether any previously recorded historic or prehistoric material is present within the project footprint, (2) archival research, and (3) a field reconnaissance intended to identify any previously unrecorded cultural resources,

The archaeological records search was performed by Robert S. White. The intensive survey of the property was conducted by Robert S. White (Principal Investigator), and Susan Klein (surveyor). The study was conducted in accordance with the California Environmental Quality Act (CEQA), as amended in 2015, which includes criteria for eligibility to the California Register of Historical Resources (CRHR). This report was prepared according to the *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* contained within the States Preservation Planning Bulletin Number 4(a) (California Department of Parks and Recreation 1989).

II. SETTING

A. Study Area Location

Regionally, the study area is situated on the northwesterly edge of the San Gorgonio Pass in the Yucaipa Valley, San Bernardino County. The core of Yucaipa lies a short distance to the northeast, as do the Crafton Hills to the north and Calimesa to the southeast (fig.1). More specifically, the study area adjoins Yucaipa Blvd. on the north, 18th Street on the east, and Avenue E on the south and west. A portion of the southern boundary also abuts rural residential development. Avenue E transects the southwestern tip of the project from northwest to southeast. Legally, the subject property lies in an unsectioned portion of Township 2 South, Range 2 West,

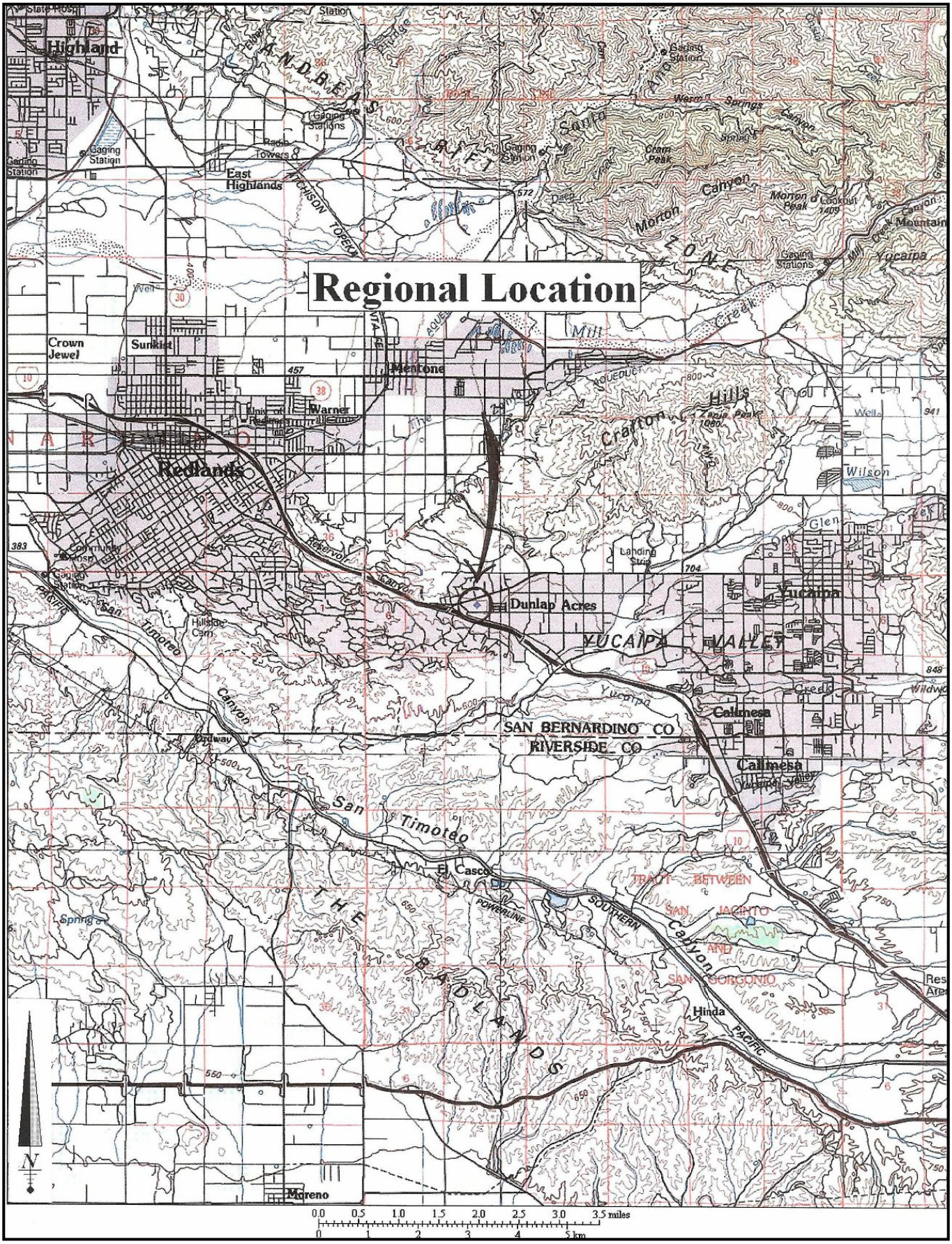

Figure 1. Regional location of the project area as indicated on a portion of the USGS *San Bernardino* 1:100,000 scale Topographic Map (1982).

San Bernardino Base Meridian as shown on a portion of the USGS *Yucaipa* 7.5' Topographic Quadrangle (fig. 2).

B. Natural Setting

The San Gorgonio Pass comprises the readily identifiable geographical territory that separates the Coachella Valley from the San Jacinto and Moreno Valleys. Located at the geologic junction of the Transverse Ranges (San Bernardino Mountains) on the north and the Peninsular Ranges (San Jacinto Mountains) on the south, it is one of the regions most distinctive areas. For the most part, the pass comprises an east-west oriented lowland covered by both recent and older alluvial fan deposits mainly derived from the San Bernardino Mountains. Two, prominent high peaks, Mount San Gorgonio at 11,485-feet and Mount San Jacinto at 10,831-feet tower above the area. Water originating from the San Bernardino Mountains is drained to points west of the pass via the south fork of the Santa Ana River. To points east of the pass, water is conveyed by the San Gorgonio River into the Whitewater River.

The project area is situated in a region of the County where the climate comprises warm summers and cool winters. Topographically, study area comprises a portion of a broad swale that has been significantly built-up on the north. A large portion of the north half of the study area has been filled and terraced. Elevations range from a maximum of 2,120 feet above mean sea level in the far northeast property corner to a minimum of approximately 2,080 feet in the swale bottom and the extreme southwest corner. Drainage is generally to the west.

On-site vegetation is sparse due to weed abatement and on-going construction staging activities. Some of the more readily identifiable plants included buckwheat and foxtail accompanied by other exotic weeds and forbes. Fauna encountered were limited to ravens, doves and a solitary Red-tailed hawk.

Soils comprise sandy loam, clayey loam and sand. No bedrock exposures or sources of natural surface water were encountered anywhere within study area (including the swale bottom). Disturbance within the parcels is fairly widespread. Disturbed areas comprise: 1) the aforementioned past filling and terracing in the northern half of the property, 2) use of the northeast property corner as a construction staging area, and 3) storage of a great deal of fill soil and concrete/asphalt rubble adjacent to Yucaipa Blvd. There are also three occupied residences that adjoin Avenue E in the western portion of the project site (fig. 3).



Figure 2. Study area plotted on a portion of the *Yucaipa* 7.5' USGS Topographic Quadrangle (1996).

C. Prehistoric Occupation of the San Gorgonio Pass

While prehistoric man may have been present in California from the earliest days of the Holocene epoch (circa 10,000 years ago), there is no indication that he frequented the area of the San Gorgonio pass prior to Late Prehistoric times (beginning circa 1,000 A.D.). The Serrano or "Mountaineers" occupied the San Bernardino Mountains, portions of the high desert, and San Timoteo Canyon to the west of the San Gorgonio Pass during this period while the Pass Cahuilla are said to have inhabited at least the eastern half of the Pass. Serrano boundaries extended north from the Yucaipa Valley, eastward from the Cajon Pass to Twentynine Palms, and south of the Victorville area encompassing the transitional mountain and desert floor. The reader may find ethnographic accounts of the Serrano in a number of works including Kroeber (1925), Strong (1929), Johnston (1965) and Bean and Smith (1978). Strong, who was probably as reliable an authority on the subject, regarded the territorial affiliation of the Pass as an insoluble problem:

> That the Pass division of the Cahuilla occupied the San Gorgonio Pass has been generally accepted, but in a recent work Kroeber changed his opinion giving the region in question to the Serrano...This was done in accord with the findings of Benedict [1924] who worked on the Morongo Reservation near Banning in 1922...This general region, due to the breaking down of the culture, the assembling of all dialectic groups on one reservation, and the lack of any tribal unity, is the most complex in southern California. (Strong 1929:10).

It has been suggested that the Highland Springs settlement was the Serrano village of *"Akvat* or *Akavat*" (Anonymous 1972:3-2). This suggestion appears to find its roots in a map published by Kroeber (1925:Plate 57) which shows the village of "*Aka-va-t*" at the eastern end of San Timoteo Canyon northwest of Banning. Tom Hughes (1938) seems also to have regarded Highland Springs as a Serrano site as does Johnston who sums up the situation admirably:

> Indians: Riv-90 [Highland Springs Resort]. There is a set of bedrock mortars here bearing a plaque erected by Guy C. Bogart, late Beaumont sponsor, promoter, and historian. Two lineages are given for this spot by three different anthropologists. Bean [1960] lists the Aekit Wanakik [Cahuilla]. Benedict [1924] and Kroeber [1925] both give Pavukuyam Serrano. The two latter name the place Akvat and Akavat respectively. This probably represents another case of



Figure 3. Study area as shown on aerial photograph

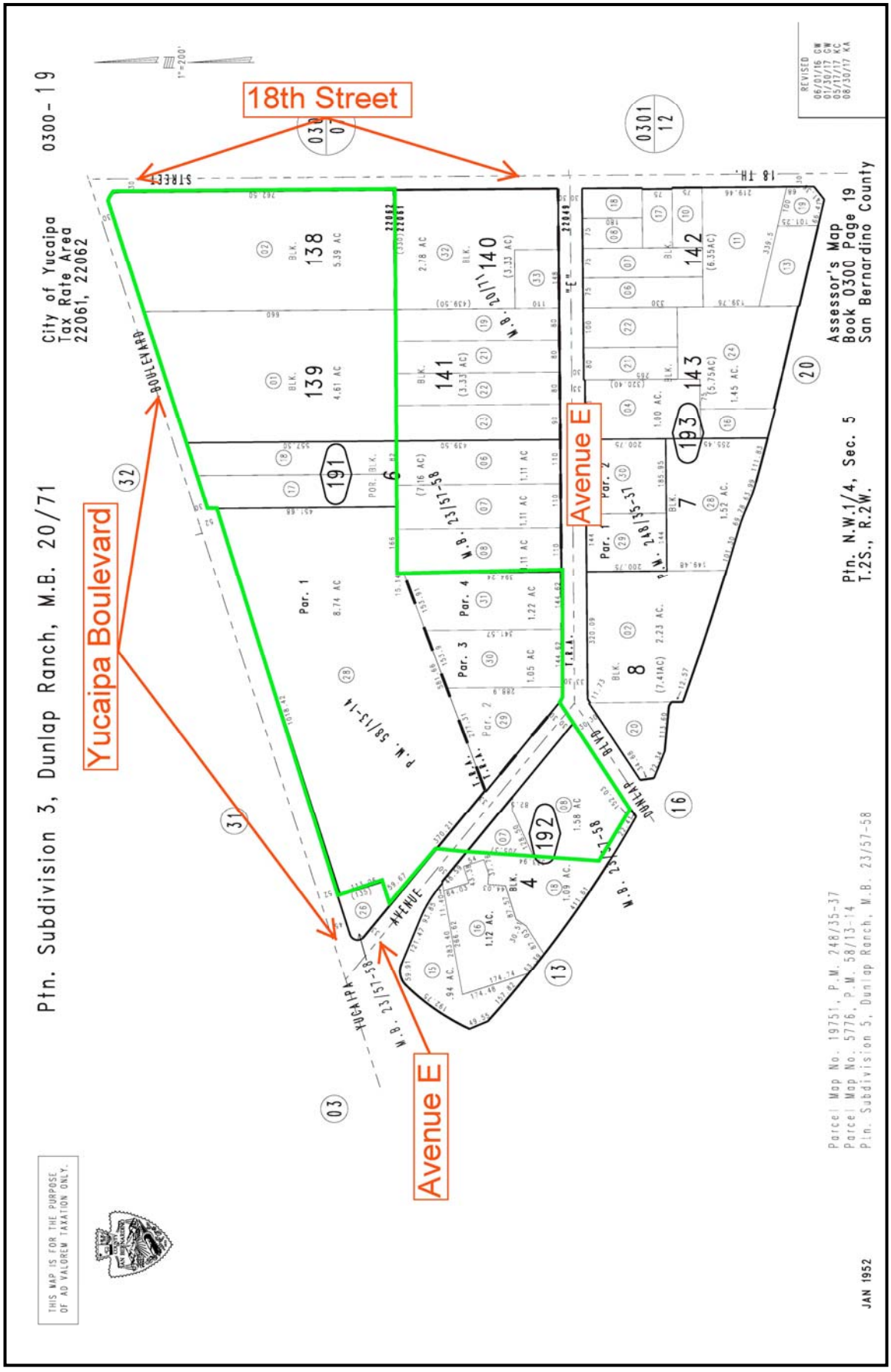

Figure 4. Study area as shown on San Bernardino Assessor's Map, Book 0300, Page 19

> Serrano and Cahuilla Indians living side by side; other like situations are Banning Water Canyon and Mission Creek. (Johnston 1957).

Like all of the prehistoric southern Californians, the Serrano were hunters and gatherers:

> The primary vegetable staples varied with hamlet locality: acorns and pinon nuts for groups living in the foothills [such as Highland Springs]; honey mesquite, cacti fruits, for those living in or near the desert. These principal foods were supplemented by various other roots, bulbs, shoots, and seeds, particularly chia (*Salvia columbariae*)... (Bean and Smith 1978:571).

Game animals included deer, rabbits, mountain sheep, and various birds and small rodents. These were hunted with bow and arrow, rabbit stick, traps, nets, etc. Because of the critical importance of water availability, most villages were located near springs or watercourses--a fact explaining the probable presence of a Serrano camp at Highland Springs.

Serrano villages were small, probably rarely exceeding fifty individuals. Structures were shared by members of individual families and usually comprised circular domed willow frames covered with tule thatching (ibid.). Houses each had a central fire-pit but were probably used principally for sleeping and storage. Day-to-day activities were carried out outside or under ramadas. Besides the houses, a typical Serrano village would have included a ceremonial house, sweathouses, and granaries for acorn storage.

The Serrano never existed as a "tribe" in the political sense, inter-village bonds depending upon ceremonial and social connections:

> All bonds between the [Serrano] groups were of a purely ceremonial nature, and there appears to have been no sort of tribal or political union between them...It is therefore erroneous to speak of such a mythical thing as a Serrano "tribe", for none such existed within historic times, and there is no reason to believe that it ever did. (Strong 1929:14).

It is not known when the Serrano first encountered the Spanish though Pedro Fages visited Serrano territory as early as 1772. This visit would have had negligible effect upon Serrano culture. Bean and Smith postulate that the establishment of an *asistencia* at Redlands around 1819 may have

comprised the first influential contact (Bean and Smith 1978:573; *asistencias* were small satellite outposts set up by the central missions to serve outlying areas).

The Serrano living at *Akvat* may have had their first contact with the whites when a Father Gorgonio visited the area prior to 1812 or later when Pauline Weaver and Daniel Sexton first began lumbering operations. Further discussion of these subjects follows below.

D. Historical Overview

1. Early History of San Gorgonio Pass

The earliest Spanish explorers may not have even known of the existence of the San Gorgonio Pass, Anza's interior route between northern Mexico and Alta California having passed to the south. However, the Yuma massacre of 1781 rendered Anza's route dangerous and by the early 1820's the new Mexican government was investigating the possibility of using the San Gorgonio Pass as an alternative (Bancroft 1886:ii, 508). According to Quimby (1975:6) the San Gabriel Mission had set up a station at Banning Water Canyon as early as 1821 and cattle were being raised there in 1823 when the Romero Expedition came through the Pass to explore it as an alternative to Anza's inland route to Alta California.

It is possible that one Spaniard, a Father Gorgonio, was living in the Pass prior to 1812. The papers of a Ms. Ada G. Elder, who gathered stories about the early history of the Pass, stated that:

> ... Doctor Wellwood Murray, an early settler of the Pass and Palm Springs, told Miss Elder that a priest from San Juan Capistrano traveled up the Santa Ana River, through San Timoteo Canyon, and up Singleton Canyon into the Pass where he administered to the Indians. This priest was named Father Gorgonio and the Pass seems to have taken its name from him. He was killed in 1812 so the early date of his influence can be seen. Her paper also reports adobe walls standing on what is now Highland Springs, with no specific facts known as to their origin. (Johnston 1977:95).

On the other hand, Gudde (1965:271) states that in 1824 San Gorgonio was a cattle ranch for the Mission San Gabriel, and that it was named for "Gorgonius, a third-century martyr, whose feast day is September 9." In any event, the adobe walls were said to have been present when the Smith family settled Highland Springs in 1854. The adobe may have belonged to Father Gorgonio as stated by Miss Elder--in this case it would have represented an outpost of the Mission San

Gabriel, or it may have been connected with Weaver's development of the Rancho San Gorgonio (Johnston 1977:1).

2. Pauline Weaver

The first Anglos definitely known to have settled in the Pass were Daniel Sexton and Pauline Weaver who arrived about 1842. Sexton came to the Pass from San Bernardino to start a lumbering business concentrated on what later became Weaver's Rancho San Gorgonio. He hired Indian labor for 25 cents a day and sold his product to Isaac Williams, well-known owner of the Rancho Santa Ana del Chino. Sexton is remembered most for a Fourth of July celebration which he sponsored in 1842:

> Upon being asked by the Indians whether Americans engaged in any annual public celebrations, Sexton had decided to acquaint them with Independence Day...Reportedly highlighting the occasion with a diverse array of events including an opening prayer, a flag-raising ceremony, Indians songs and dances, and two barrels of whiskey, the day's celebration eventually degenerated into a drunken orgy bearing little resemblance to the educational type of program the Indians had requested. (McAdams 1955:53).
>
> The climax of this fiesta was the flying of the first American Flag to fly in California. Rumor has it he [Sexton] made the flag from his wife's petticoats. (Quimby 1975:6).

Weaver was no less colorful a figure than Sexton. Apparently born Powell Weaver in White County, Tennessee, he was the son of an English Settler while his mother was said to have been Cherokee. The Mexicans called him "Paulino" and the Indians called him "Pauline", the latter becoming his best known name. He was a trapper, farmer, lumberman, prospector, and explorer who is said to have been the first white man to settle in Arizona. He eventually moved to California and settled in the San Gorgonio Pass region west of Noble Creek. More specifically, the 1857 General Land Office Plat Map for Township 2 South, Range 1 West shows Weaver's house in Section 27 adjacent to a creek known today as Little San Gorgonio Creek. It seems probable that he and Sexton may have worked together for a while as both were acquainted with Isaac Williams (who had also been a trapper).

In 1853, the Congress of the United States authorized the United States Army to conduct a land survey to find the most favorable route for a railroad between the Mississippi River and the

Pacific Ocean. While on their way from San Bernardino to the Colorado Desert, the party of engineers led by Lt. R.S. Williamson, passed through the San Gorgonio Pass. On November 13, 1853, Weaver's rancho was visited by the survey party and the following notes were taken by Mr. W.P. Blake, geologist for the expedition:

> ...The ascent continued very gradual; at length a short hill brought us to the edge of a broad and gently sloping plain, upon which an adobe house is built. This, although partly in ruins, was occupied by Mr. Weaver, well known as an experienced mountaineer. He is the claimant of a large rancho at this place. The presence of fruit trees and other evidences of cultivation showed that the rancho had been in use for many years, and it is said that the occupants have several times been driven away by the Indians. The situation of this rancho, and the house, is such as one would least expect, being at the summit of the pass. (Blake 1856:90).

3. Stagecoach Activities in the San Gorgonio Pass

In September of 1857, John Butterfield was awarded the U.S. Mail contract and began studying possible stage routes to Los Angeles. The citizens of San Bernardino were very anxious to have the stage from Yuma, Arizona pass through San Gorgonio Pass en route to their city. They elected Isaac Smith to the state legislature on a platform favoring the route, and not surprisingly, Smith Ranch was regarded as an excellent potential way-station. In an attempt to get Butterfield to run his stages to San Bernardino, the County Supervisors had Smith, Stephen M. St. John, and Alfred Bybee lay out a county road between San Bernardino and the southeast corner of the county. Unofficially, this route was known as "the Smith Survey." However, despite the efforts of Smith and the citizenry of San Bernardino, Butterfield decided to use the southern route through Warner's Pass (Johnston 1977:105ff.)

Fortunately, the setback was a temporary one. On September 6, 1862, David Alexander's (Colorado Stage and Express Line) first Concord stagecoach traveled from Los Angeles to La Paz, Arizona via the Bradshaw Trail (Johnston 1957; 1977:133). In the San Gorgonio Pass, the stage stop known as "Smith's Station" was established on the Smith Ranch (Highland Springs Resort). The stop provided fresh horses, food, and presumably a place to sleep for stagecoach passengers. Mr. Jim Banks served as proprietor of Smith's Station between 1862-1876 (Johnston 1977:205).

According to Holmes (1912:180), it took from 18-20 hours to reach the Smith Ranch from the initial starting point in Los Angeles.

Smith's Station had hardly opened for business when the Superintendent of the Colorado Stage and Express Line, Warren Hall and his leading driver, Henry Wilkinson were murdered. Upon arriving at Smith's Station on the 29th of October, Wilkinson was greeted by Superintendent Hall. Shortly thereafter, the two men discovered that the stage's express box containing $1,200. was missing. They immediately accused a company hostler by the name of Gordon of robbing the stage:

> Wilkinson and his shotgun guard took the suspect up an oak-filled canyon just north of the ranch. They planned to extort a confession by hanging the suspect by the neck, not quite to the point of fatality. After actually raising Gordon off the ground once or twice Wilkinson sent the guard back after Hall, as the suspect would not confess. (Johnston 1977:134).

Gordon subsequently drew a knife with which he attacked both Wilkinson and Hall before escaping. Shortly following the melee, Smith and others found the two men dead from their wounds. Smith is reported to have used the front door of his house to transport both bodies back to the ranch; the blood stains on which were visible for years thereafter. After surrendering to San Bernardino's sheriff, Gordon was later acquitted of the crime on the grounds of self-defense. Although absolved of the murders of Wilkinson and Hall, Gordon's luck finally ran out some years later. He was reported to have been hanged in Montana for the killing of sheepmen.

Other stage stops in the Pass were located on the Gilman Ranch in neighboring Banning and at Whitewater. At the Gilman Ranch (formerly the Noble Ranch), the old adobe home of Jose Pope served as the stage station. It was owned by James M. Gilman who later married Martha Smith (daughter of Isaac Smith). The Whitewater Station, was established in 1860 by Frank Smith (son of Isaac Smith). Smith erected a shack then later an adobe that served as the stage station. Water for the station was conveyed through a ditch dug by Smith to the Whitewater River. It was here on his son's Whitewater ranch in 1878 that Isaac Smith himself met his demise as a result of a gunshot wound inflicted during an Indian altercation (Holmes 1912:179f.; Johnston 1977:119).

III. RESEARCH ORIENTATION

A. Introduction

Much of the historic data pertaining to the San Gorgonio Pass and the project vicinity was drawn from literature housed at the Beaumont, Banning and Riverside Public Libraries. Tom Hughes' *History of Banning and San Gorgonio Pass* was published in 1938 and seems to be the first published history of the Pass. Other noted works include Holme's *History of Riverside County* (1912), Gabbert's *History of Riverside City and County* (1935), Gunther's *Riverside County, California, Place Names: Their Origins and Their Stories* (1984), and Quimby's *History of the Potrero Ranch and its Neighbors* (1975). Francis J. Johnston's *The Bradshaw Trail* (1977) is an excellent reference on the history of the Bradshaw and Arizona stage line which passed through the area. However, perhaps the most complete and useful document on the Pass' history is the Master's thesis of H.E. McAdams entitled *Early History of the San Gorgonio Pass: Gateway to California* (1955).

B. Research Goals

The goals of our research were to identify known locations of potential significance resources situated within the study area. Our hypotheses were as follows:

(1) Prehistoric sites may be found almost anywhere but are generally located in areas that offered access to water and plant resources. In this area, due to particularly arid conditions, sources of permanent or semi-permanent water would have offered the best chance for settlement or seasonal encampments. Thus, within the pass itself, the topographic transition zones from the lowlands to the mountains/foothills would be considered higher probability than the valley floor. This would hold true not only for the presence of dependable sources of water, but also the diverse communities of flora and the animals they would attract. Ideally, oak groves or seasonal water courses lined with oak trees would have been most attractive for gathering and processing sites. Granitic boulders and outcrops were also commonly utilized as milling stations for vegetal foodstuffs and to a lesser extent rock shelters and rock art sites.

(2) Historic sites in the region would most likely be associated with early ranching, fruit growing and general farming activities. Lacking standing structures, remains of these homesteads and farmsteads typically comprises concrete, river cobble or adobe structure foundations, irrigation systems and trash scatters. However, not all debris scatters (e.g. tin can, glass, crockery) can be

connected to a particular home or farmstead. In many instances, isolated scatters of dumped historic debris represent nothing more that illicitly discarded rubbish.

IV. ARCHIVAL RESEARCH METHODS

A. Cultural Resources Records Search

An in-person records search of the study area was conducted by Robert S. White at the South Central Coastal Information Center (SCCIC), California State University, Fullerton on November 14, 2018. The search entailed a review of all previously recorded prehistoric and historic archaeological sites situated on or within a one-mile radius of the project area. Additionally, the National Register of Historic Places (NRHP), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), and the Office of Historic Preservation's Directory of Properties (DOP) were reviewed for the purpose of identifying any historic properties.

1. Previously Recorded Prehistoric and Historic Resources Within the Study Area

The results of the search indicated that no prehistoric or historic archaeological resources (sites, structures, isolates) have been previously recorded within the boundaries of the subject property.

2. Previously Recorded Archaeological Sites/Isolates Within a One-Mile Radius

The results of the search indicated that one prehistoric site has been previously recorded within a one-mile radius of the subject property. The site, SBR-4910, is described as a small scatter of groundstone and lithics (Jenson 1982). It is located ¾ mile to the west-northwest.

3. Previously Recorded Historic Structures Within a One-Mile Radius

Outside the study area, one historic building has been recorded within a one-mile radius. Known as the Jillson House, (Primary # 36-013987) is described as a Craftsman style residence located at 345 Sand Canyon Road. Characterized as a small, wood-framed dwelling, it is believed to have been constructed cicra 1925 (Elliot 1986).

4. Heritage Properties

No listed National Register of Historic Places (NRHP), California Historical Landmarks (CHL), or California Points of Historical Interest have been recorded within a one-mile radius.

5. Previous Surveys

The results of the search indicated that the study area has not been previously surveyed for cultural resources. Outside the property, approximately 40% of the surrounding one-mile search radius has been investigated. These studies comprise small acreage surveys (40 acres or less), cellular sites, and linear projects (roads and utilities). The closest survey to the study area lies just to the southwest along Interstate 10. The linear project was conducted by Applied Earthworks in support of a proposed Caltrans truck climbing lane project (Horne & Hallaran 2001). The results of the study were negative for both prehistoric and historic resources.

B. Historic Map Research

In addition to the records search, numerous historic General Land Office (GLO) and Geological Survey (USGS) maps of Yucaipa and the surrounding region were inspected. These maps are on file with one or more of the following entities: Bureau of Land Management, Map Room of the Science Library at UC Riverside, the USGS TopoView Historic Topographic Map Database, and the California Historic Topographic Map Collection housed in Special Collections at the Merriam Library at California State University, Chico. These included:

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian
Surveyed 1853-1871, Examined and Approved August 26, 1871

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian
Surveyed 1853-1879, Examined and Approved April 26, 1880

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian
Surveyed 1880-1883, Examined and Approved June 28, 1883

GLO Map of Township No. 2 South Range No. 2 West San Bernardino Meridian, California
Surveyed 1896, Examined and Approved February 3, 1897

Southern California Sheet No.1, 1:250,000, 1901 reprinted 1948, Surveyed 1893-1900

1954 San Bernardino 1:125,000

1954 San Bernardino 1:125,000, revised 1959

1901 *Redlands 15*' USGS Topographic Quadrangle, surveyed 1898-1899.

1954 *Redlands* 15' USGS Topographic Quadrangle

1954 *Yucaipa* 7.5' USGS Topographic Quadrangle

1967 *Yucaipa* 7.5' USGS Topographic Quadrangle

1967 *Yucaipa* 7.5' USGS Topographic Quadrangle, photorevised 1973.

1967 *Yucaipa* 7.5' USGS Topographic Quadrangle, photorevised 1988.

A review of these maps was performed for the purpose of identifying locations of potential historical resources. The results of the map research indicated that numerous structures have occupied the property starting with the 1954 *Yucaipa* 7.5' and 1954 *Redlands* 15' Quadrangles. Today, only three residences remain along Avenue E, dating from 1946 to 1953 (fig. 3). Since they are allover 50 years of age, they are considered to be historic structures.

C. Land Patents

Archival research also included a review of land patents on file with the Bureau of Land Management (BLM) in Sacramento. The subject property lies in an unsectioned portion of Township 2 South, Range 2 West, San Bernardino Base Meridian. Office records indicate that a serial land patent for 35,509.42 acres (Rancho San Bernardino) was issued to Jose del Carmen Lugo, Jose Maria Lugo, Vincente Lugo, and Diego Sepulveda on November 24, 1865. The patent includes the subject property. The land patent was granted under the authority of the March 3, 1851: Grant-Spanish/Mexican (9 Stat. 631). It is recorded as Document Nr: Plc 481, Accession No./BLM Serial Nr: CACAAA 072999. It does not appear that the Lugo's or Sepulveda ever constructed a residence within the project site.

V. FIELD SURVEY

A field reconnaissance of the study area was conducted by Robert S. White (Principal Investigator), and Susan R. Klein on November 19, 2018 and January 8, 2019. The pedestrian

survey began in the northeast corner of the property and proceeded in a westerly direction. Surface visibility over the undisturbed portions of the study area was excellent, varying between 90 and 100% depending on the density of the low-lying vegetation. Within the swale bottom, visibility varied between 40 and 100% depending on the thickness of the winter weeds and forbes.

Where feasible, the survey was conducted by walking parallel transects spaced at 5-10 meter intervals across the property. Meandering transects were used when obstacles or terrain rendered parallel transects impractical. In particular, the swale bottom and slopes were examined for any signs of buried archaeological deposits as were rodent backdirt piles. By employing these techniques, a thorough survey of the study area was accomplished

VI. REPORT OF FINDINGS

A. Prehistoric Resources

The results of the records search conducted at the South Central Coastal Information Center failed to identify any prehistoric resources within the boundaries of the study area. The results of the field study were also negative. No prehistoric resources of any kind were identified during the course of the investigation.

B. Historic Archaeological Resources

The results of the records search indicated that no historic archaeological sites or historic buildings had been previously recorded within the project area. No historic archaeological resources of any kind were identified during the course of the investigation.

C. Historic Structures

Map and archival research has indicated that the three occupied residences that adjoin Avenue E are all over 50 years of age and are therefore considered historic. They comprise: 1) 31479 Avenue E (APN 0300-192-08) constructed 1946, 2) 31514 Avenue E (APN 0300-191-30) constructed 1951, and 3) 31548 Avenue E (APN 0300-191-31) constructed 1953 (figs 3 & 4).

VII. MANAGEMENT CONSIDERATIONS

A. Prehistoric and Historic Archaeological Resources

The results of the records search and field study were negative for the presence of prehistoric and historic archaeological resources within the project area. Therefore, no further work in conjunction with archaeological resources is warranted or recommended including monitoring of earth disturbing activities connected with future development.

B. Historic Structures

Records indicate that the three historic period residences located at 31479, 31514 and 31548 Avenue E have not been previously evaluated for historical and architectural significance. However, only the residence located at 31479 Avenue E will be demolished in conjunction with the proposed undertaking. The remaining residences will remain occupied. Therefore, it is recommend that only the residence at 31479 Avenue E be evaluated for significance under criteria based on the California Environmental Quality Act (CEQA), as amended in 2015, which includes criteria for eligibility to the California Register of Historical Resources (CRHR).

C. Discovery of Human Remains

In the event that human remains are encountered during the course of any future development, California State Law (*Health and Safety Code Section 7050.5 and Section 5079.98 of the Public Resources Code*) states that no further earth disturbance shall occur at the location of the find until the San Bernardino County Coroner has been notified. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD).

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ANONYMOUS

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2001 *Archaeological Survey Report: Construction of Eastbound Truck Climbing Lane from Ford Street to Live Oak Canyon Road, San Bernardino County California.* 08-SBd-10-K.P. 53.6/R59.6 (P.M. 33.3/R37.0), EA 419200. Report on file with the South Central Coastal Information Center, California State University, Fullerton..

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JOHNSTON, FJ. and P.J.
1957 Archaeological Site Form and Notes on Highland Springs Resort (RIV-90). Archaeological Information Center, University of California at Riverside.

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Plate I. Top: Looking west along northern property boundary from the northeast corner.
Bottom: Looking southwest into construction staging yard located in the northeast corner.



Plate II. Top: Looking southeast across study area from near the northwest property corner. **Bottom:** Looking west through center of property from the eastern boundary.



Plate III. Top: Looking northwest at rubble pile located in the northeastern portion of the property. **Bottom:** Looking east across the swale bottom from Avenue E.

APPENDIX A: Personnel Qualifications

RÉSUMÉ OF

ROBERT S. WHITE

Principal, Archaeological Associates

Mr. White has been affiliated with Archaeological Associates since 1983. Starting in 1991 he became the firm's Director and in 2013, Principal. Mr. White has extensive experience in many aspects of cultural resource management, including but not limited to, project administration, field survey, excavation, lab analysis, land survey and cartography, archival research, budgeting, planning, and report writing/production. In those jurisdictions requiring professional certification, Mr. White is certified by the Counties of Riverside, Orange, and Ventura to conduct all phases of archaeological investigation.

Since 1983, Mr. White has conducted well over 500 prehistoric and historic archaeological investigations in Riverside, San Bernardino, Los Angeles, Orange, Kern, San Diego, Imperial, Sonoma, and Inyo Counties. Additionally, in concert with colleague Dr. David Van Horn, they have pioneered innovative techniques that revolutionized data recovery programs on large, low-density archaeological sites.

EDUCATION

B.A., Liberal Studies (emphasis in Anthropology), California State University Long Beach, 1987

A.A., Liberal Arts, Los Angeles Harbor College, 1977

PROFESSIONAL HISTORY

Joined Archaeological Associates in 1983
1991 to 2013, Director of Archaeological Associates
2013 to Present, Principal of Archaeological Associates
Riverside County Approved Archaeologist #164
Orange County Approved Archaeologist

PROFESSIONAL AFFILIATIONS

American Committee for the Preservation of Archaeological Collections (ACPAC)
Pacific Coast Archaeological Society.

PUBLICATIONS

Van Horn, David, Laura S. White, and Robert S. White

2005 The Prehistory of Gretna Green, a Site in Northern San Diego County, pp. 145-168 IN: Onward and Upward! Papers in honor of Clement W. Meighan (Keith L. Johnson, editor). Stansbury Publishing, Chico.

White, R.S.

1991 Prehistoric Fire-Making Techniques of California and Western Nevada. Pacific Coast Archaeological Society Quarterly, Vol. 27, No. 1, pp. 27-38.

Van Horn, D.M. and R.S. White

1986 Some Techniques for Mechanical Excavation in Salvage Archaeology. Journal of Field Archaeology, 13:239-244.

TRAINING

Tortoise Awareness Training. Joshua Tree, San Bernardino County (September, 2008).

SB 18 Consultation Seminar. Riverside (December, 2005). Offered through the Governor's Office of Planning and research et. al.

- 1987 B.A. in Liberal Studies with emphasis in Anthropology, California State University, Long Beach.
- 1977 A.A. Degree in Liberal Arts, Los Angeles Harbor College.
- Riverside County Certified Archaeologist #164
- Orange County Certified Archaeologist
- Over 30 years of full-time experience conducting cultural resource management projects in southern California.

APPENDIX B: Records Search Results

CULTURAL RESOURCES RECORDS SEARCH

On November 14, 2018, an in-person cultural resources records search was conducted by Robert S. White at the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton. Consequently, there is no official letter from the Information Center to attach here. The in-person search included a review of all previously recorded prehistoric and historic archaeological sites situated within a one-mile radius of the study area. Additionally, the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks (CHL), California Points of Historical Interest (CPHI), and the California Directory of Properties (DOP, aka the Historic Resources Inventory [HRI]) were reviewed for the purpose of identifying any historic properties. Copies of site record forms were obtained for those resources situated within a one-mile radius of the project. Pertinent archaeological reports were also were reviewed and all relevant information was incorporated into the study.

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Redlands, California 92374
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www.rinconconsultants.com

June 7, 2019
Project Number 19-07759

Greg Lukosky
VantageOne Real Estate Investments
4 Corporate Plaza, Suite 210
Newport Beach, CA 92660
Via email: greg@v1invest.com

Subject: **31479 Avenue E Historical Resource Study, Yucaipa, San Bernardino County, California**

Dear Mr. Lukosky:

This report presents the findings of a historical resources study of 31479 Avenue E, Yucaipa, San Bernardino County, California. VantageOne Real Estate Investments retained Rincon Consultants, Inc. (Rincon) to determine whether the subject property qualifies as a historical resource under the California Environmental Quality Act (CEQA). The present study included background and archival research and an intensive-level survey of the subject residence. All work was completed in compliance with CEQA.

Methods

Archival and Background Research

Archival research was completed in May and June 2019 and focused on the review of a variety of primary and secondary source materials relating to the history and development of the subject residence and its surroundings. Sources included, but were not limited to, historic maps and photographs, contemporary newspaper articles, and written histories of the area. The following is a list of sources consulted in order to conduct research pertaining to the subject property.

- Building permits and other documentation on file at the City of Yucaipa, Building and Safety Division and the County of San Bernardino, Land Uses Services Department
- Historic aerial photographs, USGS topographic maps, and city directory listings compiled by Environmental Data Research (EDR), Inc.
- Historic aerial photographs accessed digitally via Nationwide Environmental Title Research (NETR) Online, Inc. and the University of California, Santa Barbara Map & Imagery Lab
- Historic newspaper articles accessed digitally via newspapers.com

Intensive-Level Field Survey

Rincon conducted a historical resources field survey of the subject property on May 9, 2019. The survey consisted of a visual inspection of all built environment features on the propertyto assess overall condition and integrity, and to identify and document any potential character-defining features. Observations were recorded using detailed notes and digital photographs. A residence and shop building

were the only potential features. They were recorded and evaluated on California Department Parks and Recreation (DPR) 523 series forms, which are included as an attachment.

Findings

The subject property consists of a single-family residence constructed in 1946 and a shop building completed sometime between 1949 and 1953 (PIMS 2019; EDR 2019a). One story in height, the residence features structural adobe-brick exterior walls and elements of the Spanish Revival architectural style, including clay barrel tile roof cladding. Adjacent to the residence is the shop building, which is of simple clay brick construction and exhibits no discernable architectural style. Parts of the hillside immediately east of the residence are terraced with adobe- and clay-brick retaining walls.

In the 1850s, the family of John Dunlap acquired the subject property as part of a much larger tract of ranch land (Cotterman et al. 2012). By the 1920s, it was included as a parcel of the Yucaipa Land Company's Dunlap Ranch Subdivision 5 (San Bernardino County Assessor-Recorder-Clerk 1923). Historic aerial photographs and USGS topographical maps indicate the subject property remained undeveloped until the subject residence was constructed in the mid-1940s. In the ensuing years, residential development accelerated in the surrounding area, reflecting a wider housing boom in San Bernardino (EDR 2019a, 2018b; Yucaipa Valley Historical Society 2019).

The adobe construction of the residence reflects a revival of adobe building methods among Southern California architects in the mid-twentieth century. The development of mass-produced, water-resistant adobe bricks in the 1930s allowed for the material's widespread adoption, both as an alternative to conventional building materials and in homage to local building traditions that predated the arrival of Anglo-Americans in California starting in the 1840s. While the designs of postwar adobe residences most commonly reflected the influences of Spanish- and indigenous-influenced architectural styles, they were often executed in iterations the International, Ranch, and Minimal Traditional styles. In light of this, postwar adobe residential design is better characterized by formal and structural characteristics, including compact form, flexible floor plans, concrete supporting beams and lintels, and heavily constructed, load-bearing walls built of stabilized adobe bricks (Calarco 2008).

Research conducted for this study did not identify the individuals responsible for the development property, but ascertained that Elford and Marjorie Ransom Cummins were long-term owners and occupants of the property, starting in 1951 (PIMS 2019). Elford operated an electronics repair shop from the property. Marjorie was a painter and art teacher who was known locally and regionally for her work (*Redlands Daily Facts* 1957-1975). The Cummins family retained ownership of the property at least as late as 1980 (PIMS 2019). The City of Yucaipa incorporated in 1989, with the subject property situated within the city corporate boundary.

The subject property does not appear eligible for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR). The property was developed amid the post-World War II residential expansion of San Bernardino County, but was not important to this or any other event significant in local, state, or national history. It therefore does not appear eligible for listing under NHRP Criterion A or CRHR Criterion 1. Although, the property was once part of Dunlap Ranch, the buildings located on the parcel were developed at least two decades after the corresponding section of the ranch was subdivided and bear no known associations with the Dunlap family. Marjorie Ransom Cummins occupied the property with her husband Elford from 1951 until her death in 1978. Marjorie earned some acclaim locally and regionally as a painter. However, available sources do not provide a

scholarly perspective which suggests she is historically important within the context of art in the region, state, or nation. No other known owner or occupant of the subject property has made important historical contributions. As a result, the subject property does not appear eligible for listing under NRHP Criterion B or CRHR Criterion 2. The subject property consists of a vernacular adobe residence and a shop building with no discernable architectural style. While the residence may once have been an example of an adobe house built in the Post-World War II era, the application of concrete to the exterior walls has significantly impaired its integrity of materials, design, workmanship, and feeling such that it is no longer able to clearly represent this architectural type. The shop building is an undistinguished ancillary building and does not embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or possess high artistic values. Therefore, the property does not appear eligible for listing under NRHP Criterion C or CRHR Criterion 3. Because there is no reason to believe that it may yield important information about prehistory or history, it does not appear eligible for listing under NRHP Criterion D of CRHR Criterion 4. The subject property also does not appear eligible as a contributor to any existing or potential historic district.
Please see the attached California DPR 523 series forms for further details.

Conclusions

As detailed above, the subject property was found ineligible for listing in the NRHP or CRHH. As such, it does not qualify as a historical resource as defined by CEQA.

Should you have any questions concerning this study, please do not hesitate to contact any of the undersigned.

Sincerely,
Rincon Consultants, Inc.

James Williams, MA
Architectural Historian

Steven Treffers, MHP
Senior Architectural Historian

Attachment:

California DPR 523 Series Forms

References

Calarco, Dominic

2008 "Modern Adobe: Preservation of Pre- and Post-World War II Residential Construction in Southern California." Master's thesis, Goucher College.

Cotterman, Cary D, Evelyn N. Chandler, and Robert Cunningham

2012 Cultural Resources Inventory and Evaluation for the Casa Blanca Specific Plan, Yucaipa, San Bernardino County, California. Prepared for Meridian Land Development Company by ECORP Consulting, Inc. November.

Environmental Data Research (EDR), Inc.

2019a The EDR Aerial Photo Decade Package: 31479 Avenue E, Yucaipa, CA 92399. Inquiry Number: 5347105.31. June 28.

2019b EDR Historical Topo Map Report: 31479 Avenue E, Yucaipa, CA 92399. Inquiry Number: 5347105.23. June 27.

Redlands Daily Facts

1957 "Local Notes," June 6. Via Newspapers.com [electronic database'. https://www.newspapers.com/. Accessed May 7, 2019.

1958 "Mrs. Heard Takes Three Awards at Art Show," August 25. Via Newspapers.com [electronic database'. https://www.newspapers.com/. Accessed May 7, 2019.

1962 "Mrs. Cummins Painting Exhibit at Orange Show," March 1. Via Newspapers.com [electronic database'. https://www.newspapers.com/. Accessed May 7, 2019.

1964 "Cummins Oil Painting Hung at Library," July 14. Via Newspapers.com [electronic database'. https://www.newspapers.com/. Accessed May 7, 2019.

1975 "Cummins Art to Be Shown," December 4. Via Newspapers.com [electronic database'. https://www.newspapers.com/. Accessed May 7, 2019.

1975 "At 80, She's Found Fountain of Youth," December 6. Via Newspapers.com [electronic database'. https://www.newspapers.com/. Accessed May 7, 2019.

San Bernardino, County of: Assessor-Recorder-County Clerk

1923 Subdivision 5 of Part of the Dunlap Ranch. Book 23, pages 57 and 58.

San Bernardino, County of: Property Information Management System (PIMS)

2019 Property information pertaining to 31479 Avenue E, Yucaipa, Calif. http://www.sbcounty.gov/assessor/pims. Accessed May 8, 2019.

Yucaipa Valley Historical Society (YVHS)

2019 "Summary of Yucaipa History." http://www.yucaipahistory.org/frm_yucaipa_history.htm. Accessed May 9, 2019.

Attachment A

California DPR 523 Series Forms

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** 31479 Avenue E

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** San Bernardino

***b. USGS 7.5' Quad:** *Yucaipa* **Date:** 1967 Township 2S, Range 2W, Section N/A S.B.**B.M.**

c. Address: 31479 Avenue E City: Yucaipa Zip: 92373

d. UTM: Zone: mE/ mN (G.P.S.)

e. Other Locational Data: APN: 0300-192-08-0000

***P3a. Description:**

The subject property consists of a single-family residence and shop building situated on an irregular-shaped 1.6-acre parcel. The vernacular adobe residence is one story possesses a sprawling, irregular plan. It rises from a concrete foundation to culminate in a complex hipped and gabled roof with clay barrel tiles. Plaster and broad expanses of non-original Portland cement sheathe the building's adobe brick structure, some of which is exposed, due to weathering. Scalloped vertical wood-plank siding appears in the gable ends. Windows display wood sashes in various configurations. Primary entrances are located on the front facing east elevation, where the door types are obscured by metal security screens. The building's original front door is adjacent to the broad, stucco-clad external chimney. A secondary entrance is located at the south end of the building, and is flanked by wood-sash sidelights and fixed, multi-pane picture windows. The materials and method of construction at this location suggest the entryway is not original and may have replaced a garage door. A large, pent extension of the roof shelters a broad porch that runs most of the width of the rear elevation. Due to the application of non-original plaster wall cladding and installation of a secondary entrance, the building presents as highly altered.

Located east of the residence is the one-story shop building, which exhibits no discernable architectural style. The rectangular-plan building sits on a concrete foundation and is capped with a flat roof clad in rolled composition material. Its walls are constructed of structural brick with a band of scalloped vertical-plank cladding. The east-facing main elevation features a multi-section jalousie window adjacent to a set of glazed wood-panel double doors. Additional fenestration includes horizontally sliding, aluminum-frame windows on the north and south elevations and a wood-panel replacement door on the south elevation. A brick planter is located beneath the window on the main elevation.

The hillside in front of the residence is terraced, with retaining walls constructed alternately of adobe and conventional bricks. Some levels of the terrace are planted with mature trees. A low, adobe-brick wall encloses a small lawn in front of the residence. Additional landscaping consists of mature palms and trees and small shrubs. The remainder of the property consists of an unimproved hillside.

***P3b. Resource Attributes:** HP2. Single family property; HP4. Ancillary building

***P4. Resources Present:** ■ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo:
Overview of 31479 Avenue E, with residence (left) and shop building (right). Camera facing north.

***P6. Date Constructed/Age and Sources:**
■ Historic ☐ Prehistoric ☐ Both

1946 (PIMS 2019); 1949-1953 (EDR 2019a)

***P7. Owner and Address:**
N/A

***P8. Recorded by:**
James Williams
Rincon Consultants
301 9th Street, Suite 109
Redlands, CA 92374

***P9. Date Recorded:**
May 9, 2019

***P10. Survey Type:**
Intensive pedestrian

***P11. Report Citation:**

Williams, James, Lindsey Porras, and Steven Treffers. 2019. *31479 Avenue E Historical Resource Study, Yucaipa, San Bernardino County, California*. Prepared for VantageOne Real Estate Investments by Rincon Consultants, Inc.

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

State of California X Natural Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

LOCATION MAP

Trinomial

Page 2 **of** 6 ***Resource Name or #** 31479 Avenue E
***Map Name:** *Yucaipa* ***Scale:** 1:24,000 ***Date of map:** 1967



BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** 31479 Avenue E ***NRHP Status Code** 6Z
Page 3 **of** 6

B1. Historic Name: N/A
B2. Common Name: N/A
B3. Original Use: Residential B4. Present Use: Residential
***B5. Architectural Style:** Vernacular
***B6. Construction History:**

According to San Bernardino County property records, the residence was constructed in 1946. Alterations include the application of several patches of cement to the exterior and the installation of a secondary entryway on the east elevation. Historic aerial photographs indicate the shop building was constructed sometime between 1949 and 1953. Its secondary entry door was replaced in recent years.

***B7. Moved?** ■ **No** □ **Yes** □ **Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:** None
B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** N/A **Area** N/A
Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A

The subject property consists of a single family residence constructed in 1946 and shop building constructed sometime between 1949 and 1953. The property was once part of the Dunlap Ranch, named for the family of John Dunlap, who settled in the area in 1854. Dunlap and his heirs engaged in various agricultural pursuits through the remainder of the nineteenth century (Cotterman et al. 2012). By the 1920s, the portion of the ranch on which the subject property is located was subdivided by the Yucaipa Land Company (San Bernardino County Recorder 1923). Historic aerial photographs and USGS topographical maps indicate the property remain undeveloped at least as late as 1938 (EDR 2019a, 2019b).

A year after the conclusion of World War II, the subject residence was developed in what was then the unincorporated community of Yucaipa. Research conducted for the present study did not reveal the identity of any individual responsible for the construction of the residence. In the years immediately following World War II, peach, plum, and walnut orchards still filled the area surrounding Yucaipa (YVHS 2019). However, agricultural land increasingly gave way to residential development, as San Bernardino County grew with Southern California's regional population boom (YVHS 2019). Historic aerial photographs show that, in 1949, three years after the subject property was completed, much of the surrounding area remained in use as orchards (EDR 2019a).

B11. Additional Resource Attributes: N/A
***B12. References:**

Ancestry.com. 2014. U.S., Social Security Death Index, 1935-2014 [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc.

Calarco, Dominic. 2008. "Modern Adobe: Preservation of Pre- and Post-World War II Residential Construction in Southern California." Master's thesis, Goucher College.

Cotterman, Cary D, Evelyn N. Chandler, and Robert Cunningham
2012 Cultural Resources Inventory and Evaluation for the Casa Blanca Specific Plan, Yucaipa, San Bernardino County, California. Prepared for Meridian Land Development Company by ECORP Consulting, Inc. November.

Environmental Data Research (EDR), Inc. 2019a. The EDR Aerial Photo Decade Package: 31479 Avenue E, Yucaipa, CA 92399. Inquiry Number: 5347105.31. June 28.

(See continuation sheet.)

B13. Remarks:
***B14. Evaluator:** James Williams, Rincon Consultants
***Date of Evaluation:** May 10, 2019

(This space reserved for official comments.)



***Recorded by:** James Williams, Rincon Consultants ***Date:** June 5, 2019 ■Continuation ☐Update

B10. Significance (continued):

The residence was constructed with adobe bricks amid a mid-twentieth-century revival of adobe residential construction in the U.S. Southwest. Starting in the 1920s, several California-based architects, Clarence Cullimore chief among them, embraced new methods of design and construction that emphasized structural rigor and modern conveniences, while retaining the "warmth… and beauty" of traditional adobe construction methods. In the 1930s, the American Bitumals Company of San Francisco and the Madera-based Hans Sumpf Company pioneered the mass production of the stabilized adobe brick, often sold under the trademark Bituadobe. Such bricks were distinguished by the addition of emulsified asphalt to the traditional adobe admixture of earth and water, which gave the bricks a degree of waterproofing and durability not present in traditional adobe. In the 1930s and 1940s, such publications as *Sunset* magazine and *Arts and Architecture* helped to popularize adobe residential construction as an alternative to conventional methods. While the designs of postwar adobe residences most commonly reflected the influences of Spanish- and indigenous-influenced architectural styles, they were often executed in iterations of the International, Ranch, and Minimal Traditional styles. In light of this, postwar adobe residential design is better characterized by formal and structural characteristics, including compact form, flexible floor plans, concrete supporting beams and lintels, and heavily constructed, load-bearing walls built of stabilized adobe bricks (Calarco 2008).

Elford "Al" and Marjorie Ransom Cummins moved into the property by October 1951, when the *Redlands Daily Facts* reported their housewarming party. Elford was electronics engineer who operated a television and radio repair service from the property. Marjorie was an artist and art teacher whose Almar Studio was located on the subject property. A practitioner of what she called "esthetic realism," Marjorie worked primarily in oil and watercolor, producing landscapes, seascapes, and still life. She specialized in the depiction of flowers. Marjorie's reputation won her such local commissions as her hand-painted tilework for the Redlands Daily Facts building and an unspecified painting hung over the circulation desk at A.K. Smiley Library in Redlands. Her work was also shown in exhibitions and contests throughout California (*Redlands Daily Facts* var.; *San Bernardino County Sun* var.). Marjorie passed away in 1978 (Ancestry.com 2014). Research conducted for this study suggests that, despite her local success, Marjorie completed no well-known works of art and did not instruct or otherwise influence any important artists.

By 1959, Interstate 10 was constructed along the south boundary of the subject parcel. In the following decades, residential development continued in the surrounding area (EDR 2019a). The property remained in the possession of the Cummins family at least as late as 1981 (PIMS 2019). Subsequent owners and occupants included Fred, Jeanette, and Gladys Bergon, Geraldine and Howard Morrow, Adella and Forrest Greek, and Gudrun Strong (Pims 2019; EDR 2018c The City of Yucaipa incorporated in 1989, with the subject property situated within the city corporate boundary.

The subject property does not appear eligible for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR). The property was developed amid the post-World War II residential expansion of San Bernardino County, but was not important to this or any other event significant in local, state, or national history. It therefore does not appear eligible for listing under NHRP Criterion A or CRHR Criterion 1. Although, the property was once part of Dunlap Ranch, the buildings located on the parcel were developed at least two decades after the corresponding section of the ranch was subdivided and bear no known associations with the Dunlap family. Marjorie Ransom Cummins occupied the property with her husband Elford from 1951 until her death in 1978. Marjorie earned some acclaim locally and regionally as a painter. However, available sources do not provide a scholarly perspective which suggests she is historically important within the context of art in the region, state, or nation. No other known owner or occupant of the subject property has made important historical contributions. As a result, the subject property does not appear eligible for listing under NRHP Criterion B or CRHR Criterion 2. The subject property consists of a vernacular adobe residence and a shop building with no discernable architectural style. While the residence may once have been an example of an adobe house built in the Post-World War II era, the application of concrete exterior wall cladding has impaired its integrity of materials, design, workmanship, and feeling such that it is no longer able to clearly represent this architectural type. The shop building is an undistinguished ancillary building and does not embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, or possess high artistic values. Therefore, the property does not appear eligible for listing under NRHP Criterion C or CRHR Criterion 3. Because there is no reason to believe that it may yield important information about prehistory or history, it does not appear eligible for listing under NRHP Criterion D of CRHR Criterion 4. The subject property also does not appear eligible as a contributor to any existing or potential historic district.

B12. References (continued):

_____. 2019b. EDR Historical Topo Map Report: 31479 Avenue E, Yucaipa, CA 92399. Inquiry Number: 5347105.23. June 27.

_____. 2019b. The EDR-City Directory Image Report. 31479 Avenue E, Yucaipa, CA 92399. Inquiry Number: 5347105.24. June 29.

Redlands Daily Facts. Via Newspapers.com [electronic database'. https://www.newspapers.com/. Accessed May 7, 2019.
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1964. "Cummins Oil Painting Hung at Library," July 14.
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P5a. Photographs (continued):



Photograph 2. Partial view of main (east) elevation. Camera facing west.

P5a. Photographs (continued):



Photograph 2. Representative view of cement cladding on residence. Camera facing west.



Photograph 4. Shop building, north and east elevations. Camera facing south.

GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • MATERIALS TESTING & INSPECTION • FORENSIC • LABORATORY

SALEM
engineering group, inc.

GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED COMMERCIAL DEVELOPMENT
SWC YUCAIPA BOULEVARD & 18TH STREET
YUCAIPA, CALIFORNIA

SALEM PROJECT NO. 3-218-0666B
AUGUST 29, 2018

PREPARED FOR:

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August 29, 2018 Project No. 3-218-0666B

Mr. Thomas N. Robinson
VantageOne Real Estate Investments, LLC
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Newport Beach, CA 92660

SUBJECT: GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED COMMERCIAL DEVELOPMENT
SWC YUCAIPA BOULEVARD & 18TH STREET
YUCAIPA, CALIFORNIA

Dear Mr. Robinson:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this Geotechnical Engineering Investigation report for the Proposed Commercial Development to be located at the subject site.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

Clarence Jiang, GE
Senior Geotechnical Engineer
RGE 2477



R. Sammy Salem, MS, PE, GE
Principal Engineer
RCE 52762 / RGE 2549



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GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED COMMERCIAL DEVELOPMENT
SWC YUCAIPA BOULEVARD & 18TH STREET
YUCAIPA, CALIFORNIA

1. PURPOSE AND SCOPE

This report presents the results of our Geotechnical Engineering Investigation for the Proposed Commercial Development in the City of Yucaipa, California (see Figure 1, Vicinity Map).

The purpose of our geotechnical engineering investigation was to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed. The scope of the investigation does not include a fault study.

The scope of this investigation included a field exploration, percolation testing, laboratory testing, engineering analysis and the preparation of this report. Our field exploration was performed on August 1 through August 3, 2018, and included the drilling of nineteen (19) small-diameter soil borings to a maximum depth of 50½ feet at the site. Additionally, six (6) percolation tests were performed at depths of approximately 2 and 10 feet below existing grade for the determination of the infiltration rate. The locations of the soil borings and percolation tests are depicted on Figure 2, Site Plan. A detailed discussion of our field investigation, exploratory boring logs are presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical properties for engineering analyses. Appendix B presents the laboratory test results in tabular and graphic format.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. If project details vary significantly from those described herein, SALEM should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

2. PROJECT DESCRIPTION

Based on the information provided to us, we understand that the proposed development of the site will include construction of a 34,000 square-foot health club (fitness), a 52,500 square-foot Major 2 (retail), six 3,000 to 5,000 square-foot fast-food and restaurant pads, a 9,000 square-foot Shop 1 (restaurants) shop, and a 3,220 square-foot carwash tunnel with a 240 square-foot office building and a 1,380 square-

foot equipment building. The existing gas station located at the northwest corner of the site will remain. On-site parking and landscaping are planned to be associated with the project.

A site grading plan was not available at the time of preparation of this report. As the existing project area is uneven and gently to considerably sloping down from Yucaipa Boulevard, we anticipate that fills during the earthwork will be minimal to substantial in providing level building pads and positive site drainage. The southern portion of the site is expected to receive over 10 to 15 feet of fill.

No significant cut is anticipated for the proposed development. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified. The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

3. SITE LOCATION AND DESCRIPTION

The site is irregular in shape and encompasses approximately 23.10 acres. The site is located on the southwest corner of Yucaipa Boulevard and 18th Street in the City of Yucaipa, California (see Site Plan, Figure 2). The northwest corner of the site is occupied by a gas station. The remaining site is vacant with debris, rocks, boulders, broken concrete slabs, dirt mounds, miscellaneous debris, and vegetation growths.

Based on available information, the norther portion of the site appeared to have been graded with more than 10 feet of fill. At the time of our field exploration, the site topography consisted of multiple uneven slopes, mounds and depressions. The site elevations range from approximately 2,120 to 2,070 feet above mean sea level based on Google Earth imagery.

4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings (B-5 through B-23) were drilled on August 1 through August 3, 2018 in the areas shown on the Site Plan, Figure 2. The test borings were advanced with a 6-inch diameter hollow stem auger, and a 4-inch solid flight auger rotated by a truck-mounted CME 55 drill rig. The test borings were extended to a maximum depth of 50½ feet below existing grade.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer and stratification lines were approximated on the basis of observations made at the time of drilling. Visual classification of the materials encountered in the test borings were generally made in accordance with the Unified Soil Classification System (ASTM D2487). A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A."

The logs of the test borings are presented in Appendix "A." The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The location of the test borings were determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

Soil samples were obtained from the test borings at the depths shown on the logs of borings. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content. The borings were backfilled with soil cuttings after completion of the drilling.

5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, density, shear strength, consolidation potential, expansion index, maximum density and optimum moisture determination, and gradation of the materials encountered.

In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

6. GEOLOGIC SETTING

The site is located within the northwestern portion of the San Gorgonio pass within the northernmost portion of the Peninsular Ranges Geomorphic Province. The San Gorgonio Pass is a tectonic physiographic feature that separates the San Bernardino Mountains of the Transverse Ranges on the north and the San Jacinto Mountains on the south. The San Gorgonio Pass is expressed as a narrow notch that cuts through the mountains into the Colorado Desert to the east. Most of the vicinity is underlain by a thick sequence of terrestrial sediments that rest on the basement comprising igneous-metamorphic rocks. Alluvium sediments have been deposited from Live Oak Creek and tributary channels. Deposits encountered on the subject site during exploratory drilling are discussed in detail in this report.

7. GEOLOGIC HAZARDS

7.1 Faulting and Seismicity

The Peninsular Range has historically been a province of high seismic activity. The nearest faults to the project site are associated with the San Andreas fault system located approximately 5.1 miles from the site. There are no known active fault traces in the project vicinity. Based on mapping and historical seismicity, the seismicity of the Peninsular Range has been generally high by the scientific community.

The site is not located within the Alquist-Priolo Earthquake Fault zone (AP Zone) and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D in accordance with Chapter 16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category E.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 34.0288° North; site longitude is 117.1151° West. The ten closest active faults are summarized below in Table 7.1.

TABLE 7.1
REGIONAL FAULT SUMMARY

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB+SSB+BG+CO	5.1	8.2
San Jacinto; SBV+SJV+A+CC+B+SM	5.3	7.9
San Jacinto; SBV	7.1	7.1
San Jacinto, A+CC+B+SM	9.5	7.6
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB	10.4	8.0
Cleghorn	18.3	6.8
S. San Andreas; BG+CO	18.7	7.4
Cucamonga	21.5	6.7
North Frontal (West)	21.8	7.2
Pinto Mtn	22.7	7.3

The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.

7.2 Surface Fault Rupture

The site is not within a currently established State of California Earthquake Fault Zone for surface fault for rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low.

7.3 Ground Shaking

We used the USGS web-based application *US Seismic Design Maps* to estimate the peak ground acceleration adjusted for site class effects (PGA_M). Because of the proximity to the subject site and the maximum probable events for these faults, it appears that a maximum probable event along the fault zones could produce a peak horizontal acceleration of approximately 0.65g (2% probability of being exceeded in 50 years). While listing PGA is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including frequency and duration of motion and soil conditions underlying the site.

7.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure

with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. However, liquefaction has occurred in soils other than clean sand.

The soils encountered within the depth of 50½ feet on the project site consisted predominately of sandy silt with various amounts of clay and silty sand with various amounts of clay and gravel. Groundwater was not encountered during this investigation. Low to very low cohesion strength is associated with the sandy soil. A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands. The site was evaluated for liquefaction potential. The liquefaction analysis indicated that the soils had a low potential for liquefaction under seismic condition. Therefore, no mitigation measures are warranted.

7.5 Seismic Densification

One of the most common phenomena during seismic shaking accompanying any earthquake is the induced settlement of loose unconsolidated soils. Based on site subsurface conditions and the seismicity of the region, any loose granular materials at the site could be vulnerable to this potential hazard. Our analysis of dynamic densification of "dry" soil in the upper 50 feet of soil profile was performed.

For the analysis, a maximum earthquake magnitude of 8.2 M_w and a peak horizontal ground surface acceleration of 0.65g (with a 2 percent probability of exceedance in 50 years) were considered appropriate for the analysis. The seismic densification of dry to damp alluvial sandy soils due to onsite seismic activity is calculated to have a total settlement of approximately 0.47 inch. The seismic settlement analysis is included in Appendix A.

7.6 Lateral Spreading

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relatively flat site topography and low potential for liquefaction, we judge the likelihood of lateral spreading to be low.

7.7 Landslides

There are no known landslides at the site, nor is the site in the path of any known or potential landslides. We do not consider the potential for a landslide to be a hazard to this project.

7.8 Tsunamis and Seiches

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

8. SOIL AND GROUNDWATER CONDITIONS

8.1 Subsurface Conditions

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted of up to 10½ feet of fill material underlain by alluvium deposits of stiff to very stiff sandy silt with various amounts of clay and loose to very dense silty sand with various amounts of clay and gravel. The fill consisted of medium dense to very dense silty sand with varying amounts of clay and gravel, and very stiff to hard sandy silt with various amounts of clay.

Thicker fill soils may be present onsite between our test boring locations. Limited testing was performed on the fill soils during the time of our field and laboratory investigations. The limited testing indicates that some compaction effort had been applied to the fill soils during placement. However, the consistency of the fills should be verified during site construction. Prior to fill placement, Salem Engineering Group, Inc. should inspect the bottom of the excavation to verify no additional excavation will be required. Verification of the extent of fill should be determined during site grading.

Based on available information and current site conditions, it appears the fill was associated with previous grading operations performed within portions of the site. It's unclear whether or not the fill has been certified. If the fill was placed with inspection and testing, it's recommended any compaction reports related to the fill placement be provided to us for an evaluation.

Based on the laboratory test results, the fill had a relative compaction of 84.8 to 97.6 percent of the anticipated maximum dry density based on ASTM D1557-07 Test Method with moisture content of 3.6 to 11.3%.

The soils were classified in the field during the drilling and sampling operations. The stratification lines were approximated by the field engineer on the basis of observations made at the time of drilling. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted. The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The locations of the test borings were determined by measuring from feature shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

8.2 Groundwater

The test boring locations were checked for the presence of groundwater during and after the drilling operations. Free groundwater was not encountered during this investigation.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

8.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2014 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water.

A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride.

The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be 50 mg/kg. ACI 318 Tables 19.3.1.1 and 19.3.2.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 8.3 below.

TABLE 8.3
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS

Water Soluble Sulfate (SO_4) in Soil, % by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Min. Concrete Compressive Strength	Cementations Materials Type
0.0050	Not Applicable	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 49 mg/kg. This level of chloride concentration is not considered to be severely corrosive.

It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

8.4 Percolation Testing

Six percolation tests (P-3 through P-8) were performed within assumed infiltration areas and were conducted in accordance with the guidelines established by the County of San Bernardino. The approximate locations of the percolation tests are shown on the attached Site Plan, Figure 2.

The boreholes were advanced to the depths shown on the percolation test worksheets. The holes were pre-saturated before percolation testing commenced. Percolation rates were measured by filling the test holes with clean water and measuring the water drops at a certain time interval. The difference in the percolation rates are reflected by the varied type of soil materials at the bottom of the test holes. The test results are shown on the table below.

PERCOLATION TEST RESULTS

Test No.	Depth (feet)	Measured Percolation Rate (min/inch)	Infiltration Rate* (inch/hour)	Soil Type
P-3	2	31.3	0.30	Silty SAND (SM)
P-4	2	22.7	0.43	Silty SAND (SM)
P-5	10	125.0	0.03	Silty SAND (SM)
P-6	9.5	25.0	0.40	Silty SAND (SM)
P-7	9	27.8	0.18	Silty SAND (SM)
P-8	9.8	27.8	0.11	Silty SAND (SM)

*** Tested infiltration Rate = (ΔH 60 r) / (Δt(r + 2H_{avg}))**

The soil infiltration or percolation rates are based on tests conducted with clear water. The infiltration/percolation rates may vary with time as a result of soil clogging from water impurities. The infiltration/percolation rates will deteriorate over time due to the soil conditions.

The soils may also become less permeable to impermeable if the soil is compacted. Thus, periodic maintenance consisting of clearing the bottom of the drainage system of clogged soils should be expected. The infiltration/percolation rate may become slower if the surrounding soil is wet or saturated due to prolonged rainfalls. Additional percolation tests should be conducted at bottom of the drainage system during construction to verify the infiltration/percolation rate. Groundwater, if closer to the bottom of the drainage system, will also reduce the infiltration/percolation rate.

The scope of our services did not include a groundwater study and was limited to the performance of percolation testing and soil profile description, and the submitted data only. Our services did not include those associated with septic system design. Neither did services include an Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands. Any statements, or absence of statements, in this report or on any boring logs regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

The geotechnical engineering information presented herein is based upon professional interpretation utilizing standard engineering practices. The work conducted through the course of this investigation, including the preparation of this report, has been performed in accordance with the generally accepted standards of geotechnical engineering practice, which existed in the geographic area at the time the report was written. No other warranty, express or implied, is made.

Please be advised that when performing percolation testing services in relatively small diameter borings, that the testing may not fully model the actual full scale long term performance of a given site. This is particularly true where percolation test data is to be used in the design of large infiltration system such as may be proposed for the site. The measured percolation rate includes dispersion of the water at the sidewalls of the boring as well as into the underlying soils. Subsurface conditions, including percolation rates, can change over time as fine-grained soils migrate. It is not warranted that such information and interpretation cannot be superseded by future geotechnical engineering developments. We emphasize that this report is valid for the project outlined above and should not be used for any other sites.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1 General

9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction of improvements at the site as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.

9.1.2 The primary geotechnical constraints identified in our investigation is the presence of fill materials and the potentially compressible (collapsible) soils at the site. Recommendations to mitigate the effects of these soils are provided in this report.

9.1.3 Up to 10½ feet of fill soils were encountered in our borings. Thicker fill soils may be present onsite between our test boring locations. Limited testing was performed on the fill soils during the time of our field and laboratory investigations. The limited testing indicates that some compaction effort had been applied to the fill soils during placement. However, the consistency of the fills should be verified during site construction. Prior to fill placement, Salem Engineering Group, Inc. should inspect the bottom of the excavation to verify no additional excavation will be required. Any loose or undocumented fill soils encountered during construction should be replaced with Engineered Fill.

9.1.4 The scope of our services for the investigation does not include a slope stability evaluation of the site. Slopes should be constructed in accordance with the typical figures and details as shown in the General Earthwork and Pavement Specifications, Appendix C (i.e. Stabilization Fill, Buttress Fill, Daylight Shear key, Shear Key, Fill Slope above Natural Ground, Fill Slope Above Cut Slope, Backdrain, Geofabric Subdrain, Benching for Compacted Fill, Rock Disposal, Canyon Subdrain and Transition Lot).

9.1.5 Where fill slopes are to be constructed on original ground that slopes steeper than 6:1 (horizontal to vertical), the ground should be stepped or benched. The benches should be cut into the dense slope as the grading operations proceed. The first bench (base or key bench) should be at least 15 feet wide. Each bench should consist of a minimum 8 feet wide of level terrace, with the rise to the next bench held for 4 feet or less.

9.1.6 The horizontal distance between the outer edges of the footing bottom and the adjacent slope face should be at least 10 feet.

9.1.7 To reduce the erosion of graded slopes, it is recommended that all slopes be planted with ground cover vegetation and deep rooted vegetation as soon as practical. The proper maintenance of proper lot drainage and vegetation should be performed. Over-irrigation should be prevented. A rodent control program should be established and maintained.

9.1.8 All surface runoff should be directed away from the slope and toward approved drainage devices.

9.1.9 Site demolition activities shall include removal of all surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. It is suspected that possible demolition activities of the existing structures may disturb the upper soils. After demolition activities, it is recommended that disturbed soils be removed and/or recompacted.

9.1.10 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 6 to 10 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. The stripped vegetation, will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

9.1.11 The near-surface onsite soils are moisture-sensitive and are moderately to highly compressible (collapsible soil) under saturated conditions. Proposed structures may experience excessive post-construction settlement, when the foundation soils become near saturated. The collapsible or weak soils should be removed and recompacted according to the recommendations in the Grading section of this report (Section 9.5).

9.1.12 Based on the subsurface conditions at the site and the anticipated structural loading, we anticipate that the proposed structures may be supported using conventional shallow foundations provided that the recommendations presented herein are incorporated in the design and construction of the project.

9.1.13 Provided the site is graded in accordance with the recommendations of this report and foundations constructed as described herein, we estimate that total settlement due to static and seismic loading utilizing conventional shallow foundations for the proposed building will be within 1½ inches and corresponding differential settlement will be less than ¾ inch over 20 feet.

9.1.14 All references to relative compaction and optimum moisture content in this report are based on ASTM D 1557 (latest edition).

9.1.15 SALEM shall review the project grading and foundation plans prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required. If SALEM is not provided plans and specifications for review, we cannot assume any responsibility for the future performance of the project.

9.1.16 SALEM shall be present at the site during site demolition and preparation to observe site clearing/demolition, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

9.1.17 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

9.2 Seismic Design Criteria

9.2.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2016 CBC, our recommended parameters are shown below. These parameters are based on Probabilistic Ground Motion of 2% Probability of Exceedance in 50 years. The Site Class was determined based on the results of our field exploration.

TABLE 9.2.1
SEISMIC DESIGN PARAMETERS

Seismic Item	Symbol	Value	2010 ASCE 7 or 2016 CBC Reference
Site Coordinates (Datum = NAD 83)		34.0288 Lat -117.1151 Lon	
Site Class	--	D	ASCE 7 Table 20.3
Soil Profile Name	--	Stiff Soil	ASCE 7 Table 20.3
Risk Category	--	II	CBC Table 1604.5
Site Coefficient for PGA	F_{PGA}	1.000	ASCE 7 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	PGA_M	0.65 g	ASCE 7 Equation 11.8-1
Seismic Design Category	SDC	E	ASCE 7 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	S_S	1.616 g	CBC Figure 1613.3.1(1-6)
Mapped Spectral Acceleration (1.0 sec. period)	S_1	0.764 g	CBC Figure 1613.3.1(1-6)
Site Class Modified Site Coefficient	F_a	1.000	CBC Table 1613.3.3(1)
Site Class Modified Site Coefficient	F_v	1.500	CBC Table 1613.3.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	S_{MS}	1.616 g	CBC Equation 16-37
MCE Spectral Response Acceleration (1.0 sec. period) $S_{M1} = F_v S_1$	S_{M1}	1.145 g	CBC Equation 16-38
Design Spectral Response Acceleration $S_{DS}=⅔S_{MS}$ (short period - 0.2 sec)	S_{DS}	1.077 g	CBC Equation 16-39
Design Spectral Response Acceleration $S_{D1}=⅔S_{M1}$ (1.0 sec. period)	S_{D1}	0.764 g	CBC Equation 16-40

9.2.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

9.3 Soil and Excavation Characteristics

9.3.1 Based on the soil conditions encountered in our soil borings, the upper soils can be excavated with moderate to intensive effort using conventional heavy-duty earthmoving equipment.

9.3.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

9.3.3 The upper soils are moisture-sensitive and moderately compressible (collapsible) under saturated conditions. These soils, in their present condition, possess moderate risk to construction in terms of possible post-construction movement of the foundations and floor systems if no mitigation measures are employed. Accordingly, measures are considered necessary to reduce anticipated collapse potential. Mitigation measures will not eliminate post-construction soil movement, but will reduce the soil movement. Success of the mitigation measures will depend on the thoroughness of the contractor in dealing with the soil conditions.

9.3.4 The near surface soils identified as part of our investigation are, generally, moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. Exposed native soils exposed as part of site grading operations shall not be allowed to dry out and should be kept continuously moist prior to placement of subsequent fill.

9.4 Materials for Fill

9.4.1 Excavated soils generated from cut operations at the site are suitable for use as general Engineered Fill in structural areas, provided they have an expansion index (EI) of less than 30; and do not contain deleterious matter, organic material, or rock material larger than 3 inches in maximum dimension.

9.4.2 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.

9.4.3 Import soil shall be well-graded, slightly cohesive silty fine sand or sandy silt, with relatively impervious characteristics when compacted. A clean sand or very sandy soil is not acceptable for this purpose. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.4.3.

TABLE 9.4.3
IMPORT FILL REQUIREMENTS

Minimum Percent Passing No. 200 Sieve	20
Maximum Percent Passing No. 200 Sieve	50
Minimum Percent Passing No. 4 Sieve	80
Maximum Particle Size	3"
Maximum Plasticity Index	12
Maximum CBC Expansion Index	20

9.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered.

9.4.5 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

9.5 Grading

9.5.1 A SALEM representative should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.

9.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.

9.5.3 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.

9.5.4 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 2 to 4 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, asphalt and concrete materials will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

9.5.5 Medium- to large- trees were present on the western boundary of the site. Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than ½ inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

9.5.6 Structural building pad areas should be considered as areas extending a minimum of 5 feet horizontally beyond the outside dimensions of buildings, including footings and non-cantilevered overhangs carrying structural loads.

9.5.7 To minimize post-construction soil movement and provide uniform support for the proposed buildings, it is recommended that the overexcavation and recompaction within the proposed building area be performed to a minimum depth of **three (3)** feet below existing grade or **three (3)** feet below proposed footing bottom, whichever is deeper. The overexcavation and recompaction should also extend laterally to a minimum of 5 feet beyond the building area.

9.5.8 Within pavement and canopy areas, it is recommended that the overexcavation and recompaction be performed to a minimum depth of **one (1) foot** below existing grade or proposed grade, whichever is deeper. The overexcavation and recompaction should also extend laterally to a minimum of 2 feet beyond the pavement area.

9.5.9 Final pavement subgrade should be finished to a smooth, unyielding surface. We further recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base.

9.5.10 <u>All uncompacted fill materials encountered during grading should be removed and replaced with engineered fill. The actual depth of the overexcavation and recompaction should be determined by our field representative during construction.</u>

9.5.11 <u>Up to 10½ feet of fill soils were encountered in our borings. Thicker fill soils may be present onsite between our test boring locations. Limited testing was performed on the fill soils during the time of our field and laboratory investigations. The limited testing indicates that some compaction effort had been applied to the fill soils during placement. However, the consistency of the fills should be verified during site construction.</u>

9.5.12 Prior to placement of fill soils, the upper 8 to 10 inches of native subgrade soils should be scarified, moisture-conditioned to **<u>no less</u>** than the optimum moisture content and recompacted to a minimum of 95 percent of the maximum dry density based on ASTM D1557-07 Test Method.

9.5.13 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in thin lifts to allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).

9.5.14 All Engineered Fill soils should be placed, moisture conditioned to near optimum moisture content, and compacted to at least 95% relative compaction.

9.5.15 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

9.5.16 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.

9.5.17 We do not anticipate groundwater or seepage to adversely affect construction if conducted during the drier moths of the year (typically summer and fall). However, groundwater and soil moisture conditions could be significantly different during the wet season (typically winter and spring) as surface soil becomes wet; perched groundwater conditions may develop. Grading during this time period will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If the construction schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.

9.5.18 The soils, during wet winter months, may become very moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. The wet soils may become non conducive to site grading as the upper soils yield under the weight of the construction equipment. Therefore, mitigation measures should be performed for stabilization.

Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation.

To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose. If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 6 to 24 inches of ¾-inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 6 to 24 inches of crushed rock material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. A layer of geofabric is recommended to be placed on top of the compacted crushed rock to minimize migration of soil particles into the voids of the crushed rock, resulting in soil movement. Although it is not required, the use of geogrid (e.g. Tensar

BX 1100 or TX 160) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization.

Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

9.6 Shallow Foundations

9.6.1 The site is suitable for use of conventional shallow foundations consisting of continuous footings and isolated pad footings bearing in properly compacted Engineered Fill.

9.6.2 The bearing wall footings considered for the structure should be continuous with a minimum width of 15 inches and extend to a minimum depth of 18 inches below the lowest adjacent grade. Isolated column footings should have a minimum width of 24 inches and extend a minimum depth of 18 inches below the lowest adjacent grade.

9.6.3 The bottom of footing excavations should be maintained free of loose and disturbed soil. Footing concrete should be placed into a neat excavation.

9.6.4 Footings proportioned as recommended above may be designed for the maximum allowable soil bearing pressures shown in the table below.

Loading Condition	Allowable Bearing
Dead Load Only	2,500 psf
Dead-Plus-Live Load	3,000 psf
Total Load, Including Wind or Seismic Loads	4,000 psf

9.6.5 For design purposes, total settlement due to static and seismic loadings on the order of 1½ inch may be assumed for shallow footings. Differential settlement due to static and seismic loadings, along a 20-foot exterior wall footing or between adjoining column footings, should be ¾ inch, producing an angular distortion of 0.003. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated. The footing excavations should not be allowed to dry out any time prior to pouring concrete.

9.6.6 Resistance to lateral footing displacement can be computed using an allowable coefficient of friction factor of 0.45 acting between the base of foundations and the supporting native subgrade.

9.6.7 Lateral resistance for footings can alternatively be developed using an equivalent fluid passive pressure of 450 pounds per cubic foot acting against the appropriate vertical native footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. An increase of one-third is permitted when using the

alternate load combination in Section 1605.3.2 of the 2016 CBC that includes wind or earthquake loads.

9.6.8 Minimum reinforcement for continuous footings should consist of four No. 4 steel reinforcing bars; two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

9.6.9 Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom edge of the footing.

9.6.10 The foundation subgrade should be sprinkled as necessary to maintain a moist condition without significant shrinkage cracks as would be expected in any concrete placement. Prior to placing rebar reinforcement, foundation excavations should be evaluated by a representative of SALEM for appropriate support characteristics and moisture content. Moisture conditioning may be required for the materials exposed at footing bottom, particularly if foundation excavations are left open for an extended period.

9.7 Concrete Slabs-on-Grade

9.7.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading. We recommend that non-structural slabs-on-grade be at least 4 inches thick and underlain by six (6) inches of compacted granular aggregate subbase material compacted to at least 95% relative compaction.

9.7.2 Granular aggregate subbase material shall conform to ASTM D-2940, Latest Edition (Table 1, bases) with at least 95 percent passing a 1½-inch sieve and not more than 8% passing a No. 200 sieve or its approved equivalent to prevent capillary moisture rise.

9.7.3 The use of processed asphalt in the granular aggregate subbase material (i.e. recycled or miscellaneous base) will have to be approved by the owner. Asphalt is a petroleum hydrocarbon with numerous components, including naphthalene and other semi-volatile constituents that are regulated by California. This material in the subsurface could become a potential vapor intrusion risk (naphthalene is a recent risk-driver that DTSC is actively pursuing).

9.7.4 We recommend reinforcing slabs, at a minimum, with No. 3 reinforcing bars placed 18 inches on center, each way.

9.7.5 Slabs subject to structural loading may be designed utilizing a modulus of subgrade reaction K of 200 pounds per square inch per inch. The K value was approximated based on inter-relationship of soil classification and bearing values (Portland Cement Association, Rocky Mountain Northwest).

9.7.6 The spacing of crack control joints should be designed by the project structural engineer. In order to regulate cracking of the slabs, we recommend that full depth construction joints or control joints be provided at a maximum spacing of 15 feet in each direction for 5-inch thick slabs and 12 feet for 4-inch thick slabs.

9.7.7 Crack control joints should extend a minimum depth of one-fourth the slab thickness and should be constructed using saw-cuts or other methods as soon as practical after concrete placement. The exterior floors should be poured separately in order to act independently of the walls and foundation system.

9.7.8 It is recommended that the utility trenches within the structure be compacted, as specified in our report, to minimize the transmission of moisture through the utility trench backfill. Special attention to the immediate drainage and irrigation around the structures is recommended.

9.7.9 Moisture within the structure may be derived from water vapors, which were transformed from the moisture within the soils. This moisture vapor penetration can affect floor coverings and produce mold and mildew in the structure. To minimize moisture vapor intrusion, it is recommended that a vapor retarder be installed in accordance with manufacturer's recommendations and/or ASTM guidelines, whichever is more stringent. In addition, ventilation of the structure is recommended to reduce the accumulation of interior moisture.

9.7.10 In areas where it is desired to reduce floor dampness where moisture-sensitive coverings are anticipated, construction should have a suitable waterproof vapor retarder (a minimum of 15 mils thick polyethylene vapor retarder sheeting, Raven Industries "VaporBlock 15, Stego Industries 15 mil "StegoWrap" or W.R. Meadows Sealtight 15 mil "Perminator") incorporated into the floor slab design. The water vapor retarder should be decay resistant material complying with ASTM E96 not exceeding 0.04 perms, ASTM E154 and ASTM E1745 Class A. The vapor barrier should be placed between the concrete slab and the compacted granular aggregate subbase material. The water vapor retarder (vapor barrier) should be installed in accordance with ASTM Specification E 1643-94.

9.7.11 The concrete maybe placed directly on vapor retarder. The vapor retarder should be inspected prior to concrete placement. Cut or punctured retarder should be repaired using vapor retarder material lapped 6 inches beyond damaged areas and taped.

9.7.12 The recommendations of this report are intended to reduce the potential for cracking of slabs due to soil movement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to soil movement. This is common for project areas that contain expansive soils since designing to eliminate potential soil movement is cost prohibitive. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

9.7.13 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

9.8 Lateral Earth Pressures and Frictional Resistance

9.8.1 Active, at-rest and passive unit lateral earth pressures against footings and walls are summarized in the table below:

Lateral Pressures Drained and Level Backfill Conditions	Equivalent Fluid Pressure, pcf
Active Pressure	32
At-Rest Pressure	50
Passive Pressure	450
Related Parameters	
Allowable Coefficient of Friction	0.45
In-Place Soil Density (lbs/ft^3)	120

9.8.2 Active pressure applies to walls, which are free to rotate. At-rest pressure applies to walls, which are restrained against rotation. The preceding lateral earth pressures assume sufficient drainage behind retaining walls to prevent the build-up of hydrostatic pressure.

9.8.3 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.

9.8.4 The foregoing values of lateral earth pressures represent equivalent soil values and a safety factor consistent with the design conditions should be included in their usage.

9.8.5 For stability against lateral sliding, which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.5.

9.8.6 For stability against lateral sliding, which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended.

9.8.7 For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.

9.8.8 For dynamic seismic lateral loading the following equation shall be used:

Dynamic Seismic Lateral Loading Equation
Dynamic Seismic Lateral Load = $\frac{3}{8}\gamma K_h H^2$
Where: γ = In-Place Soil Density
K_h = Horizontal Acceleration = $\frac{2}{3}PGA_M$
H = Wall Height

9.9 Retaining Walls

9.9.1 Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic-concrete or other suitable backfill to minimize surface drainage into the wall drain system. The gravel should conform to Class II permeable materials graded in accordance with the current CalTrans Standard Specifications.

9.9.2 Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer's recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.

9.9.3 Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The top of the perforated pipe should be placed at or below the bottom of the adjacent floor slab or pavements. The pipe should be placed in the center line of the drainage blanket and should have a minimum diameter of 4 inches. Slots should be no wider than 1/8-inch in diameter, while perforations should be no more than ¼-inch in diameter.

9.9.4 If retaining walls are less than 5 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 2-inch minimum diameter holes (concrete walls) or unmortared head joints (masonry walls) and placed no higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to the CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.

9.9.5 During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

9.10 Temporary Excavations

9.10.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA "Type C" soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved "competent person" onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.

9.10.2 It is the contractor's responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges

from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.

9.10.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.

9.10.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in the following table:

RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	2:1

9.10.5 If, due to space limitation, excavations near property lines or existing structures are performed in a vertical position, slot cuts, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.

9.10.6 Braced shorings should be designed for a maximum pressure distribution of 30H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.

9.10.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM Engineering Group, Inc. should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

9.11 Underground Utilities

9.11.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 95% relative compaction at or above optimum moisture content.

9.11.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 6 to 12 inches above the crown of the pipe. Pipe bedding and backfill material should conform to the requirements of the governing utility agency.

9.11.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the building or structure to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.

9.11.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

9.12 Surface Drainage

9.12.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.

9.12.2 The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than 5 percent for a minimum distance of 10 feet.

9.12.3 Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building and drainage gradients maintained to carry all surface water to collection facilities and off site. These grades should be maintained for the life of the project. Ponding of water should not be allowed adjacent to the structure. Over-irrigation within landscaped areas adjacent to the structure should not be performed.

9.12.4 Roof drains should be installed with appropriate downspout extensions out-falling on splash blocks so as to direct water a minimum of 5 feet away from the structures or be connected to the storm drain system for the development.

9.13 Pavement Design

9.13.1 Based on site soil conditions, an R-value of 45 was used for the preliminary flexible asphaltic concrete pavement design. The R-value may be verified during grading of the pavement areas.

9.13.2 The pavement design recommendations provided herein are based on the State of California Department of Transportation (CALTRANS) design manual. The asphaltic concrete (flexible pavement) is based on a 20-year pavement life utilizing 1200 passenger vehicles, 10 single unit trucks, and 2 multi-unit trucks. The following table shows the recommended pavement sections for various traffic indices.

TABLE 9.13.2
ASPHALT CONCRETE PAVEMENT

Traffic Index	Asphaltic Concrete	Class II Aggregate Base*	Compacted Subgrade*
5.0 (Parking & Vehicle Drive Areas)	3.0"	4.0"	12.0"
6.0 (Heavy Truck Areas)	3.0"	5.0"	12.0"

95% compaction based on ASTM D1557 Test Method

9.13.3 The following recommendations are for light-duty and heavy-duty Portland Cement Concrete pavement sections.

TABLE 9.13.3
PORTLAND CEMENT CONCRETE PAVEMENT

Traffic Index	Portland Cement Concrete*	Class II Aggregate Base**	Compacted Subgrade**
5.0 (Light Duty)	5.0"	4.0"	12.0"
6.0 (Heavy Duty)	6.0"	4.0"	12.0"

**** Minimum Compressive Strength of 4,000 psi***
***** 95% compaction based on ASTM D1557 Test Method***

10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING

10.1 Plan and Specification Review

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

10.2 Construction Observation and Testing Services

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain

continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

10.2.3 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the test borings drilled at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated.

If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction.

If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing. The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and project design consultants

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer’s recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil. The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping.

The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

Ibrahim Ibrahim, MS, PE
Project Engineer
RCE 86724

Clarence Jiang, GE
Senior Geotechnical Engineer
RGE 2477

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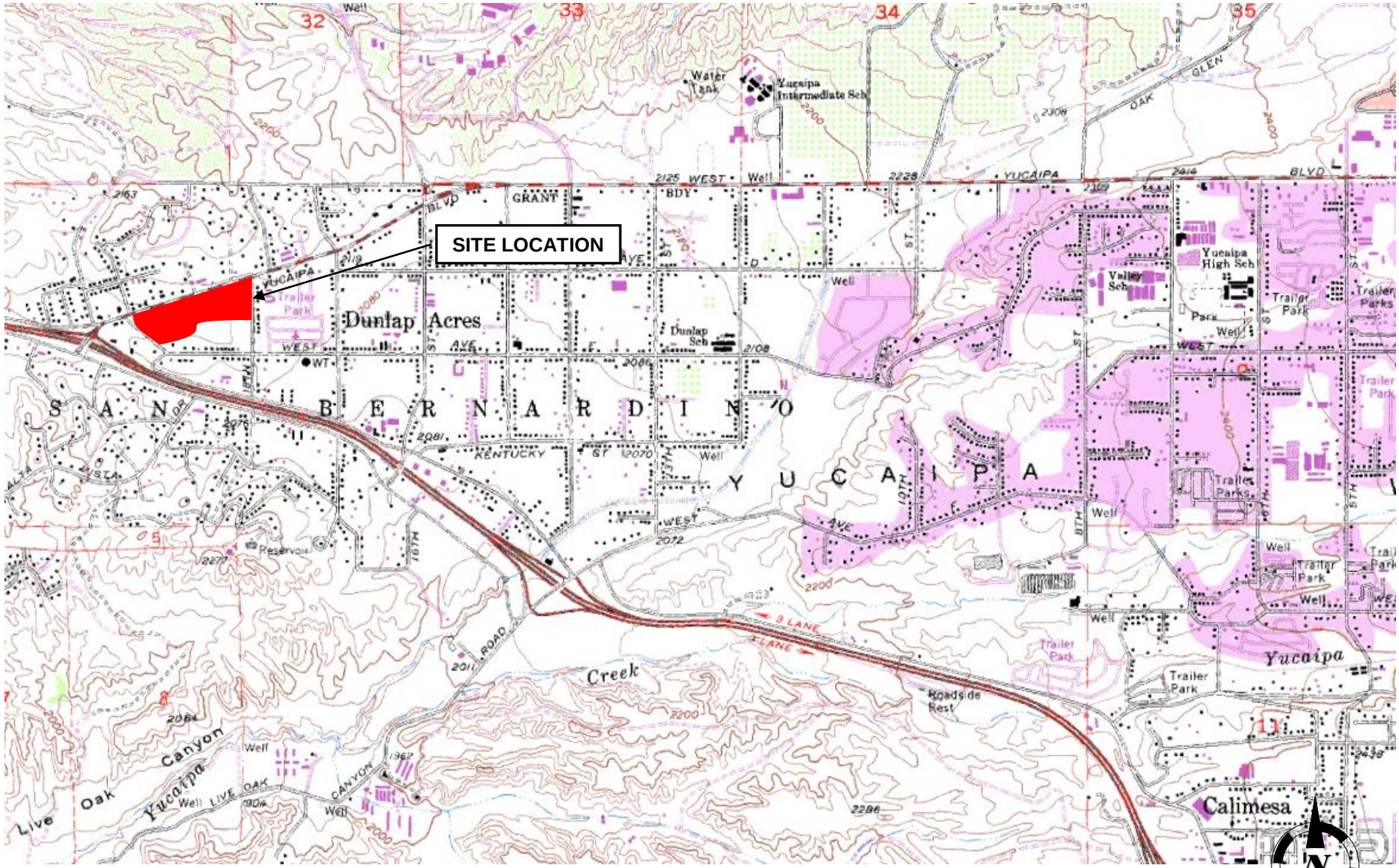
Principal Engineer
RCE 52762 / RGE 2549



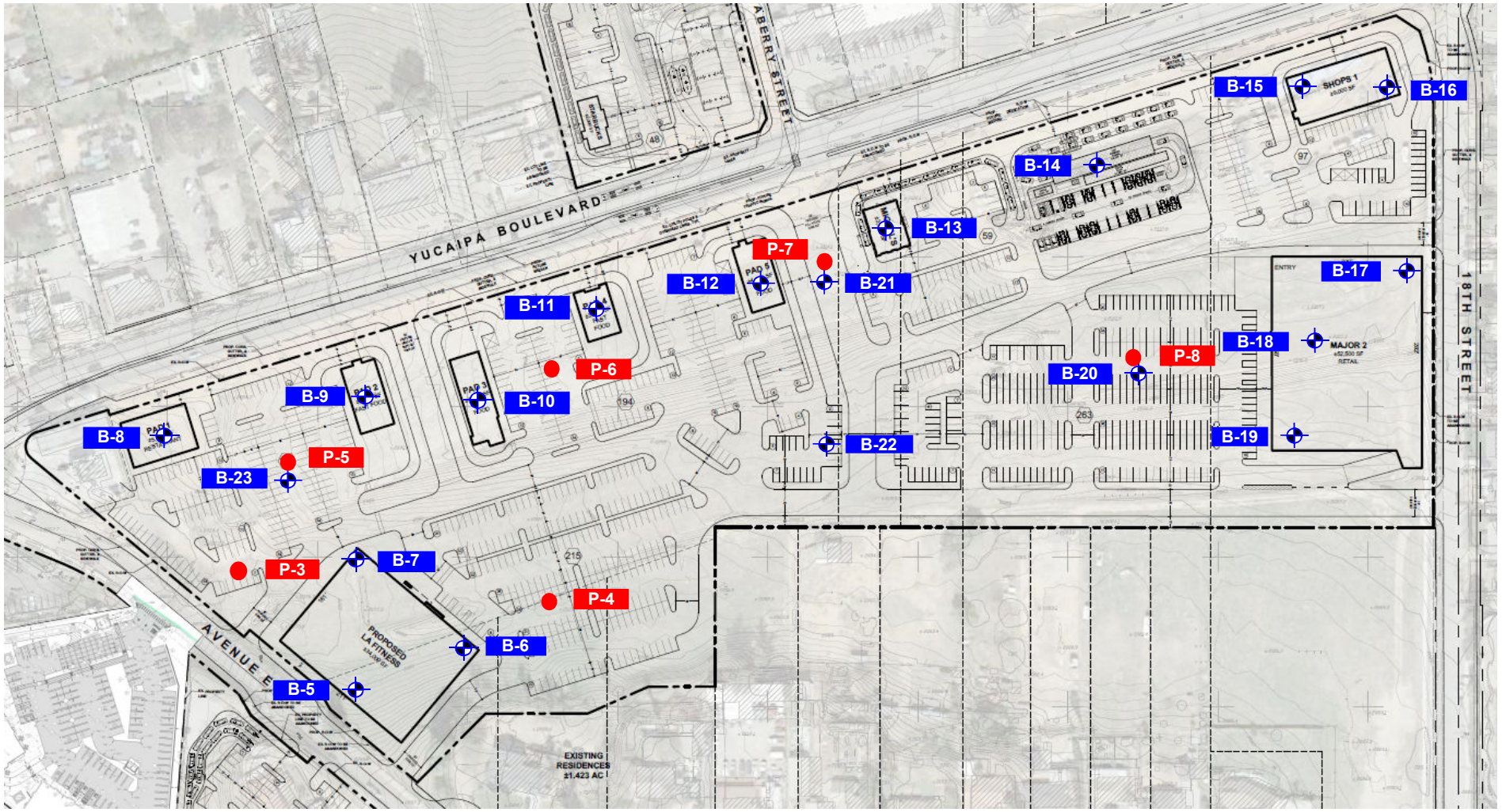
Source Image: U.S. Geological Survey Yucaipa, California 34117-A1-TF-024, 1967 (Photorevised 1988)

VICINITY MAP

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed Commercial Development
SWC Yucaipa Boulevard and 18th Street
Yucaipa, California

SCALE:	DATE:
NOT TO SCALE	08/2018
DRAWN BY:	APPROVED BY:
JC	CJ
PROJECT NO.	FIGURE NO.
3-218-0666B	1

SALEM engineering group, inc.



SITE PLAN

Geotechnical Engineering Investigation
Proposed Commercial Development
SWC Yucaipa Boulevard & 18th Street
Yucaipa, California

SCALE: NOT TO SCALE	DATE: 08/2018
DRAWN BY: JC	APPROVED BY: II
PROJECT NO. 3-218-0666B	FIGURE NO. 2

LEGEND:

B-1 Soil Boring Locations

P-1 Percolation Locations

All Locations Approximate

SALEM engineering group, inc.

APPENDIX

A

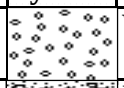
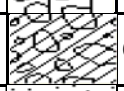
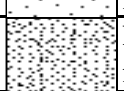
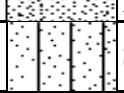
APPENDIX A
FIELD EXPLORATION

Fieldwork for our investigation (drilling) was conducted on August 1 through August 3, 2018 and included a site visit, subsurface exploration, and soil sampling. Percolation testing was performed on August 2 and August 3, 2018. The locations of the exploratory borings and percolation tests are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

In general, our borings were performed using a truck-mounted CME 55 drill rig equipped with a 6-inch diameter hollow stem auger and a 4-inch solid flight auger. Sampling in the borings was accomplished using a hydraulic 140-pound hammer with a 30-inch drop. Samples were obtained with a 3-inch outside-diameter (OD), split spoon (California Modified) sampler, and a 2-inch OD, Standard Penetration Test (SPT) sampler. The number of blows required to drive the sampler the last 12 inches (or fraction thereof) of the 18-inch sampling interval were recorded on the boring logs. The blow counts shown on the boring logs should not be interpreted as standard SPT "N" values; corrections have not been applied. Upon completion, the borings were backfilled with drill cuttings.

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

Unified Soil Classification System

Major Divisions			Letter	Symbol	Description
Coarse-grained Soils More than ½ retained on the No. 200 Sieve	**Gravels** More than ½ coarse fraction retained on the No. 4 sieve	Clean Gravels	GW		Well-graded gravels and gravel-sand mixtures, little or no fines.
			GP		Poorly-graded gravels and gravel-sand mixtures, little or no fines.
		Gravels With Fines	GM		Silty gravels, gravel-sand-silt mixtures.
			GC		Clayey gravels, gravel-sand-clay mixtures.
	Sands More than ½ passing through the No. 200 sieve	Clean Sands	SW		Well-graded sands and gravelly sands, little or no fines.
			SP		Poorly-graded sands and gravelly sands, little or no fines.
		Sands With Fines	SM		Silty sands, sand-silt mixtures
			SC		Clayey sands, sandy-clay mixtures.
Fine-grained Soils More than ½ passing through the No. 200 Sieve	**Silts and Clays** Liquid Limit less than 50%		ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands.
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL		Organic clays of medium to high plasticity.
	Silts and Clays Liquid Limit greater than 50%		MH		Inorganic silts, micaceous or diatomaceous fines sands or silts, elastic silts.
			CH		Inorganic clays of high plasticity, fat clays.
			OH		Organic clays of medium to high plasticity.
Highly Organic Soils			PT		Peat, muck, and other highly organic soils.

Consistency Classification

Granular Soils			***Cohesive Soils***		
Description - Blows Per Foot (Corrected)			Description - Blows Per Foot (Corrected)		
	MCS	SPT		MCS	SPT
Very loose	<5	<4	Very soft	<3	<2
Loose	5 – 15	4 – 10	Soft	3 – 5	2 – 4
Medium dense	16 – 40	11 – 30	Firm	6 – 10	5 – 8
Dense	41 – 65	31 – 50	Stiff	11 – 20	9 – 15
Very dense	>65	>50	Very Stiff	21 – 40	16 – 30
			Hard	>40	>30

MCS = Modified California Sampler

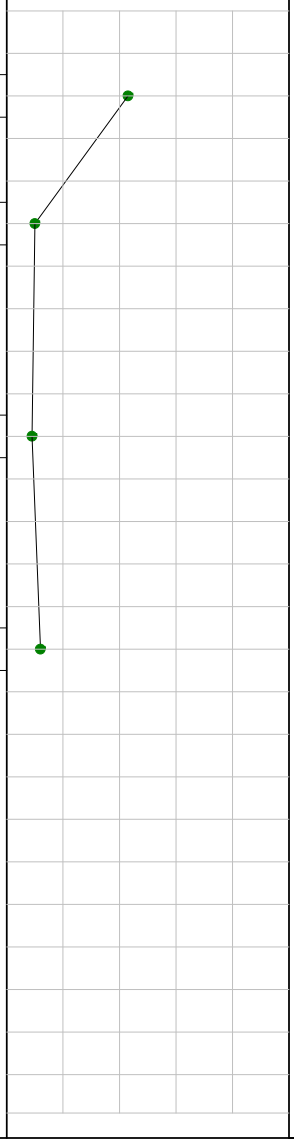
SPT = Standard Penetration Test Sampler

Boring No. B-5

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-5
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Dense; slightly moist; dark brown; fine to medium grain sand.	130.5	7.4	MCS		43		
5		Grades as above; loose; moist; reddish brown.	116.2	8.6	MCS		10		
10		Grades as above.	-	9.4	SPT		9		
15		Grades as above; medium dense.	-	8.0	SPT		12		
		End of Borehole							
20									
25									



Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-6

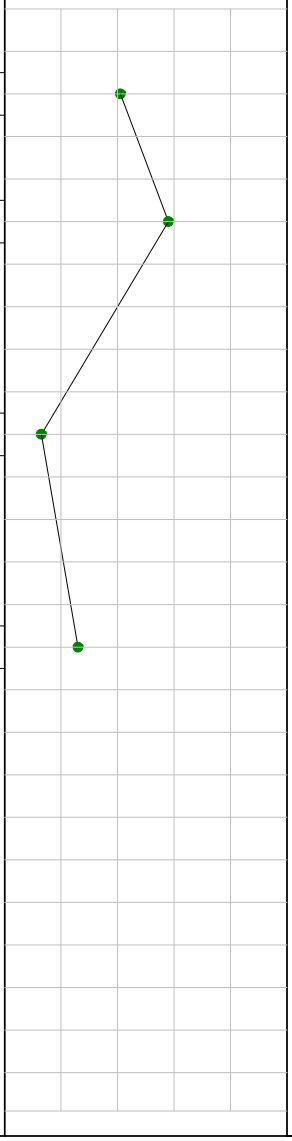
Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-6
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Dense; moist; dark brown; fine to medium grain sand.	116.8	6.6	MCS		41
5		Grades as above; reddish brown.	129.8	7.7	MCS		58
10		Grades as above; medium dense; trace clay.	-	9.1	SPT		13
15		Grades as above; no clay.	-	9.2	SPT		26
		End of Borehole					
20							
25							

SUBSURFACE PROFILE | **SAMPLE**

Penetration Test



Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-7

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-7
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Very dense; slightly moist; dark brown; fine to medium grain sand.	134.9	4.4	MCS		111
5		Grades as above; medium dense; moist; reddish brown.	122.1	7.5	MCS		35
10		Grades as above; loose.	-	8.1	SPT		7
15		Grades as above; dense; trace clay.	126.4	8.4	MCS		41
20		Grades as above; medium dense.	-	9.0	SPT		18
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

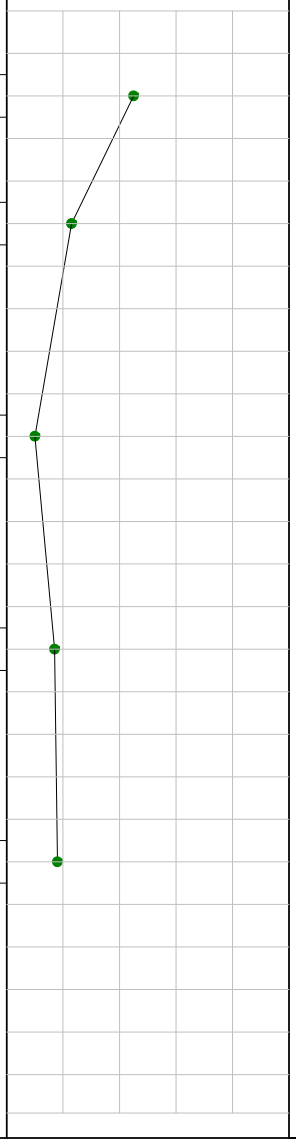
SALEM

Boring No. B-8

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-8
Logged By: SK
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Dense; moist; brown; fine to medium grain sand.	127.0	8.1	MCS		45
5		Grades as above; medium dense.	126.7	8.3	MCS		23
10		Grades as above.	-	9.1	SPT		10
15		Grades as above.	-	9.8	SPT		17
20		Grades as above; with clay.	-	11.3	SPT		18
		End of Borehole					
25							



Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/3/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

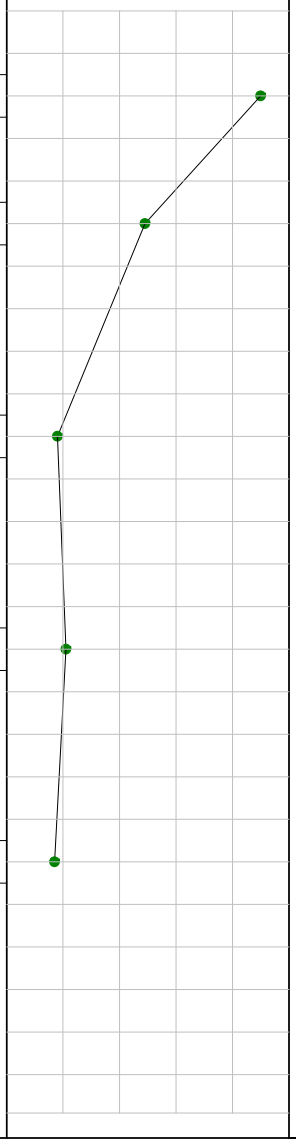
SALEM

Boring No. B-9

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

Project No: 3-218-0666B
Figure No.: A-9
Logged By: SK
Initial: -
Depth to Water>
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
		SUBSURFACE PROFILE	**SAMPLE**				
0		Ground Surface					
		Silty SAND (SM) **Fill:** Very dense; slightly moist; brown; fine to medium grain sand.	123.1	3.6	MCS		90
5		**Silty SAND (SM)** medium dense; slightly moist; brown; fine to medium grain sand.	120.9	10.0	MCS		49
10		Grades as above.	-	9.2	SPT		18
15		**Sandy SILT (ML)** Very stiff; moist; brown; fine grain sand; with clay.	-	16.4	SPT		21
20		**Silty SAND (SM)** Medium dense; moist; brown; fine to medium grain sand; trace clay.	-	9.7	SPT		17
		End of Borehole					
25							



Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/3/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

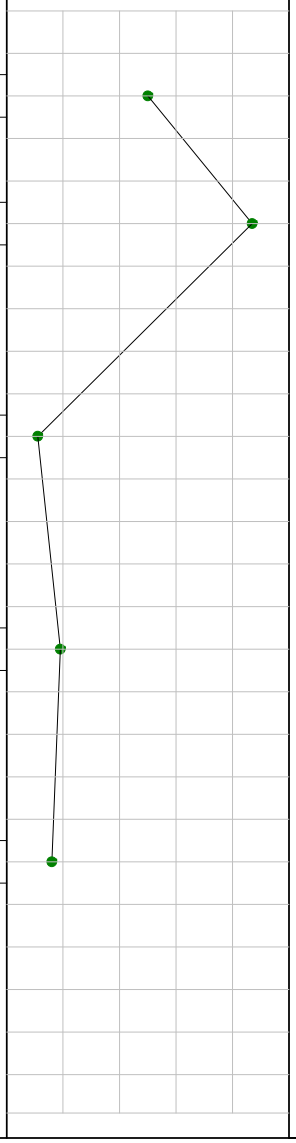
SALEM

Boring No. B-10

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-10
Logged By: SK
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) **Fill:** Very dense; slightly moist; brown; fine to medium grain sand; trace gravel.	118.4	3.6	MCS		50
5		Grades as above; with gravel.	123.2	4.3	MCS		87
		Silty SAND (SM) Medium dense; moist; dark brown; no gravel; trace clay.					
10			-	11.6	SPT		11
15		Grades as above.	-	9.2	SPT		19
20		Grades as above; brown.	-	9.5	SPT		16
		End of Borehole					
25							



Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/3/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-11

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-11
Logged By: SK
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) **Fill:** Very dense; slightly moist; brown; fine to medium grain sand; trace gravel.	120.3	4.2	MCS		71
5		Grades as above.	121.7	4.8	MCS		75
		Silty SAND (SM) Medium dense; moist; dark brown; no gravel.					
10			-	9.1	SPT		23
15		Grades as above; brown; with clay.	-	11.6	SPT		18
20		Grades as above.	-	8.1	SPT		19
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/3/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-12

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

Project No: 3-218-0666B
Figure No.: A-12
Logged By: SK
Initial: -
Depth to Water>
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) **Fill:** Very dense; slightly moist; brown; fine to medium grain sand; trace gravel.	119.9	4.0	MCS		106
5		Grades as above.	112.0	3.6	MCS		50
		Silty SAND (SM) Medium dense; slightly moist; brown; fine to medium grain sand; trace gravel.					
10			-	5.8	SPT		37
15		Grades as above; medium dense; moist; trace clay.	-	8.3	SPT		22
20		Grades as above.	-	7.5	SPT		15
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/3/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-13

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-13
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) **Fill:** Dense; moist; reddish brown; fine to medium grain sand; trace clay.	124.1	7.4	MCS		50
5		Grades as above; very dense; slightly moist.	116.2	4.6	MCS		60
		Silty SAND (SM) Medium dense; moist; reddish brown; fine to medium grain sand; trace clay.					
10			-	8.2	SPT		11
15		Grades as above.	-	9.2	SPT		22
20		Grades as above.	-	9.2	SPT		25
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-14

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-14
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) **Fill:** Very dense; slightly moist; reddish brown; fine to medium grain sand; trace clay.	122.3	4.2	MCS		89
5		Grades as above; dense; moist.	128.4	9.1	MCS		57
		Silty SAND (SM) Medium dense; moist; reddish brown; fine to medium grain sand; trace clay					
10			119.8	8.2	MCS		36
15		Grades as above; slightly moist; brown; weathered.	-	6.1	SPT		29
20		Grades as above; slightly moist.	-	4.3	SPT		20
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

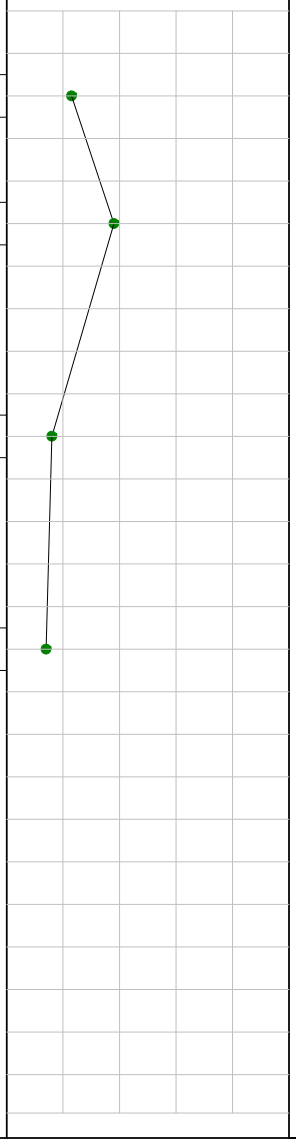
SALEM

Boring No. B-15

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-15
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Medium dense; slightly moist; reddish brown; fine grain sand.	109.4	5.5	MCS		23		
5		**Sandy SILT (ML)** Very stiff; moist; reddish brown; fine grain sand; with clay.	114.5	12.1	MCS		38		
		Silty SAND (SM) Medium dense; moist; light brown; fine to meidum grain sand.	-	7.7	SPT		16		
10		**Sandy SILT (ML)** Stiff; very moist; brown; fine grain sand; with clay.	-	23.1	SPT		14		
15		End of Borehole							
20									
25									



Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-16

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-16
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Medium dense; moist; reddish brown; fine grain sand; with clay.	115.3	7.8	MCS		22
5		Grades as above.	119.8	11.2	MCS		30
		Sandy SILT (ML) Stiff; very moist; brown; fine grain sand; with clay.					
10			-	19.7	SPT		15
		Silty SAND (SM) Medium dense; moist; reddish brown; fine to medium grain sand.	-	5.5	SPT		16
		Sandy SILT (ML) Stiff; very moist; reddish brown; fine grain sand; trace clay.					
20			-	23.8	SPT		14
		End of Borehole					
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-17

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-17
Logged By: SK
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Medium dense; moist; yellowish brown; fine to medium grain sand; trace clay.	102.1	8.7	MCS		30
5		Grades as above; no clay.	101.1	6.7	MCS		17
		Sandy SILT (ML) Very stiff; very moist; brown; trace clay.	-	16.4	SPT		20
15		Grades as above; with clay.	-	23.2	SPT		19
		End of Borehole					
20							
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-18

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

Depth to Water>
Initial: -
At Completion: -

Project No: 3-218-0666B
Figure No.: A-18
Logged By: II

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Sandy SILT (ML) **Fill:** hard; moist; dark brown; fine to medium grain sand; with clay. EI=26	124.0	9.0	MCS		89		
5		**Silty SAND (SM)** **Fill:** medium dense; moist; reddish brown; fine to medium grain sand; with clay.	119.1	11.3	MCS		36		
10		**Sandy SILT (ML)** Stiff; moist; brown; fine grain sand; with clay.	90.9	13.4	MCS		15		
15		Grades as above; wet.	-	26.3	SPT		15		
20		**Silty SAND (SM)** Medium dense; moist; reddish brown; fine to medium grain sand.	-	7.4	SPT		23		
25		**Sandy SILT (ML)** Stiff; wet; reddish brown; fine grain sand; trace clay.	-	28.4	SPT		13		

Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 2

Drill Date: 8/2/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

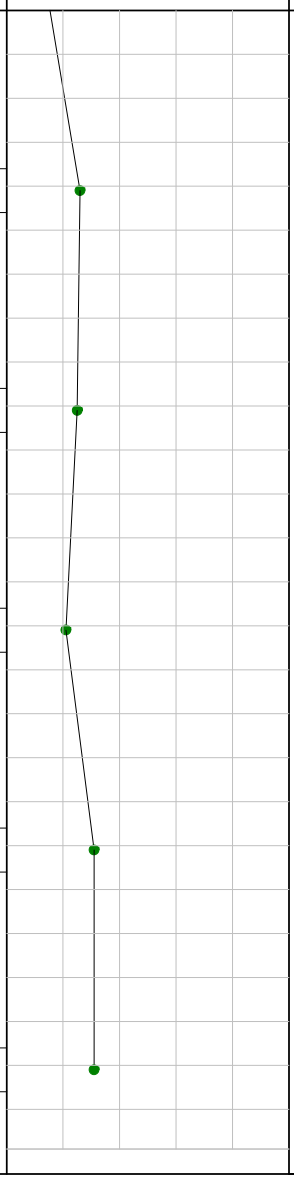
SALEM

Boring No. B-18

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-18
Logged By: II
Initial: -
At Completion: -

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
30		**Silty SAND (SM)** Medium dense; moist; reddish brown; fine to medium grain sand.	-	9.1	SPT		26		
35		Grades as above.	-	8.5	SPT		25		
40		Grades as above.	-	9.8	SPT		21		
45		Grades as above; dense.	-	5.2	SPT		31		
50		Grades as above.	-	8.6	SPT		31		
		End of Borehole							



Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 2 of 2

Drill Date: 8/2/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-19

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-19
Logged By: II
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Damp; reddish brown; fine to medium grain sand.	106.1	15.3	MCS		30
		Sandy SILT (ML) Very stiff; moist; light brown; fine grain sand; trace clay.					
5		Grades as above; no clay.	89.9	17.4	MCS		28
10		Grades as above; stiff; very moist; trace clay.	-	24.0	SPT		12
15		Grades as above; with clay.	-	22.7	SPT		11
		End of Borehole					
20							
25							

Penetration Test: 20 40 60 80

Water Level

Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/2/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-20

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-20
Logged By: SK
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Sandy SILT (ML) **Fill:** very stiff; moist; brown; fine grain sand; with clay.	117.4	9.5	MCS		40		
5		Grades as above.	112.9	10.4	MCS		34		
		Silty SAND (SM) **Fill:** Dense; slightly moist; brown; fine to medium grain sand; trace clay.	-	5.7	SPT		31		
10		End of Borehole							
15									
20									
25									

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

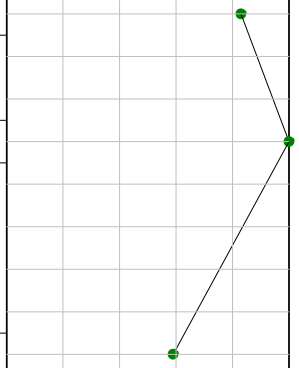
SALEM

Boring No. B-21

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-21
Logged By: JR
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM)							
		Fill: Very dense; slightly moist; brown; fine to coarse grain sand; trace gravel.	118.3	3.7	MCS		83		
5		Grades as above.	117.9	4.5	MCS		112		
10		Grades as above.	-	5.0	SPT		59		
		End of Borehole							
15									
20									
25									



Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-22

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-22
Logged By: JR
Initial: -
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Loose; moist; brown; fine to coarse grain sand; trace gravel.	105.7	6.1	MCS		15		
5		Grades as above; medium dense.	-	7.8	MCS		16		
10		Grades as above; dense.	129.5	6.9	SPT		48		
		End of Borehole							
15									
20									
25									

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-23

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: SWC Yucaipa Boulevard & 18th Street, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -
Depth to Water>

Project No: 3-218-0666B
Figure No.: A-23
Logged By: JR
Initial: -
At Completion: -

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) **Fill:** Moist; brown; fine to coarse grain sand; trace gravel.							
5		Grades as above.							
		Silty SAND (SM) Moist; brown; fine to coarse grain sand; trace gravel.							
10		End of Borehole							
15									
20									
25									

Drill Method: Solid Flight
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 4 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Percolation Test Worksheet

Project: **Proposed Commercial Development**
SWC Yucaipa Blvd. & 18th St.
Yucaipa, California

Job No.: **3-218-0666B**
Date Drilled: **8/2/2018**
Soil Classification: **Sitly SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 24 in.

Test Hole No.: **P-3**
Tested by: **JC**
Drilled Hole Depth: **2** ft.

Presoaking Date: **8/2/2018**
Test Date: **8/3/2018**

Pipe Stick up: 0 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
10:28	10:58	2.0	Y	0:30	0.60	0.75	1.80	30	16.7	16.8	15.0	15.9	0.40
10:58	11:28	2.0	N	0:30	0.75	0.87	1.44	30	20.8	15.0	13.6	14.3	0.35
11:28	11:58	2.0	N	0:30	0.87	0.97	1.20	30	25.0	13.6	12.4	13.0	0.32
11:58	12:28	2.0	N	0:30	0.97	1.07	1.15	30	26.0	12.4	11.2	11.8	0.33
12:28	12:58	2.0	N	0:30	1.07	1.15	1.01	30	29.8	11.2	10.2	10.7	0.32
12:58	13:28	2.0	N	0:30	1.15	1.23	0.96	30	31.3	10.2	9.2	9.7	0.33
13:30	14:00	2.0	Y	0:30	0.72	0.83	1.32	30	22.7	15.4	14.0	14.7	0.32
14:00	14:30	2.0	N	0:30	0.83	0.93	1.20	30	25.0	14.0	12.8	13.4	0.31
14:30	15:00	2.0	N	0:30	0.93	1.02	1.08	30	27.8	12.8	11.8	12.3	0.30
15:00	15:30	2.0	N	0:30	1.02	1.11	1.08	30	27.8	11.8	10.7	11.2	0.33
15:30	16:00	2.0	N	0:30	1.11	1.19	0.96	30	31.3	10.7	9.7	10.2	0.31
16:00	16:30	2.0	N	0:30	1.19	1.27	0.96	30	31.3	9.7	8.8	9.2	0.34
Recommended for Design:										**Infiltration Rate**			**0.30**

Measured from top of pipe

SALEM engineering group, inc.

Percolation Test Worksheet

Project: **Proposed Commercial Development**
SWC Yucaipa Blvd. & 18th St.
Yucaipa, California

Job No.: **3-218-0666B**
Date Drilled: **8/2/2018**
Soil Classification: **Silty SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 24 in.

Test Hole No.: **P-4**
Tested by: **JC**
Drilled Hole Depth: **2** ft.

Presoaking Date: **8/2/2018**
Test Date: **8/3/2018**

Pipe Stick up: 0.2 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
10:31	11:01	2.2	Y	0:30	0.42	0.66	2.88	30	10.4	21.4	18.5	19.9	0.53
11:01	11:31	2.2	N	0:30	0.66	0.85	2.28	30	13.2	18.5	16.2	17.3	0.47
11:31	12:01	2.2	N	0:30	0.85	1.01	1.92	30	15.6	16.2	14.3	15.2	0.45
12:01	12:31	2.2	N	0:30	1.01	1.15	1.68	30	17.9	14.3	12.6	13.4	0.44
12:31	13:01	2.2	N	0:30	1.15	1.28	1.56	30	19.2	12.6	11.0	11.8	0.45
13:01	13:31	2.2	N	0:30	1.28	1.40	1.44	30	20.8	11.0	9.6	10.3	0.47
13:32	14:02	2.2	Y	0:30	0.53	0.72	2.28	30	13.2	20.0	17.8	18.9	0.44
14:02	14:32	2.2	N	0:30	0.72	0.89	2.04	30	14.7	17.8	15.7	16.7	0.44
14:32	15:02	2.2	N	0:30	0.89	1.04	1.80	30	16.7	15.7	13.9	14.8	0.43
15:02	15:32	2.2	N	0:30	1.04	1.18	1.68	30	17.9	13.9	12.2	13.1	0.45
15:32	16:02	2.2	N	0:30	1.18	1.31	1.56	30	19.2	12.2	10.7	11.5	0.46
16:02	16:32	2.2	N	0:30	1.31	1.42	1.32	30	22.7	10.7	9.4	10.0	0.44
Recommended for Design:										**Infiltration Rate**			**0.43**

Measured from top of pipe

SALEM engineering group, inc.

Percolation Test Worksheet

Project: **Proposed Commercial Development**
SWC Yucaipa Blvd. & 18th St.
Yucaipa, California

Job No.: **3-218-0666B**
Date Drilled: **8/1/2018**
Soil Classification: **Silty SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 120 in.

Test Hole No.: **P-5**
Tested by: **JC**
Drilled Hole Depth: **10** ft.

Presoaking Date: **8/1/2018**
Test Date: **8/2/2018**

Pipe Stick up: 0.5 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
10:18	10:48	10.5	Y	0:30	7.24	7.30	0.72	30	41.7	39.1	38.4	38.8	0.07
10:48	11:18	10.5	N	0:30	7.30	7.35	0.60	30	50.0	38.4	37.8	38.1	0.06
11:18	11:48	10.5	N	0:30	7.35	7.40	0.60	30	50.0	37.8	37.2	37.5	0.06
11:48	12:18	10.5	N	0:30	7.40	7.44	0.48	30	62.5	37.2	36.7	37.0	0.05
12:18	12:48	10.5	N	0:30	7.44	7.48	0.48	30	62.5	36.7	36.2	36.5	0.05
12:48	13:18	10.5	N	0:30	7.48	7.52	0.48	30	62.5	36.2	35.8	36.0	0.05
13:18	13:48	10.5	N	0:30	7.52	7.55	0.36	30	83.3	35.8	35.4	35.6	0.04
13:48	14:18	10.5	N	0:30	7.55	7.58	0.36	30	83.3	35.4	35.0	35.2	0.04
14:18	14:48	10.5	N	0:30	7.58	7.61	0.36	30	83.3	35.0	34.7	34.9	0.04
14:48	15:18	10.5	N	0:30	7.61	7.63	0.24	30	125.0	34.7	34.4	34.6	0.03
15:18	15:48	10.5	N	0:30	7.63	7.65	0.24	30	125.0	34.4	34.2	34.3	0.03
15:48	16:18	10.5	N	0:30	7.65	7.67	0.24	30	125.0	34.2	34.0	34.1	0.03
Recommended for Design:										**Infiltration Rate**			**0.03**

Measured from top of pipe

SALEM engineering group, inc.

Percolation Test Worksheet

Project: **Proposed Commercial Development**
SWC Yucaipa Blvd. & 18th St.
Yucaipa, California

Job No.: **3-218-0666B**
Date Drilled: **8/1/2018**
Soil Classification: **Silty SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 114 in.

Test Hole No.: **P-6**
Tested by: **JC**
Drilled Hole Depth: **9.5** ft.

Presoaking Date: **8/1/2018**
Test Date: **8/2/2018**

Pipe Stick up: 0.5 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
10:21	10:51	10.0	Y	0:30	6.82	7.22	4.80	30	6.3	38.2	33.4	35.8	0.51
10:51	11:21	10.0	N	0:30	7.22	7.55	3.96	30	7.6	33.4	29.4	31.4	0.47
11:21	11:51	10.0	N	0:30	7.55	7.81	3.12	30	9.6	29.4	26.3	27.8	0.42
11:51	12:21	10.0	N	0:30	7.81	8.04	2.76	30	10.9	26.3	23.5	24.9	0.41
12:21	12:51	10.0	N	0:30	8.04	8.25	2.52	30	11.9	23.5	21.0	22.3	0.42
12:51	13:21	10.0	N	0:30	8.25	8.44	2.28	30	13.2	21.0	18.7	19.9	0.42
13:21	13:51	10.0	N	0:30	8.44	8.61	2.04	30	14.7	18.7	16.7	17.7	0.41
13:51	14:21	10.0	N	0:30	8.61	8.77	1.92	30	15.6	16.7	14.8	15.7	0.43
14:21	14:51	10.0	N	0:30	8.77	8.91	1.68	30	17.9	14.8	13.1	13.9	0.42
14:51	15:21	10.0	N	0:30	8.91	9.03	1.44	30	20.8	13.1	11.6	12.4	0.40
15:21	15:51	10.0	N	0:30	9.03	9.14	1.32	30	22.7	11.6	10.3	11.0	0.41
15:51	16:21	10.0	N	0:30	9.14	9.24	1.20	30	25.0	10.3	9.1	9.7	0.41
Recommended for Design:										**Infiltration Rate**			**0.40**

Measured from top of pipe

SALEM engineering group, inc.

Percolation Test Worksheet

Project: **Proposed Commercial Development**
SWC Yucaipa Blvd. & 18th St.
Yucaipa, California

Job No.: **3-218-0666B**
Date Drilled: **8/2/2018**
Soil Classification: **Silty SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 108 in.

Test Hole No.: **P-7**
Tested by: **JC**
Drilled Hole Depth: **9** ft.

Presoaking Date: **8/2/2018**
Test Date: **8/3/2018**

Pipe Stick up: 1 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:16	11:46	10.0	Y	0:30	6.62	6.86	2.88	30	10.4	40.6	37.7	39.1	0.28
11:46	12:16	10.0	N	0:30	6.86	7.05	2.28	30	13.2	37.7	35.4	36.5	0.24
12:16	12:46	10.0	N	0:30	7.05	7.22	2.04	30	14.7	35.4	33.4	34.4	0.22
12:46	13:16	10.0	N	0:30	7.22	7.37	1.80	30	16.7	33.4	31.6	32.5	0.21
13:16	13:46	10.0	N	0:30	7.37	7.51	1.68	30	17.9	31.6	29.9	30.7	0.21
13:46	14:16	10.0	N	0:30	7.51	7.64	1.56	30	19.2	29.9	28.3	29.1	0.20
14:16	14:46	10.0	N	0:30	7.64	7.76	1.44	30	20.8	28.3	26.9	27.6	0.19
14:46	15:16	10.0	N	0:30	7.76	7.87	1.32	30	22.7	26.9	25.6	26.2	0.19
15:16	15:46	10.0	N	0:30	7.87	7.97	1.20	30	25.0	25.6	24.4	25.0	0.18
15:46	16:16	10.0	N	0:30	7.97	8.07	1.20	30	25.0	24.4	23.2	23.8	0.19
16:16	16:46	10.0	N	0:30	8.07	8.16	1.08	30	27.8	23.2	22.1	22.6	0.18
16:46	17:16	10.0	N	0:30	8.16	8.25	1.08	30	27.8	22.1	21.0	21.5	0.18
Recommended for Design:										**Infiltration Rate**			**0.18**

Measured from top of pipe

SALEM engineering group, inc.

Percolation Test Worksheet

Project: **Proposed Commercial Development**
SWC Yucaipa Blvd. & 18th St.
Yucaipa, California

Job No.: **3-218-0666B**
Date Drilled: **8/2/2018**
Soil Classification: **Silty SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 117.6 in.

Test Hole No.: **P-8**
Tested by: **JC**
Drilled Hole Depth: **9.8** ft.

Presoaking Date: **8/2/2018**
Test Date: **8/3/2018**

Pipe Stick up: 0.2 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:10	11:40	10.0	Y	0:30	5.71	5.91	2.40	30	12.5	51.5	49.1	50.3	0.18
11:40	12:10	10.0	N	0:30	5.91	6.07	1.92	30	15.6	49.1	47.2	48.1	0.15
12:10	12:40	10.0	N	0:30	6.07	6.20	1.56	30	19.2	47.2	45.6	46.4	0.13
12:40	13:10	10.0	N	0:30	6.20	6.32	1.44	30	20.8	45.6	44.2	44.9	0.12
13:10	13:40	10.0	N	0:30	6.32	6.43	1.32	30	22.7	44.2	42.8	43.5	0.12
13:40	14:10	10.0	N	0:30	6.43	6.54	1.32	30	22.7	42.8	41.5	42.2	0.12
14:10	14:40	10.0	N	0:30	6.54	6.65	1.32	30	22.7	41.5	40.2	40.9	0.12
14:40	15:10	10.0	N	0:30	6.65	6.75	1.20	30	25.0	40.2	39.0	39.6	0.12
15:10	15:40	10.0	N	0:30	6.75	6.85	1.20	30	25.0	39.0	37.8	38.4	0.12
15:40	16:10	10.0	N	0:30	6.85	6.94	1.08	30	27.8	37.8	36.7	37.3	0.11
16:10	16:40	10.0	N	0:30	6.94	7.03	1.08	30	27.8	36.7	35.6	36.2	0.11
16:40	17:10	10.0	N	0:30	7.03	7.12	1.08	30	27.8	35.6	34.6	35.1	0.12
Recommended for Design:										**Infiltration Rate**			**0.11**

Measured from top of pipe

SALEM engineering group, inc.

DRY SETTLEMENT DUE TO EARTHQUAKE SHAKING

Job No. 3-218-0666B **Job Name** Proposed Commercial Development
Boring No. B-18 **Drill Date** 08/02/18

* Use Fig. 11 of Tokimatsu & Seed (1987)
** Use Fig. 13 of Tokimatsu & Seed (1987)
*** MSF=$10^{2.24}$/Mw$^{2.56}$
# C_N=2.2/(1.2+σ'_o/P_a)
+ From Pradel, D. (1998) equations for modulus reduction curves

User Input Section			
Earthquake Data		Drilling GW Depth (ft)	-
Mag. (M_w)	8.2	Earthquake GW Depth (ft)	50
a_{max}/g	0.65	Rod Stick-Up (ft)	3
MSF***	0.80	SPT N-Value Correction Factors	
Energy Ratio	C_E	1.60	Notes
Borehole Dia.	C_B	1.05	Notes
Sampling Method	C_S	1.2	Notes
Factor of Safety	FS	1.0	
Rod Length	C_R	Calculated	
Overburden Press	C_N	Calculated	

Lookup Tables

% Fines	ΔN	Length	C_R
0	0	1	0.75
10	1	12	0.85
25	2	20	0.95
50	4	30	0.98
75	5	33	1

Δ = -0.0006(% Fines)^2 + 0.1088(% Fines) - 0.0852
C_R = -0.0002(Length)^2 + 0.0131(Length) + 0.7324

Depth		Dry Unit		Fines	SPT	Layer	Unit	Total σ_o bottom	Total σ_o mid-pt.	During Drilling Eff. σ'_o	C_N #	SPT $(N_1)_{60}$	ΔN	Fines Corct'd SPT $(N_1)_{60f}$	During EQ Eff. σ'_{oeq}	$\sigma_o/\sigma_{o'eq}$	r_d	Shear Modulus G_{max} ##	Cyclic Shear Stress T_{av}	Shear Strain/Shear Modulus Ratio $\gamma_{eff}(G_{eff}/G_{max})$	Eff. Shear Strain γ(%)*	Vol. Strain (1-way) V%**	Vol. Strain Mw Corct'd V%*	S (2-way)
(ft)	USCS	Wt (pcf)	w (%)	%	Field N	(ft)	Wt (pcf)	(psf)	(psf)	(psf)					(psf)									in.
2	ML	124	9.0	57	55	2.0	135.2	270	135	135	1.74	144.3	4.0	148.3	135	1.000	0.997	9.92E+05	56.9	5.74E-05	8.7E-03	5.5E-4	0.00	0.00
5	SM	119	11.3	35	22	3.0	132.6	668	469	469	1.53	51.0	2.0	53.0	469	1.000	0.990	1.31E+06	196.3	1.50E-04	3.7E-02	9.3E-3	0.01	0.01
10	ML	91	13.4	51	9	5.0	103.1	1183	926	926	1.32	20.4	4.0	24.4	926	1.000	0.979	1.42E+06	382.9	2.69E-04	1.3E-01	8.8E-2	0.00	0.00
15	ML	90	26.3	51	15	5.0	113.7	1752	1468	1468	1.14	29.2	4.0	33.2	1468	1.000	0.968	1.99E+06	600.4	3.02E-04	1.2E-01	5.5E-2	0.00	0.00
20	SM	100	7.4	21	23	5.0	107.4	2289	2020	2020	1.00	43.8	1.0	44.8	2020	1.000	0.956	2.57E+06	816.3	3.17E-04	1.0E-01	3.3E-2	0.04	0.05
25	ML	90	28.4	62	13	5.0	115.6	2867	2578	2578	0.88	22.0	4.0	26.0	2578	1.000	0.941	2.43E+06	1024.8	4.23E-04	2.1E-01	1.4E-1	0.00	0.00
30	SM	100	9.1	31	26	5.0	109.1	3412	3139	3139	0.79	41.6	2.0	43.6	3139	1.000	0.919	3.18E+06	1219.1	3.83E-04	1.3E-01	4.2E-2	0.05	0.06
35	SM	100	8.5	31	25	5.0	108.5	3955	3683	3683	0.72	36.5	2.0	38.5	3683	1.000	0.888	3.30E+06	1382.3	4.19E-04	1.5E-01	5.6E-2	0.07	0.08
40	SM	100	9.8	31	21	5.0	109.8	4504	4229	4229	0.66	28.1	2.0	30.1	4229	1.000	0.848	3.26E+06	1514.6	4.64E-04	1.8E-01	9.6E-2	0.11	0.14
45	SM	100	5.2	17	31	5.0	105.2	5030	4767	4767	0.61	38.4	1.0	39.4	4767	1.000	0.799	3.79E+06	1609.8	4.25E-04	1.3E-01	4.7E-2	0.06	0.07
50	SM	100	8.6	17	31	5.0	108.6	5573	5301	5301	0.57	35.7	1.0	36.7	5301	1.000	0.748	3.90E+06	1675.0	4.29E-04	1.2E-01	4.9E-2	0.06	0.07
																							Total	**0.47**

The total seismic-induced settlement calculation is based on a water table depth of 50 feet below grade

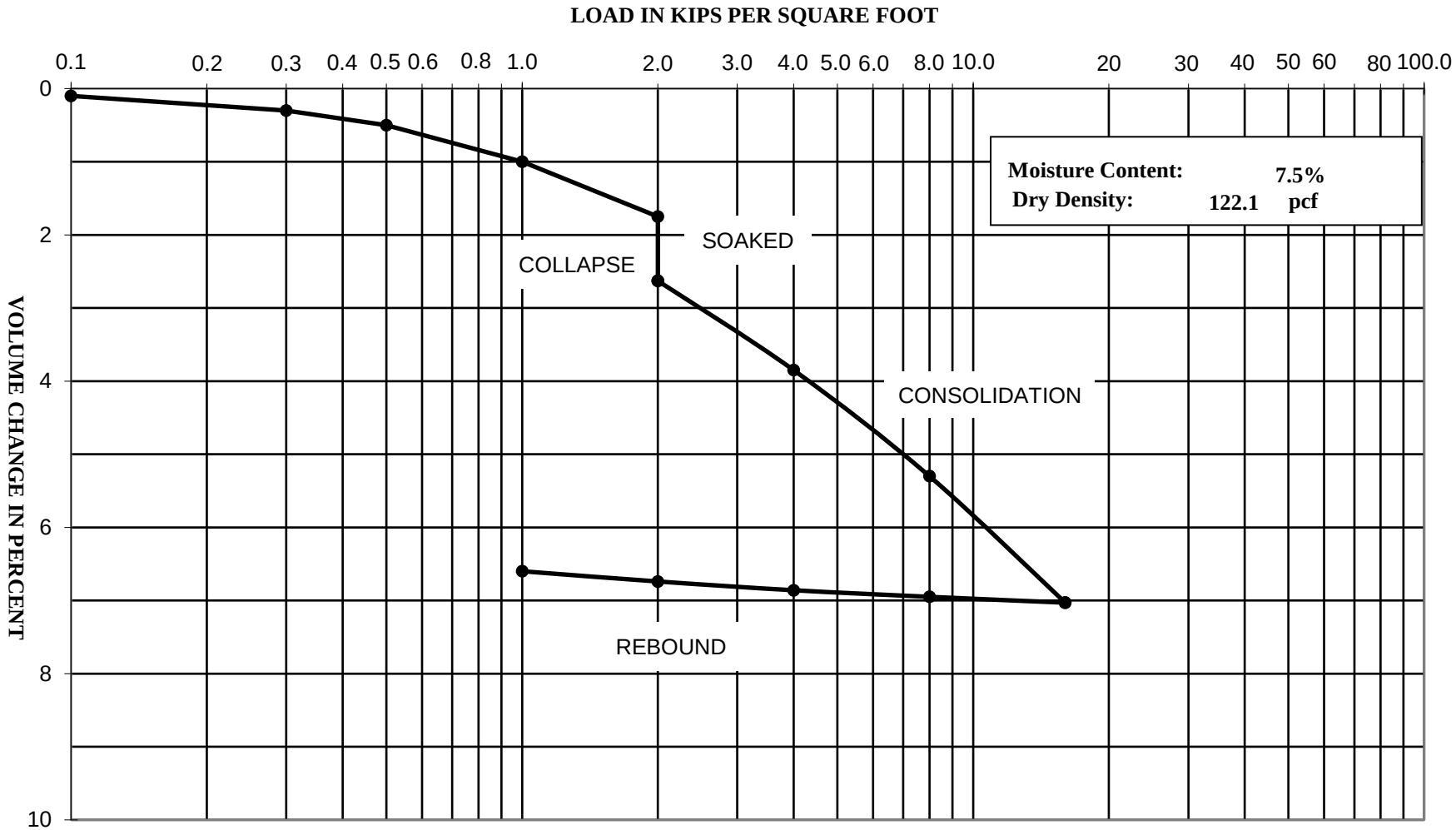
APPENDIX

B

APPENDIX B
LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ dry density and moisture content, corrosivity, consolidation, expansion index, shear strength, maximum dry density and optimum moisture, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



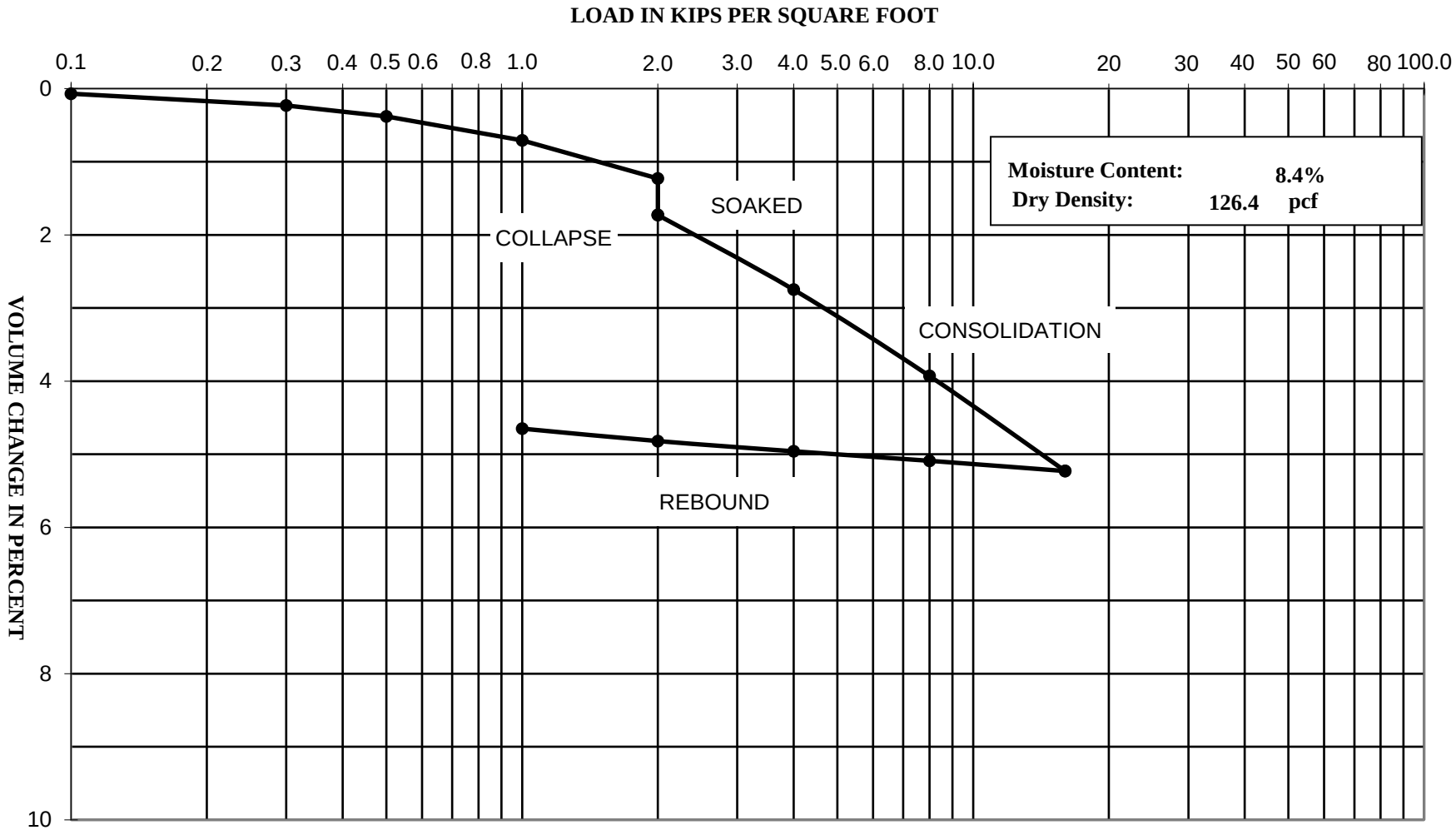
Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-7 @ 5'

SALEM engineering group, inc.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-7 @ 15'

SALEM engineering group, inc.

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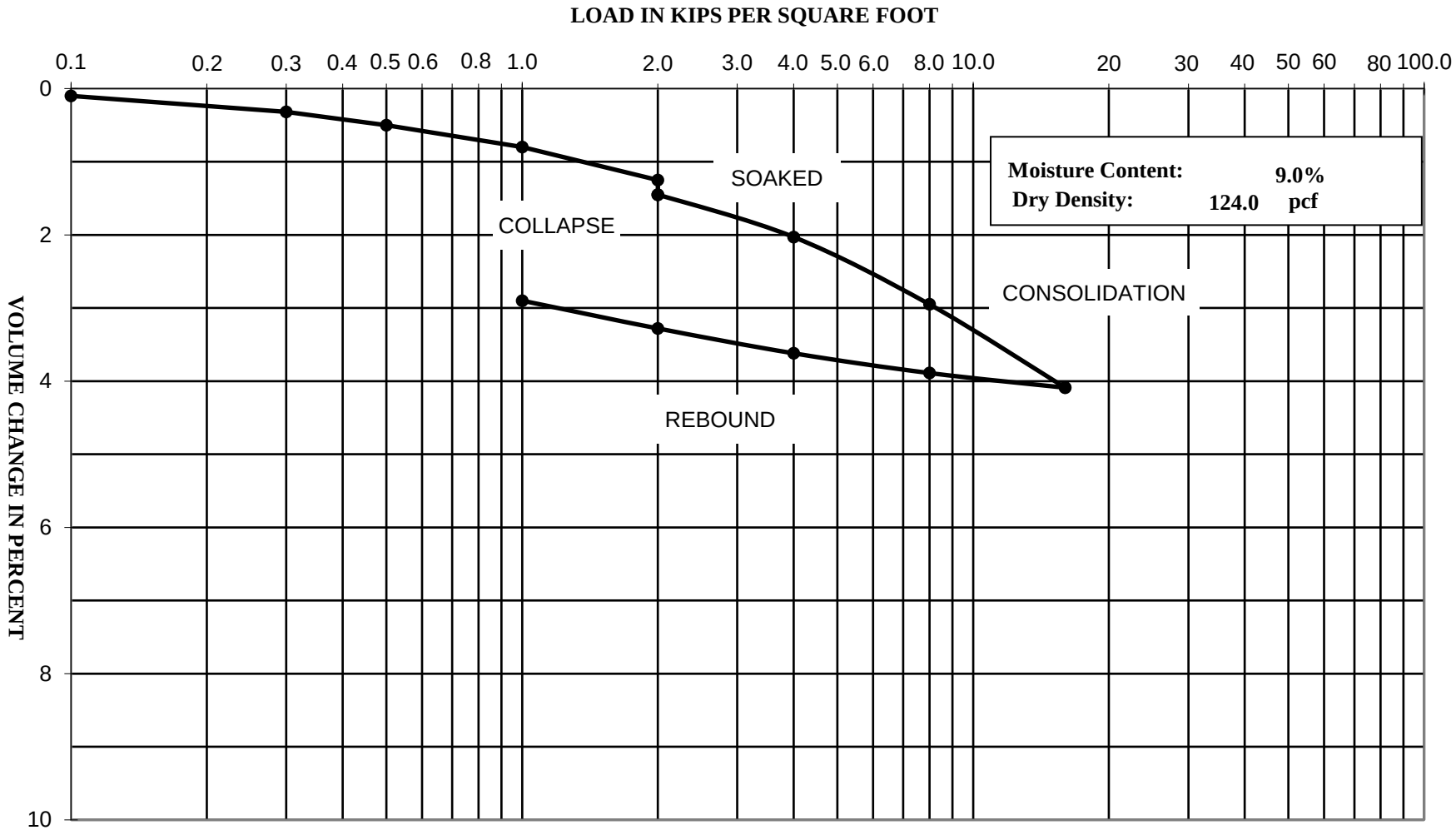


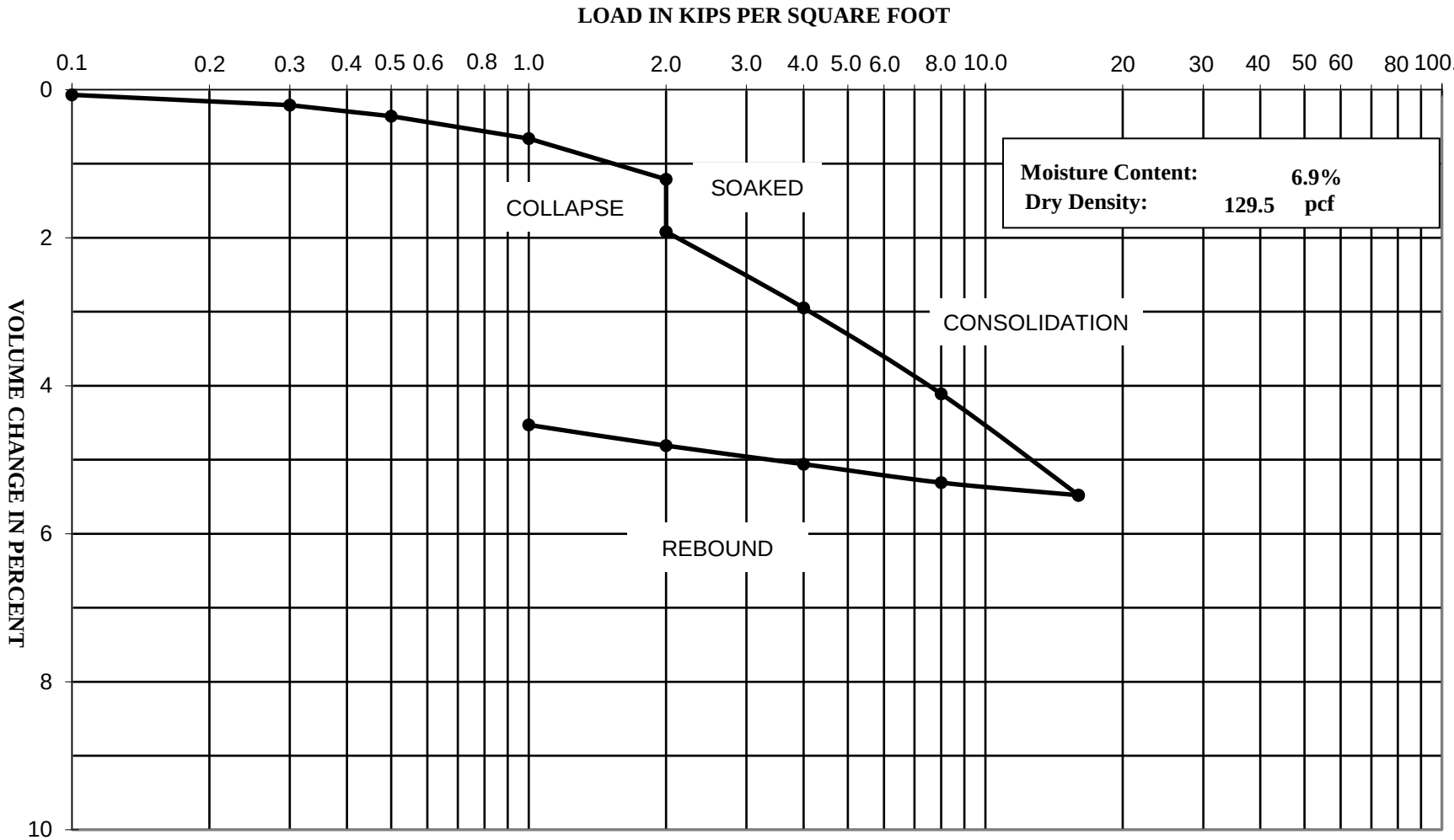
Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-18 @ 2'

SALEM engineering group, inc.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



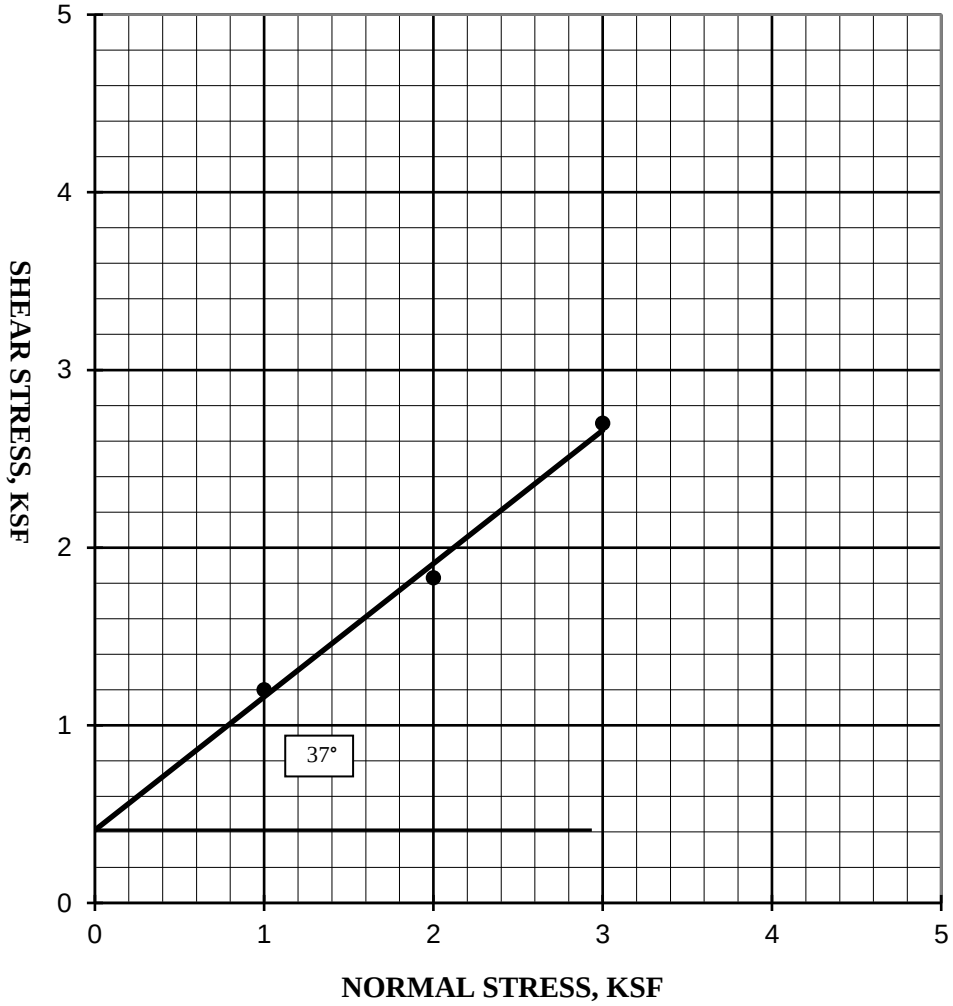
Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-22 @ 10'

SALEM engineering group, inc.

SHEAR STRENGTH DIAGRAM
(DIRECT SHEAR)
ASTM D3080



Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

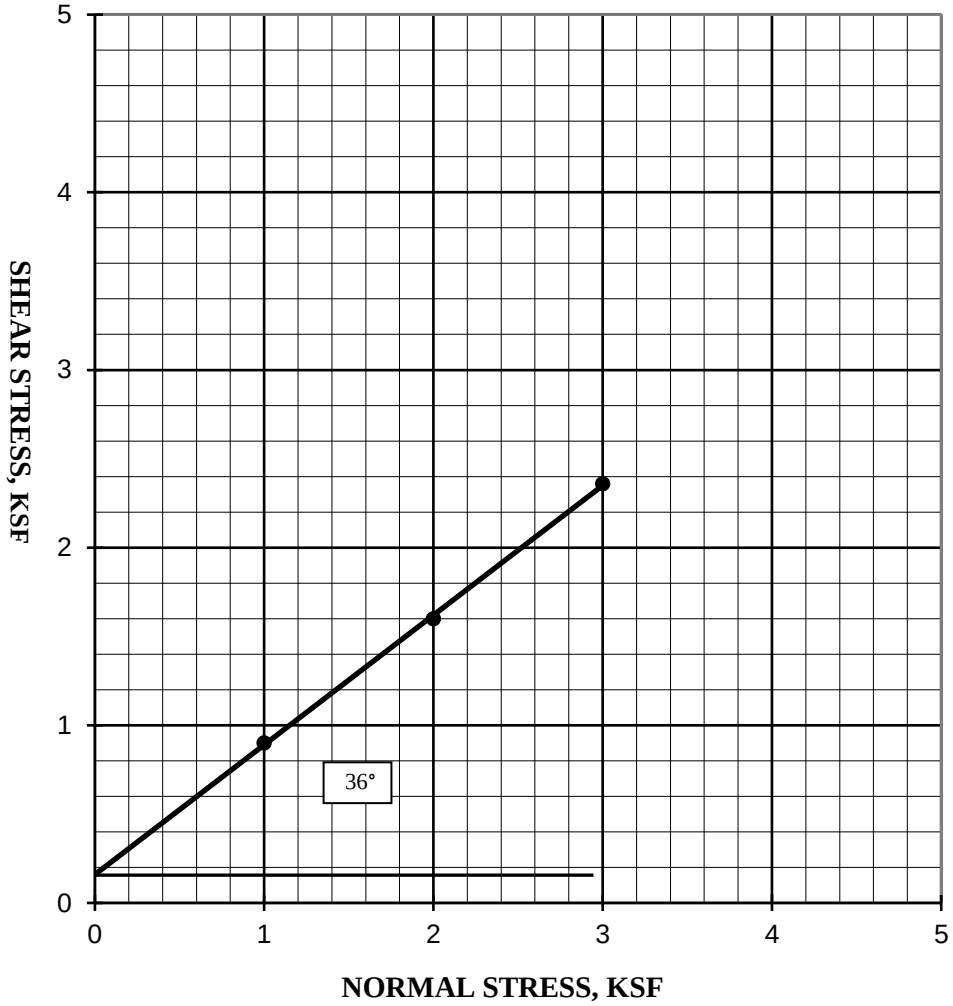
Boring: B-7 @ 2'
Soil Type: Silty SAND (SM)

Friction Angle:	**37**	**degrees**
Cohesion:	**410**	**psf**

Moisture Content	**4.4%**
Dry Density	**134.9 pcf**

SALEM engineering group, inc.

SHEAR STRENGTH DIAGRAM
(DIRECT SHEAR)
ASTM D3080



Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-18 @ 5'
Soil Type: Silty SAND (SM)

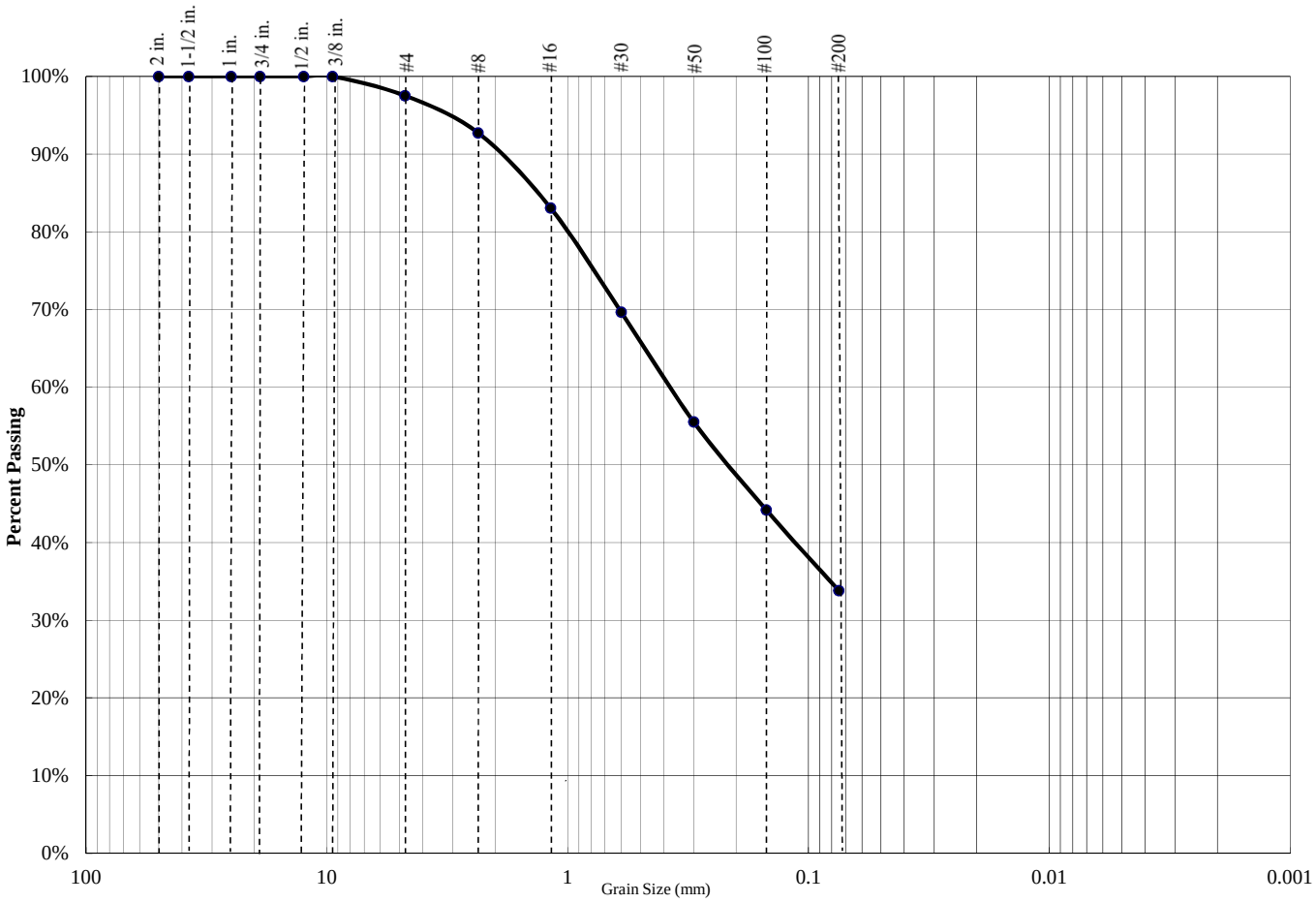
Friction Angle:	**36**	**degrees**
Cohesion:	**160**	**psf**

Moisture Content	**11.3%**
Dry Density	**119.1 pcf**

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
2%	64%	34%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	97.5%
#8	92.7%
#16	83.1%
#30	69.7%
#50	55.5%
#100	44.2%
#200	33.8%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

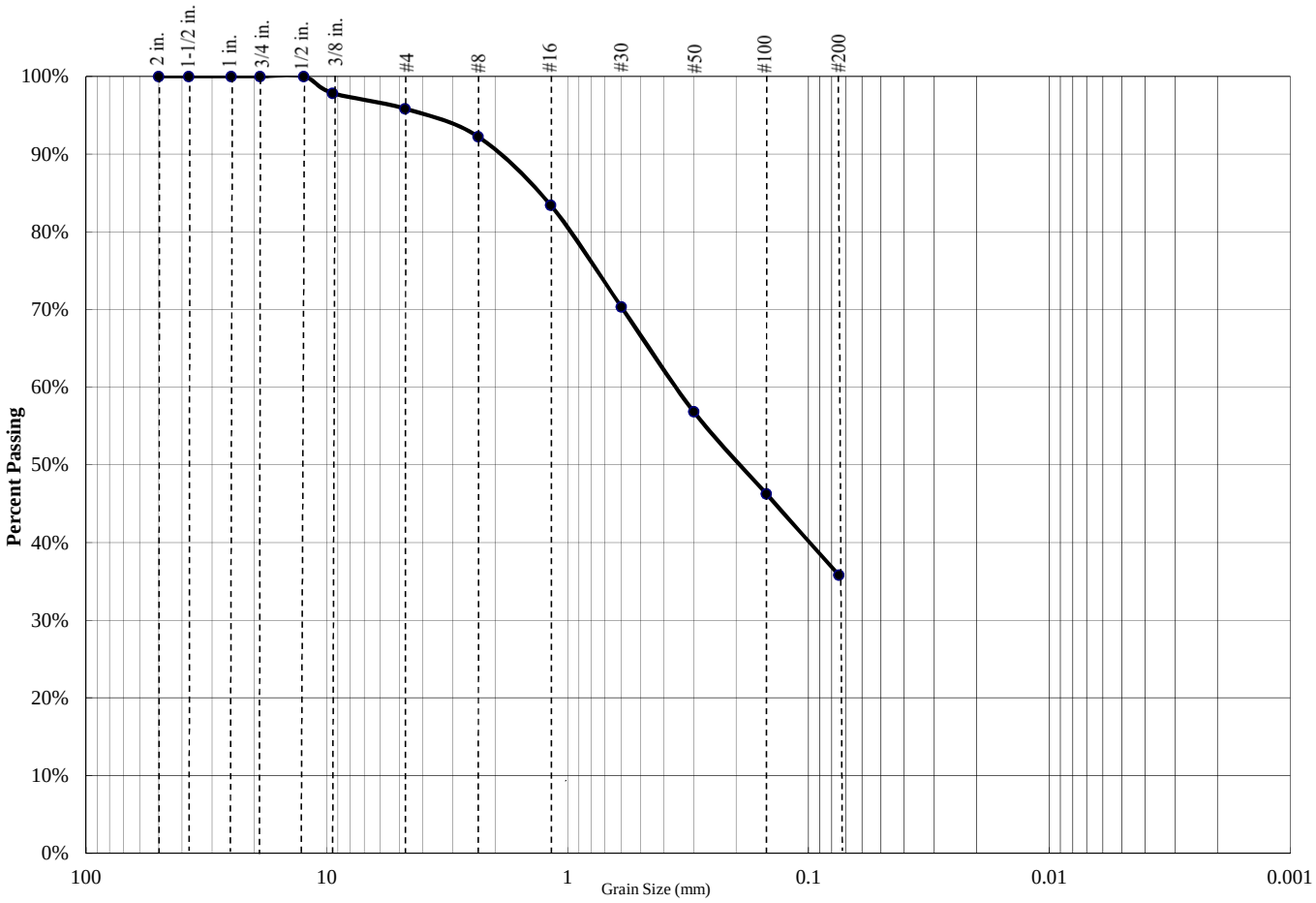
Project Number: 3-218-0666

Boring: B-7 @ 2'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
4%	60%	36%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	97.9%
#4	95.9%
#8	92.2%
#16	83.4%
#30	70.4%
#50	56.9%
#100	46.3%
#200	35.8%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

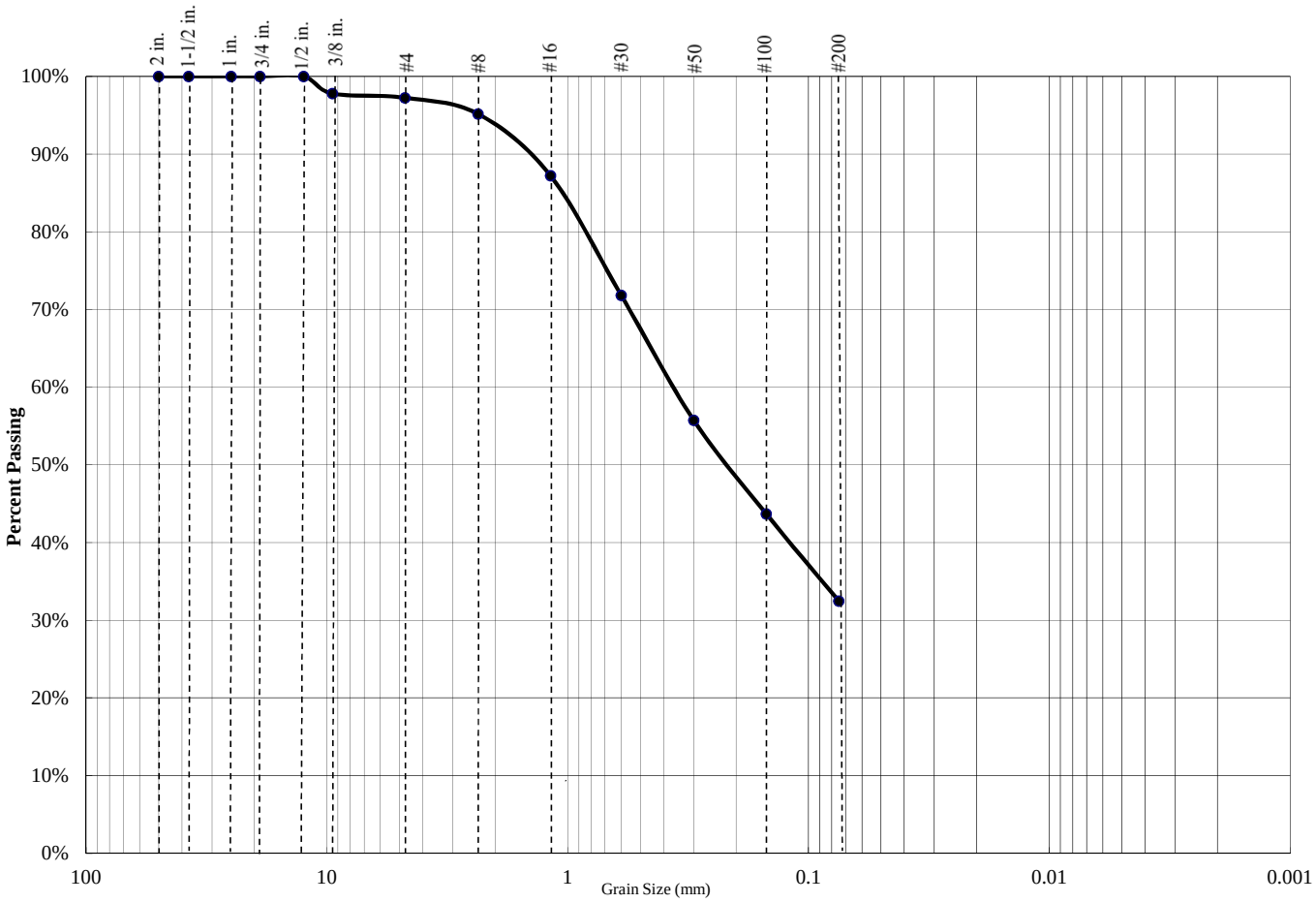
Project Number: 3-218-0666

Boring: B-7 @ 5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
3%	65%	32%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	97.8%
#4	97.2%
#8	95.2%
#16	87.2%
#30	71.8%
#50	55.7%
#100	43.7%
#200	32.5%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

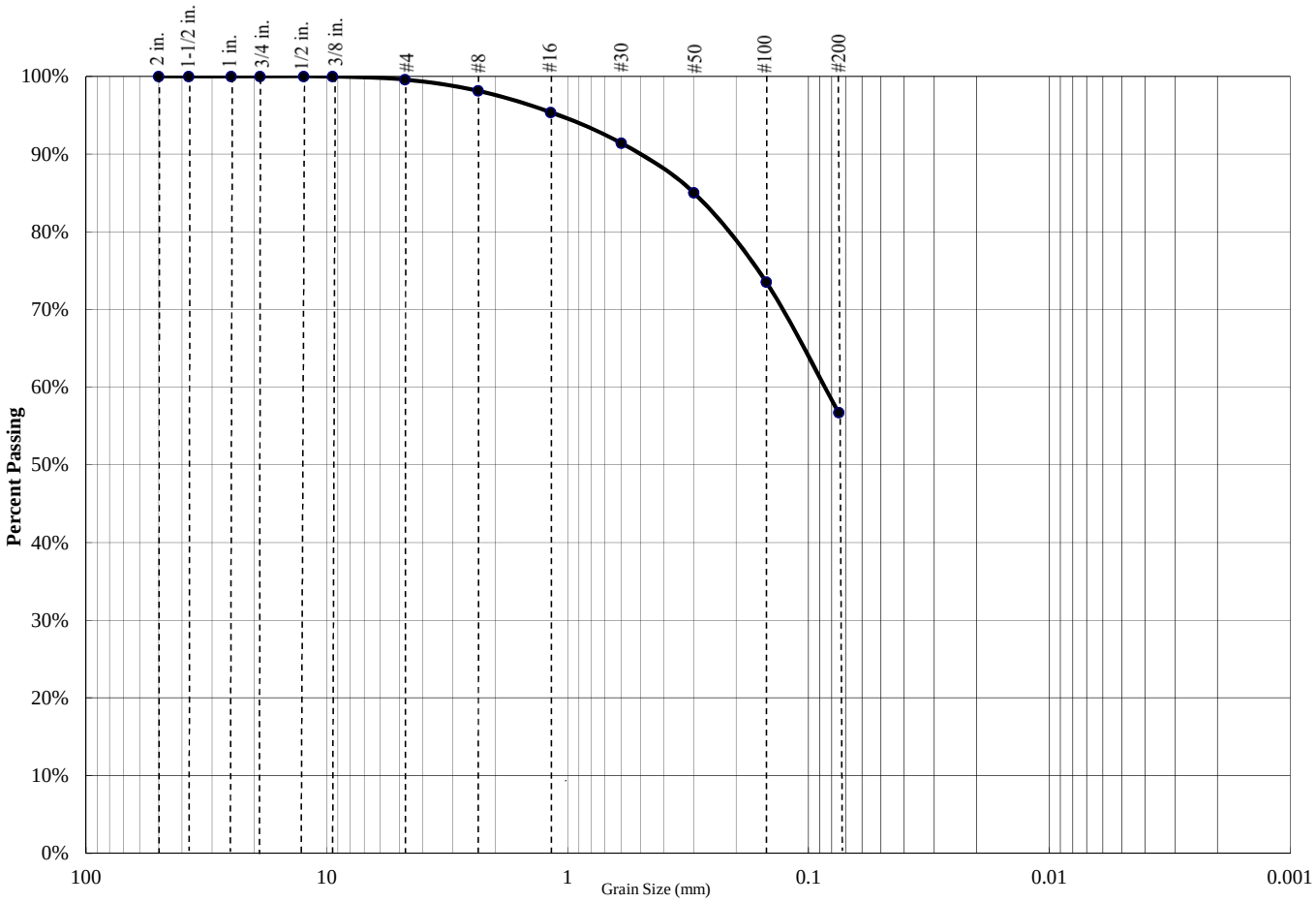
Project Number: 3-218-0666

Boring: B-7 @ 15'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
0%	43%	57%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	99.6%
#8	98.2%
#16	95.4%
#30	91.4%
#50	85.0%
#100	73.5%
#200	56.7%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Sandy SILT (ML)

Project Name: Comm Development - Yucaipa, CA

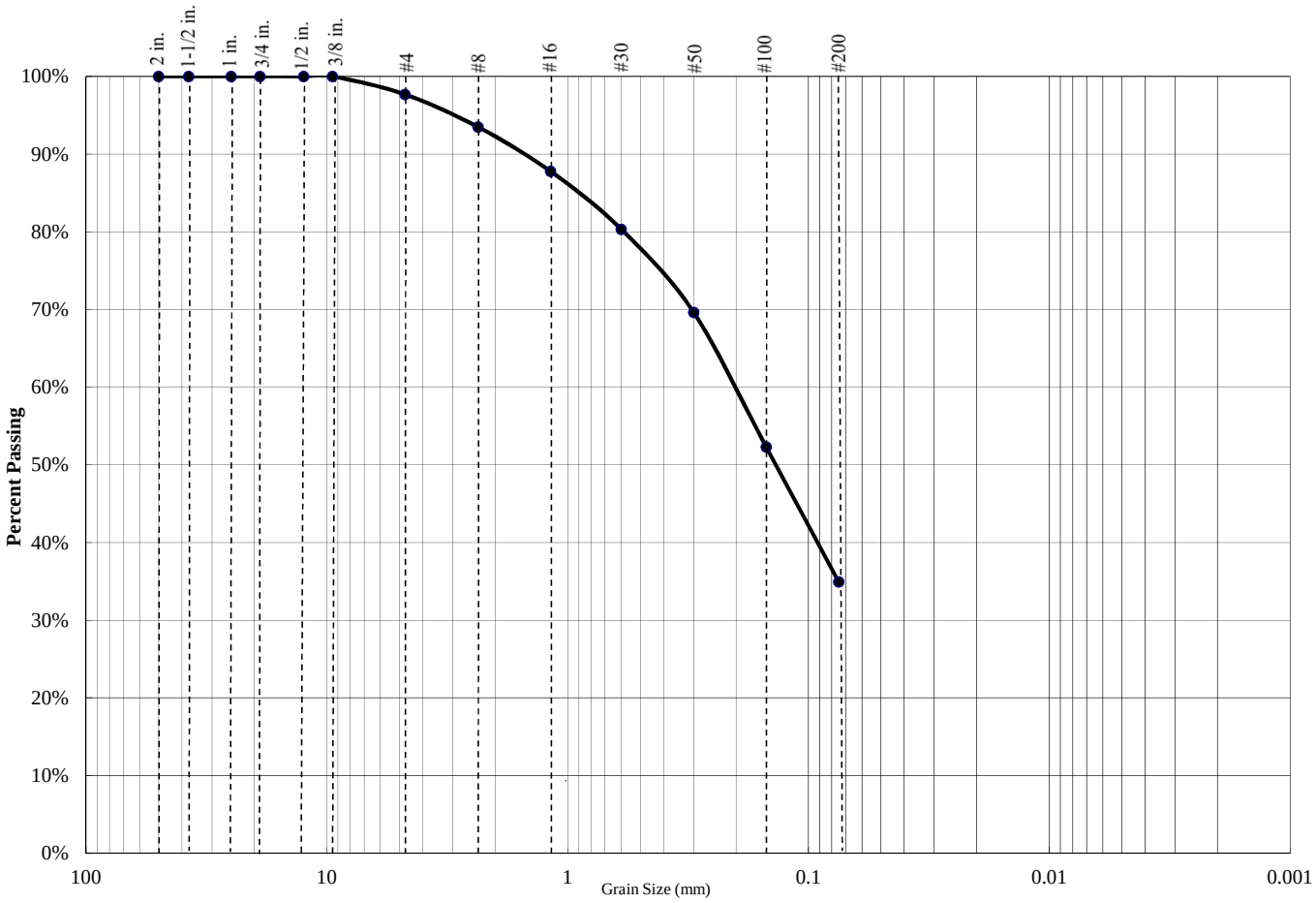
Project Number: 3-218-0666

Boring: B-18 @ 2'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
2%	63%	35%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	97.7%
#8	93.5%
#16	87.8%
#30	80.3%
#50	69.6%
#100	52.3%
#200	35.0%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

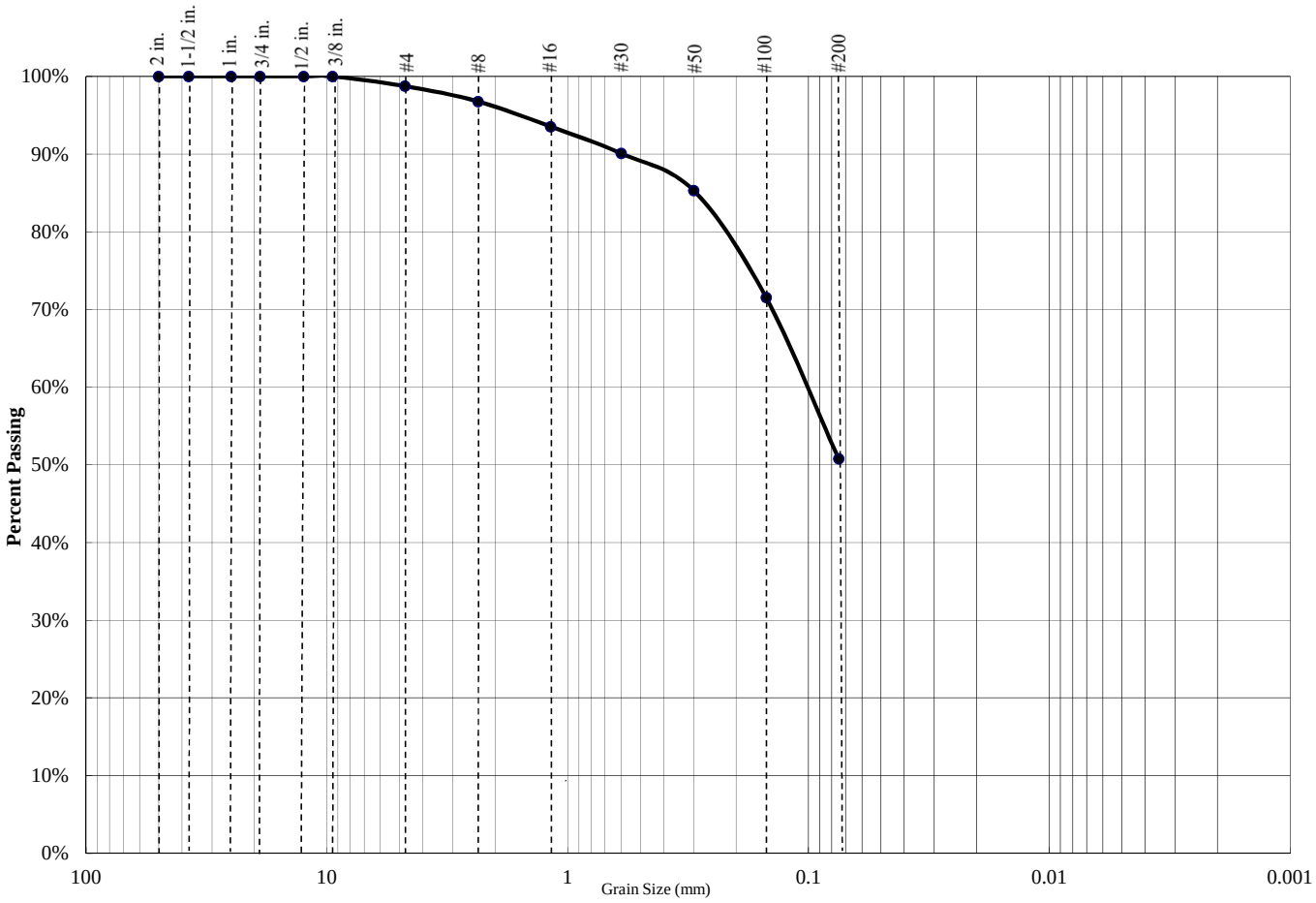
Project Number: 3-218-0666

Boring: B-18 @ 5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	48%	51%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	98.7%
#8	96.8%
#16	93.5%
#30	90.1%
#50	85.3%
#100	71.5%
#200	50.8%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

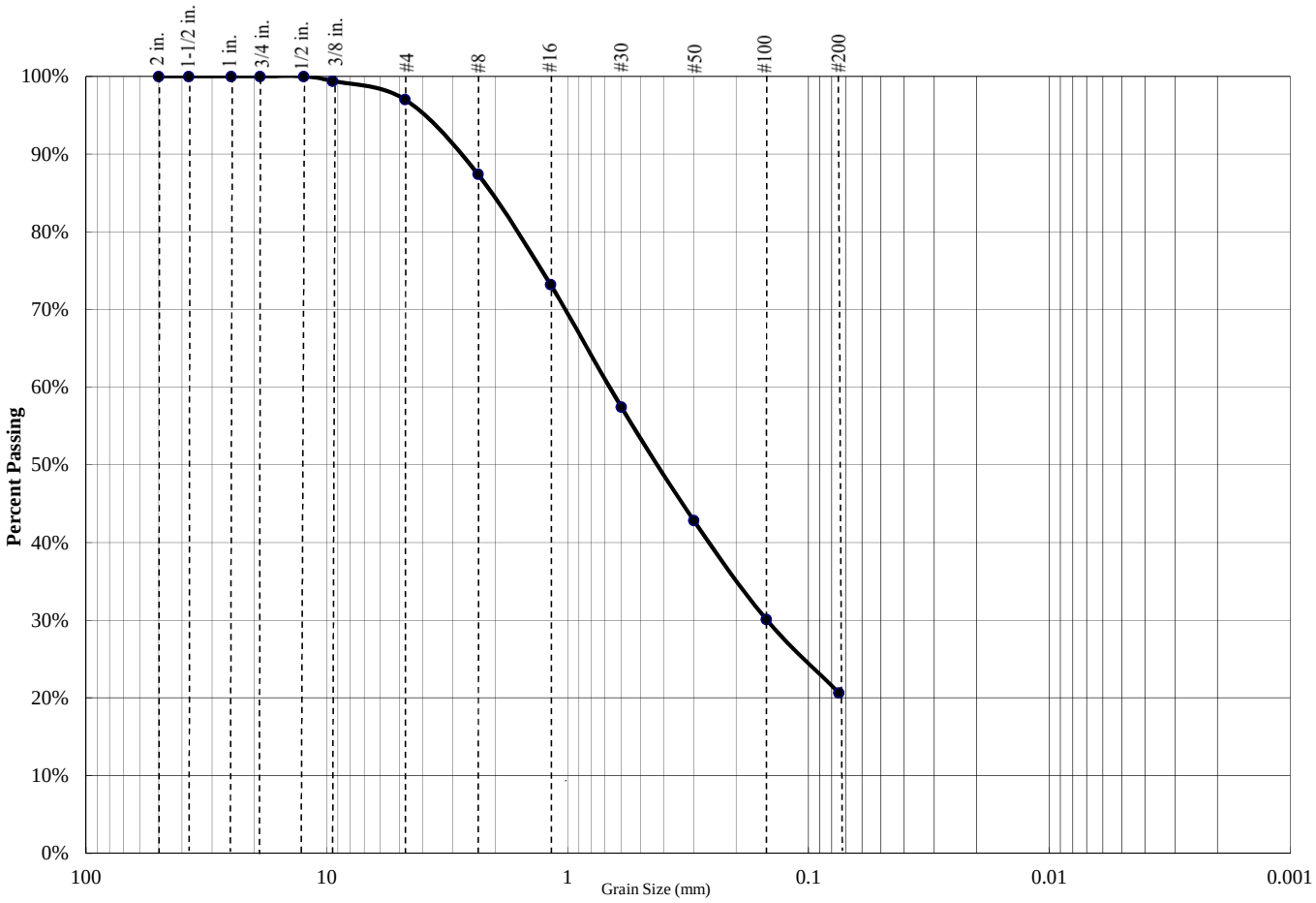
Project Number: 3-218-0666

Boring: B-18 @ 10'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
3%	76%	21%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	99.4%
#4	97.0%
#8	87.4%
#16	73.2%
#30	57.5%
#50	42.9%
#100	30.1%
#200	20.7%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

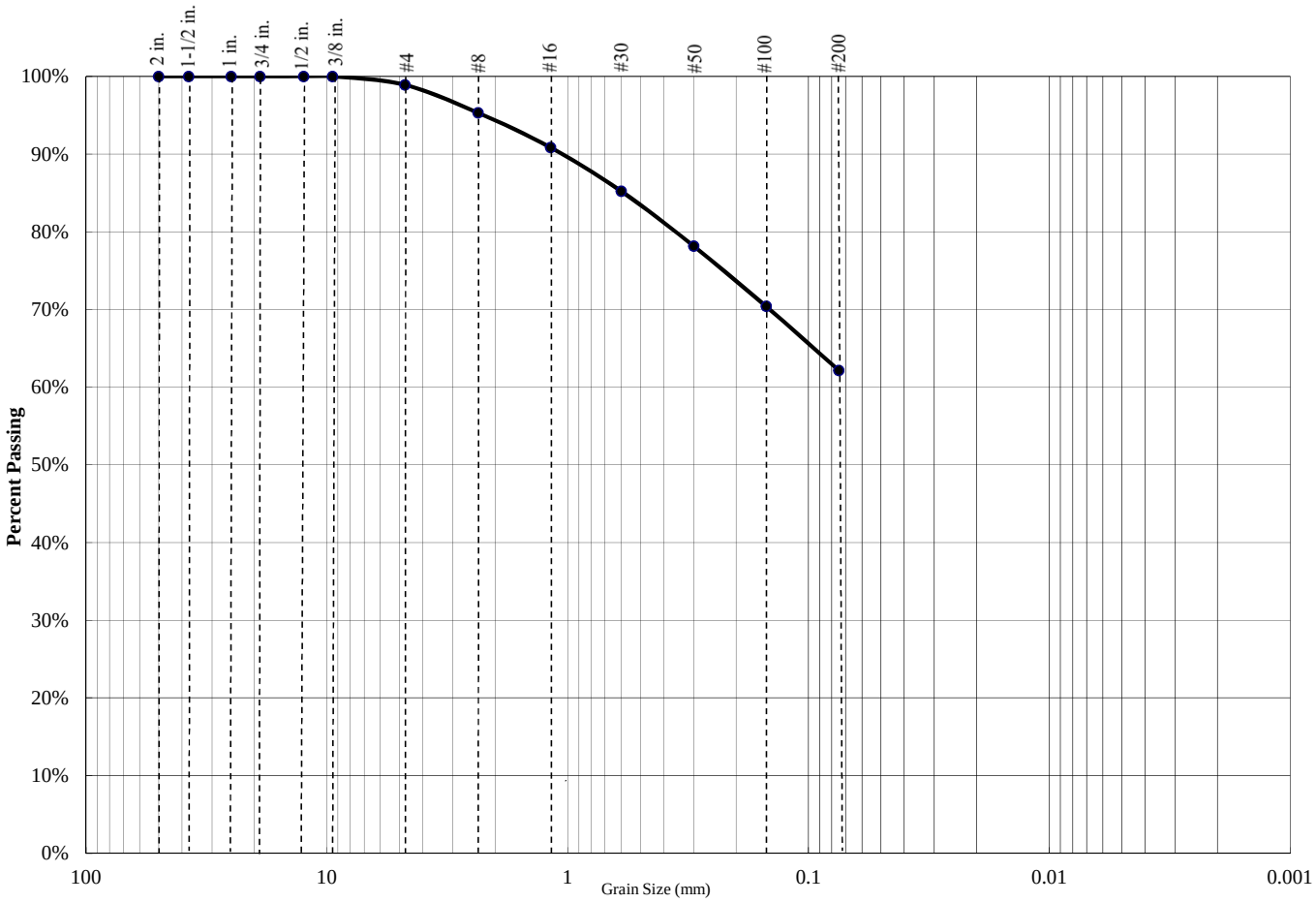
Project Number: 3-218-0666

Boring: B-18 @ 20'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
1%	37%	62%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	98.9%
#8	95.3%
#16	90.8%
#30	85.2%
#50	78.1%
#100	70.4%
#200	62.2%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Sandy SILT (ML)

Project Name: Comm Development - Yucaipa, CA

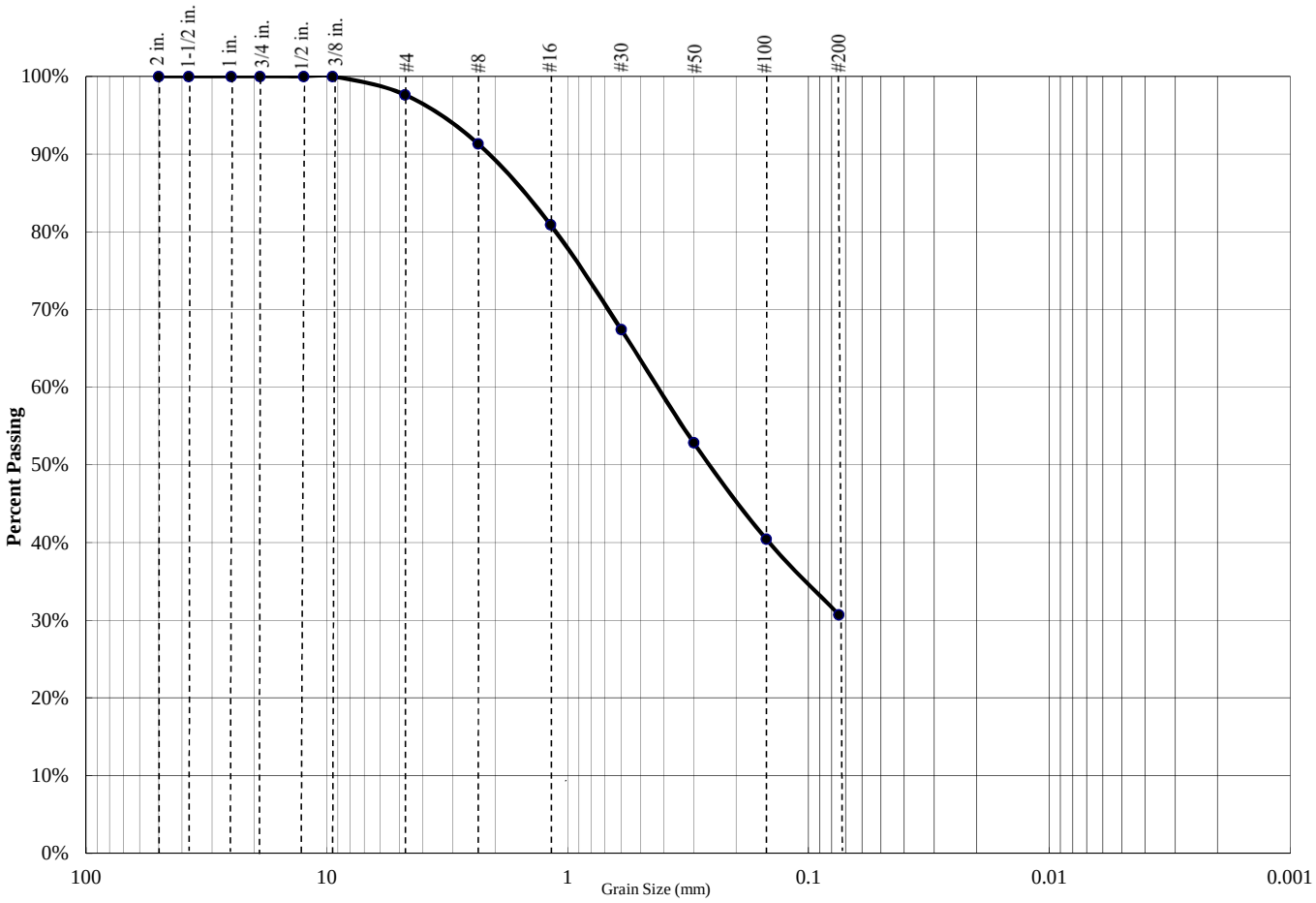
Project Number: 3-218-0666

Boring: B-18 @ 25'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
2%	67%	31%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	100.0%
#4	97.6%
#8	91.3%
#16	80.9%
#30	67.4%
#50	52.8%
#100	40.4%
#200	30.7%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

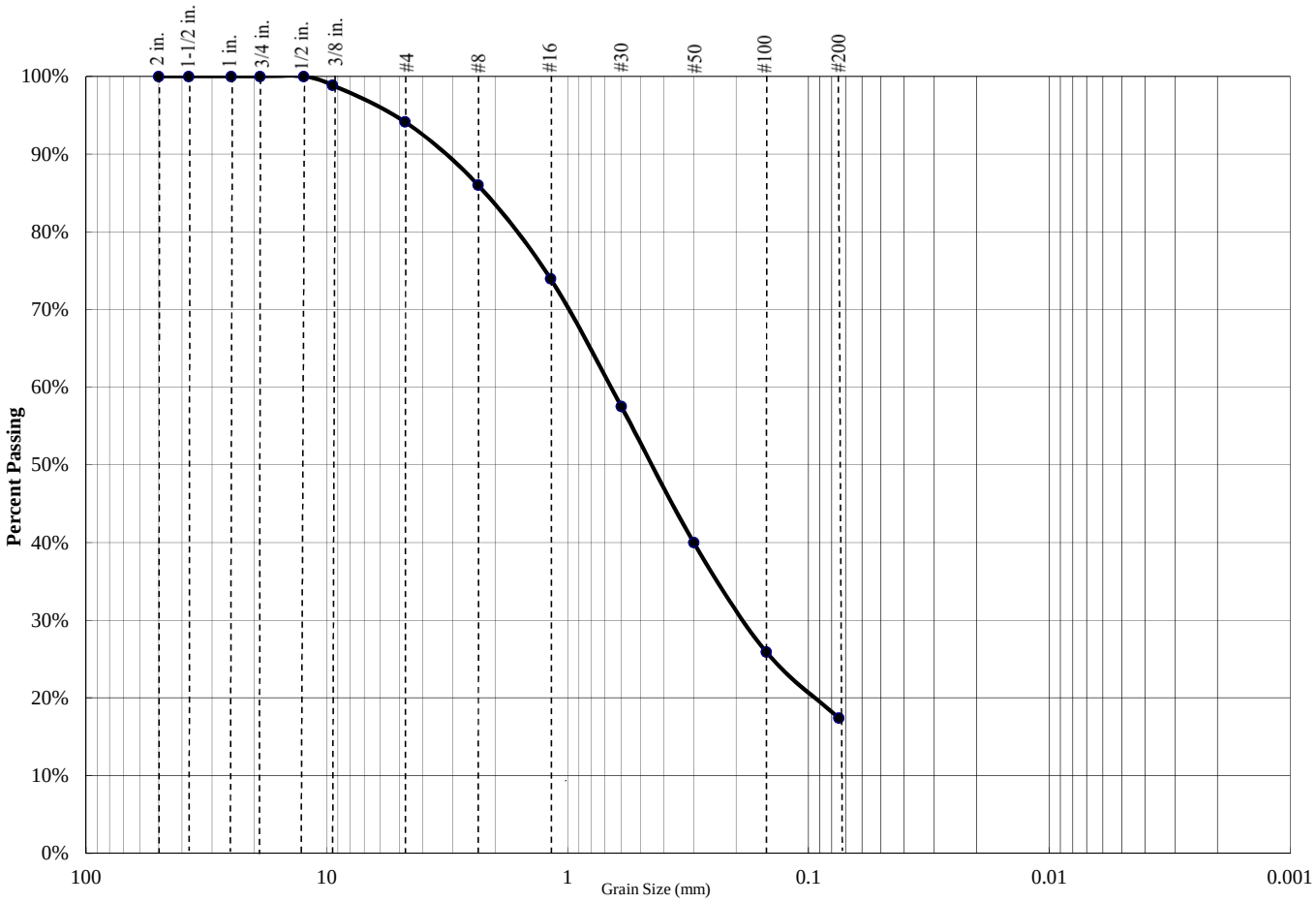
Project Number: 3-218-0666

Boring: B-18 @ 30'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
6%	77%	17%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	98.9%
#4	94.2%
#8	86.0%
#16	74.0%
#30	57.5%
#50	40.0%
#100	25.9%
#200	17.4%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

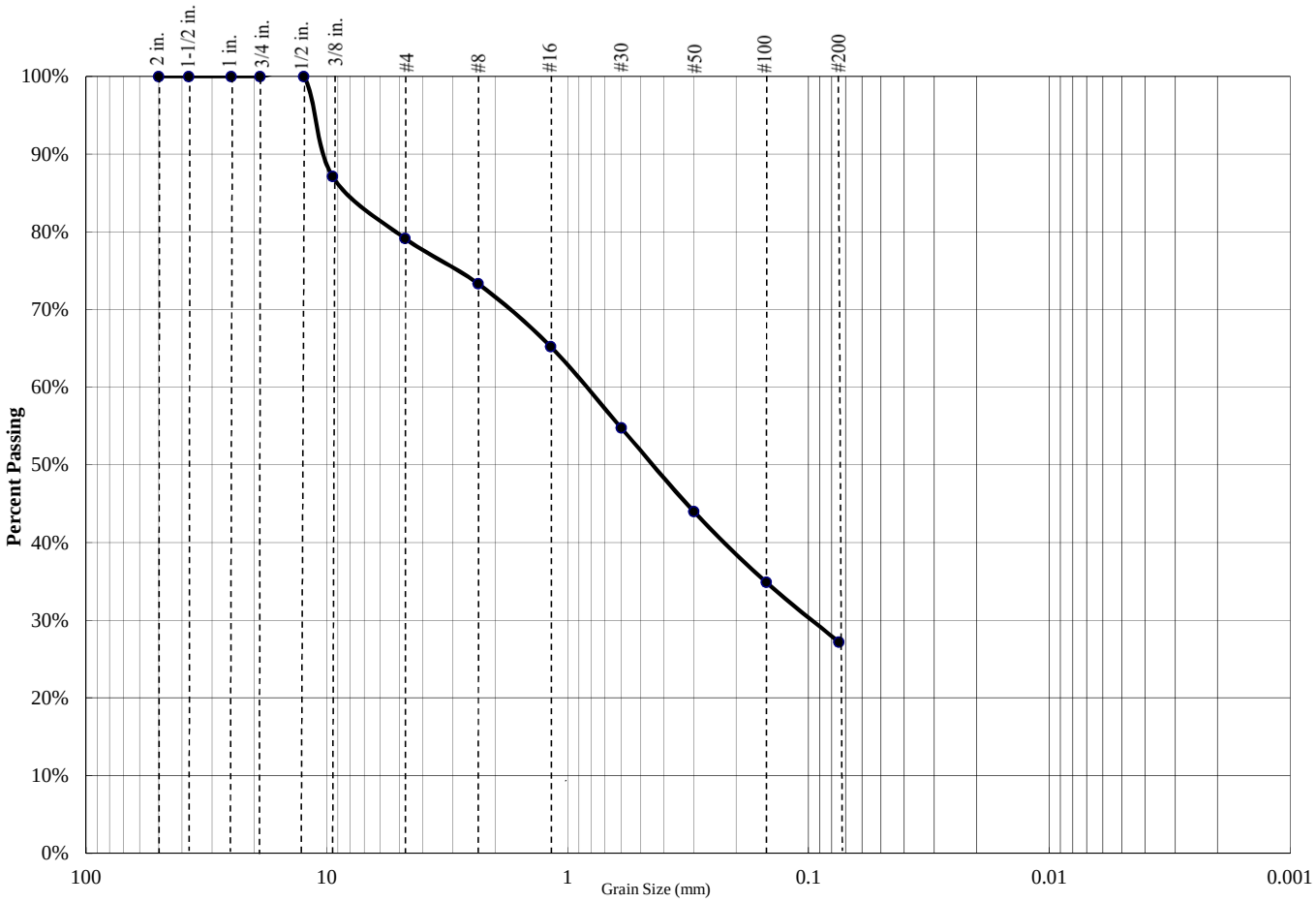
Project Number: 3-218-0666

Boring: B-18 @ 45'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
21%	52%	27%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	87.2%
#4	79.2%
#8	73.3%
#16	65.2%
#30	54.8%
#50	44.0%
#100	34.9%
#200	27.2%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-22 @ 10'

SALEM engineering group, inc.

EXPANSION INDEX TEST
ASTM D4829

Project Name: Comm Development - Yucaipa, CA
Project Number: 3-218-0666
Date Sampled: 8/1/18 to 8/3/18 Date Tested: 8/14/18
Sampled By: SEG Tested By: AV
Sample Location: B-18 @ 0 - 3'
Soil Description: Dark Brown Sandy SILT (ML) w/ trace clay

Trial #	1	2	3
Weight of Soil & Mold, g.	596.8		
Weight of Mold, g.	188.2		
Weight of Soil, g.	408.6		
Wet Density, pcf	123.2		
Weight of Moisture Sample (Wet), g.	840.0		
Weight of Moisture Sample (Dry), g.	770.0		
Moisture Content, %	9.1		
Dry Density, pcf	113.0		
Specific Gravity of Soil	2.7		
Degree of Saturation, %	49.9		

Time	Inital	30 min	1 hr	6 hrs	12 hrs	24 hrs
Dial Reading	0	0.0221	0.023	--	--	0.0258

Expansion Index $_{measured}$ = 25.8
Expansion Index $_{50}$ = 25.8

Expansion Index = **26**

Expansion Potential Table	
Exp. Index	Potential Exp.
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

SALEM engineering group, inc.

CHEMICAL ANALYSIS

SO_4 - Modified CTM 417 & Cl - Modified CTM 417/422

Project Name: Comm Development - Yucaipa, CA
Project Number: 3-218-0666
Date Sampled: 8/1/18 to 8/3/18 Date Tested: 8/9/18
Sampled By: SEG Tested By: RA
Soil Description: Dark Brown Sandy SILT (ML) w/ trace clay

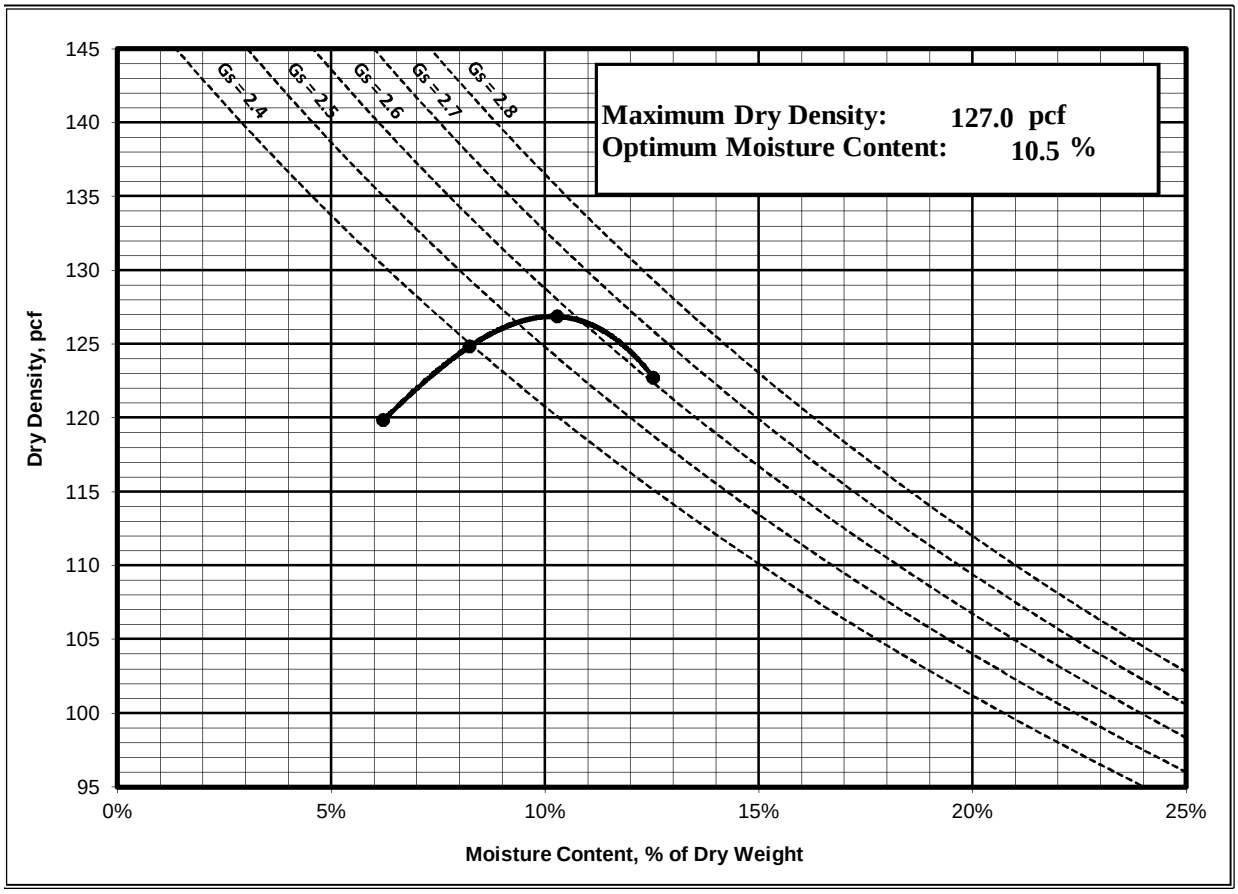
Sample Number	Sample Location	Soluble Sulfate SO_4-S	Soluble Chloride Cl	pH
1a.	B-18 @ 0 - 3'	50 mg/kg	49 mg/kg	7.9
1b.	B-18 @ 0 - 3'	50 mg/kg	49 mg/kg	7.9
1c.	B-18 @ 0 - 3'	50 mg/kg	49 mg/kg	7.9
Average:		**50 mg/kg**	**49 mg/kg**	**7.9**

SALEM engineering group, inc.

Laboratory Compaction Curve
ASTM D1557

Project Name: Comm Development - Yucaipa, CA
Project Number: 3-218-0666
Date Sampled: 8/1/18 to 8/3/18 Date Tested: 8/14/18
Sampled By: SEG Tested By: JG
Sample Location: B-18 @ 0 - 3'
Soil Description: Dark Brown Sandy SILT (ML) w/ trace clay
Test Method: Method A

	1	2	3	4
Weight of Moist Specimen & Mold, (g)	3909.9	4027.9	4100.5	4073.2
Weight of Compaction Mold, (g)	1985.2	1985.2	1985.2	1985.2
Weight of Moist Specimen, (g)	1924.7	2042.7	2115.3	2088.0
Volume of Mold, (ft^3)	0.0333	0.0333	0.0333	0.0333
Wet Density, (pcf)	127.3	135.1	139.9	138.1
Weight of Wet (Moisture) Sample, (g)	336.4	336.4	336.4	336.4
Weight of Dry (Moisture) Sample, (g)	316.7	310.8	305.0	298.9
Moisture Content, (%)	6.2%	8.2%	10.3%	12.5%
Dry Density, (pcf)	119.8	124.8	126.8	122.7



SALEM engineering group, inc.

APPENDIX

C

APPENDIX C
GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

1.0 SCOPE OF WORK: These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

2.0 PERFORMANCE: The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

3.0 TECHNICAL REQUIREMENTS: All compacted materials shall be densified to no less that 95 percent of relative compaction (90 percent for cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

4.0 SOILS AND FOUNDATION CONDITIONS: The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

5.0 DUST CONTROL: The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

6.0 CLEARING AND GRUBBING: The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

7.0 SUBGRADE PREPARATION: Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

8.0 EXCAVATION: All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

9.0 FILL AND BACKFILL MATERIAL: No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

10.0 PLACEMENT, SPREADING AND COMPACTION: The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.

11.0 SEASONAL LIMITS: No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

12.0 DEFINITIONS - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

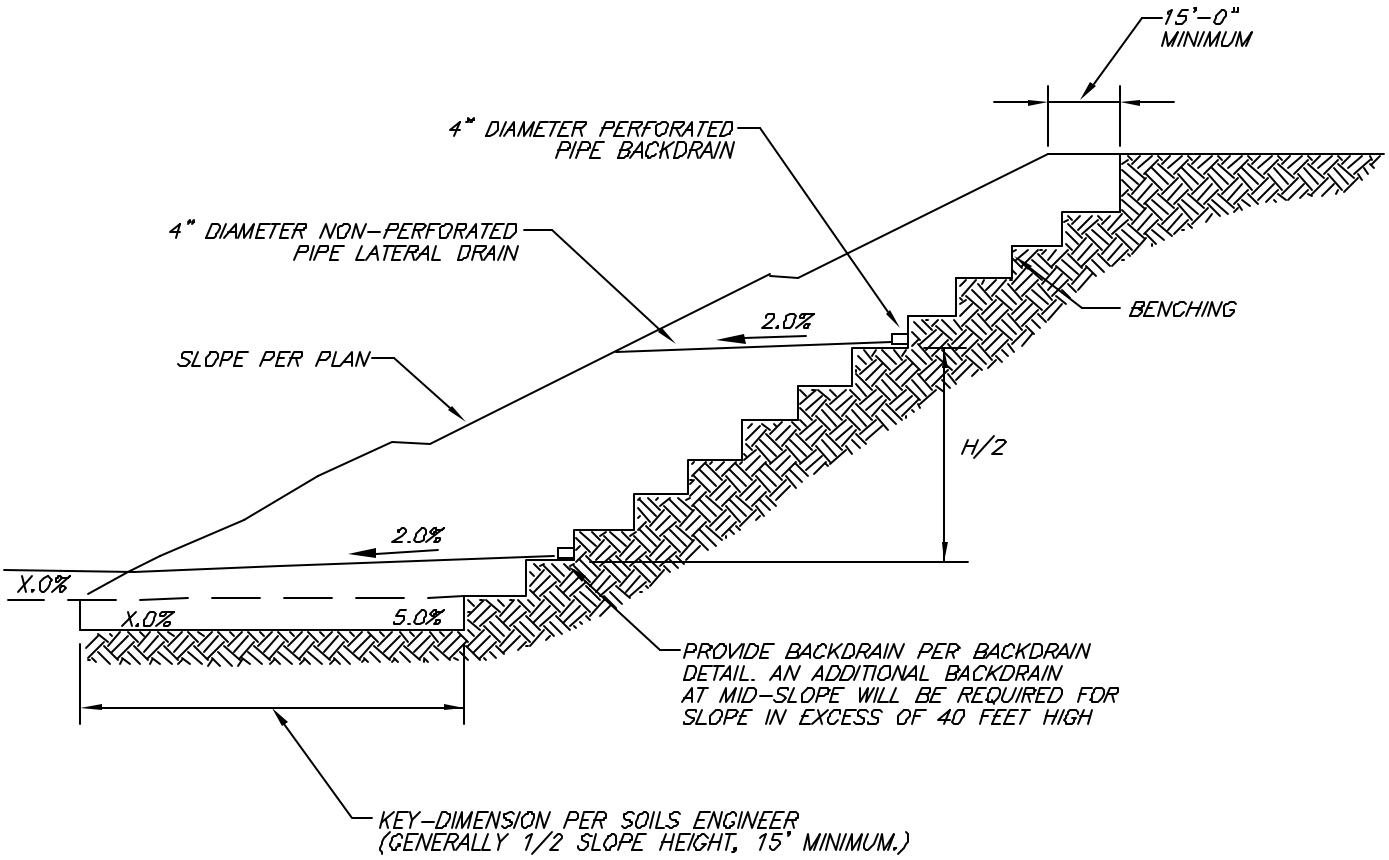
The term "Standard Specifications": hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

13.0 PREPARATION OF THE SUBGRADE - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

14.0 AGGREGATE BASE - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

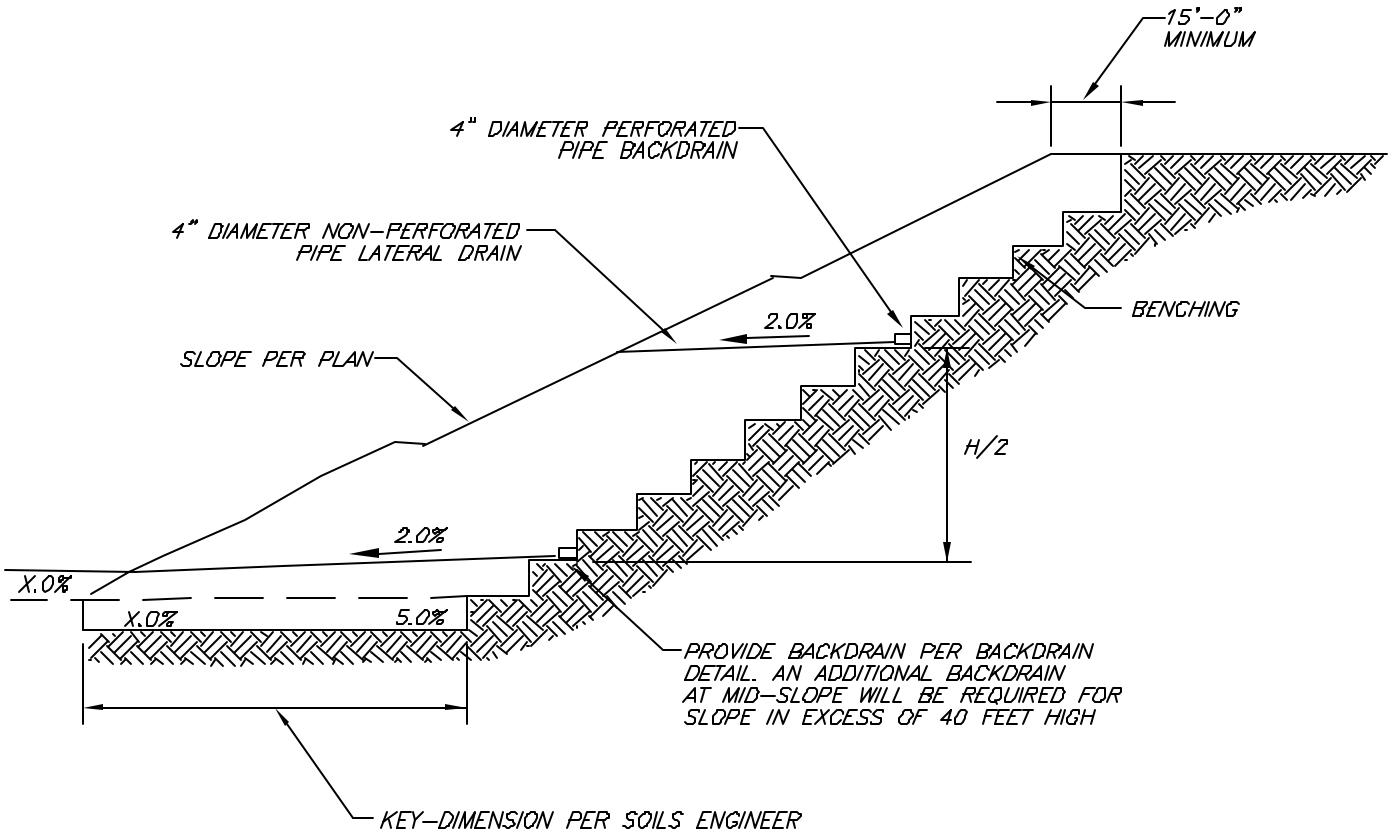
15.0 AGGREGATE SUBBASE - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

16.0 ASPHALTIC CONCRETE SURFACING - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.



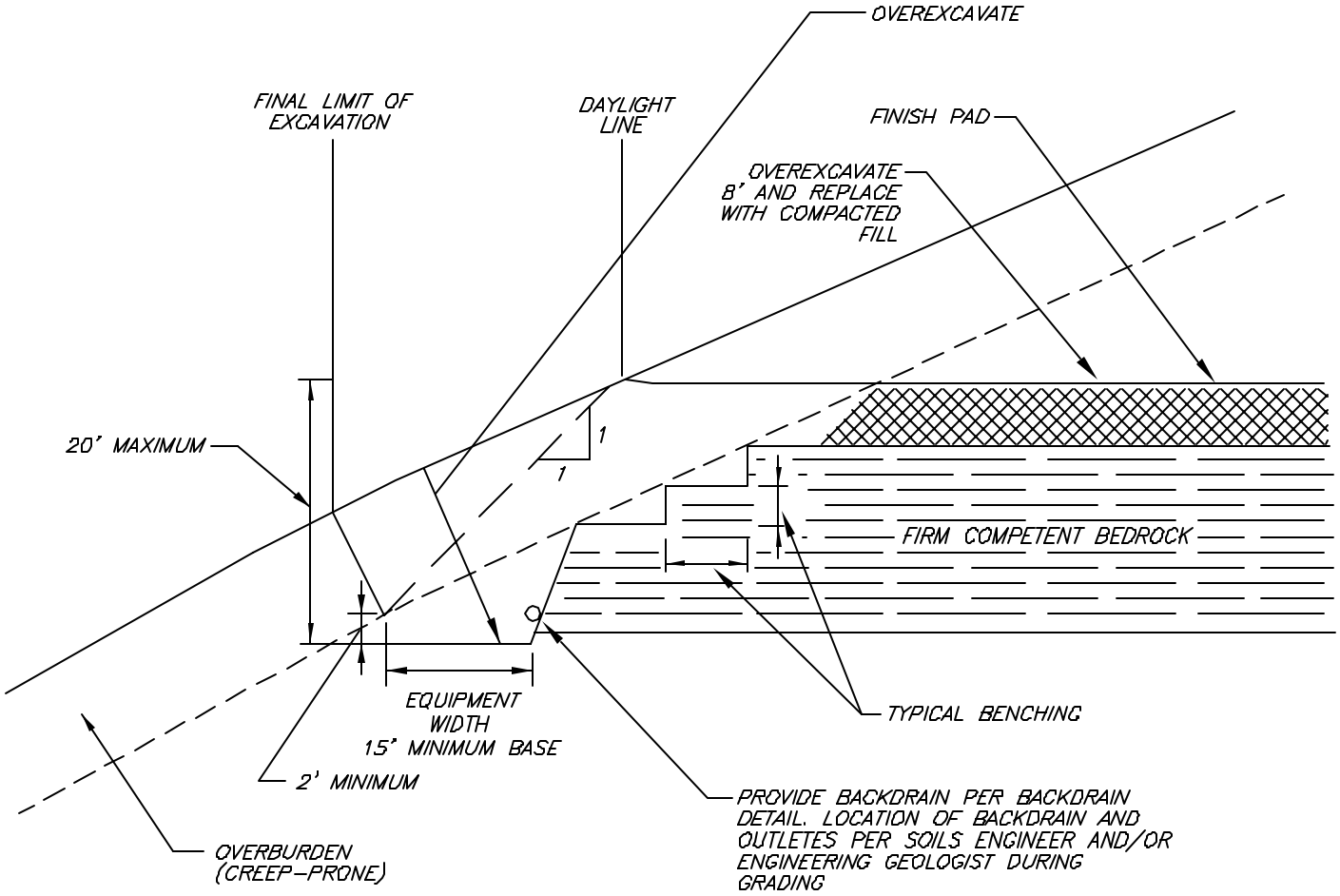
TYPICAL STABILIZATION FILL DETAIL

SALEM Engineering Group, Inc.



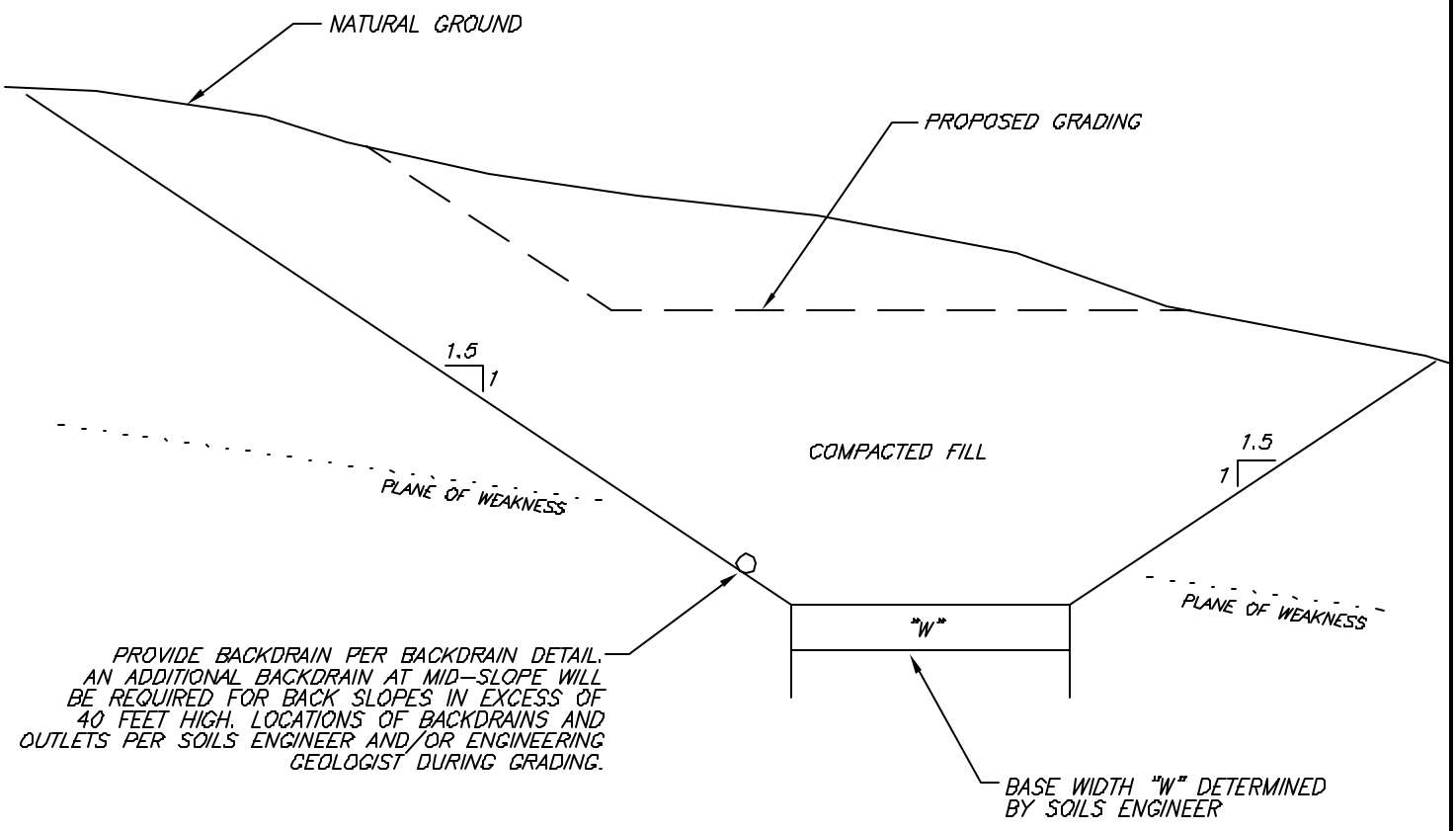
TYPICAL BUTTRESS FILL DETAIL

SALEM Engineering Group, Inc.



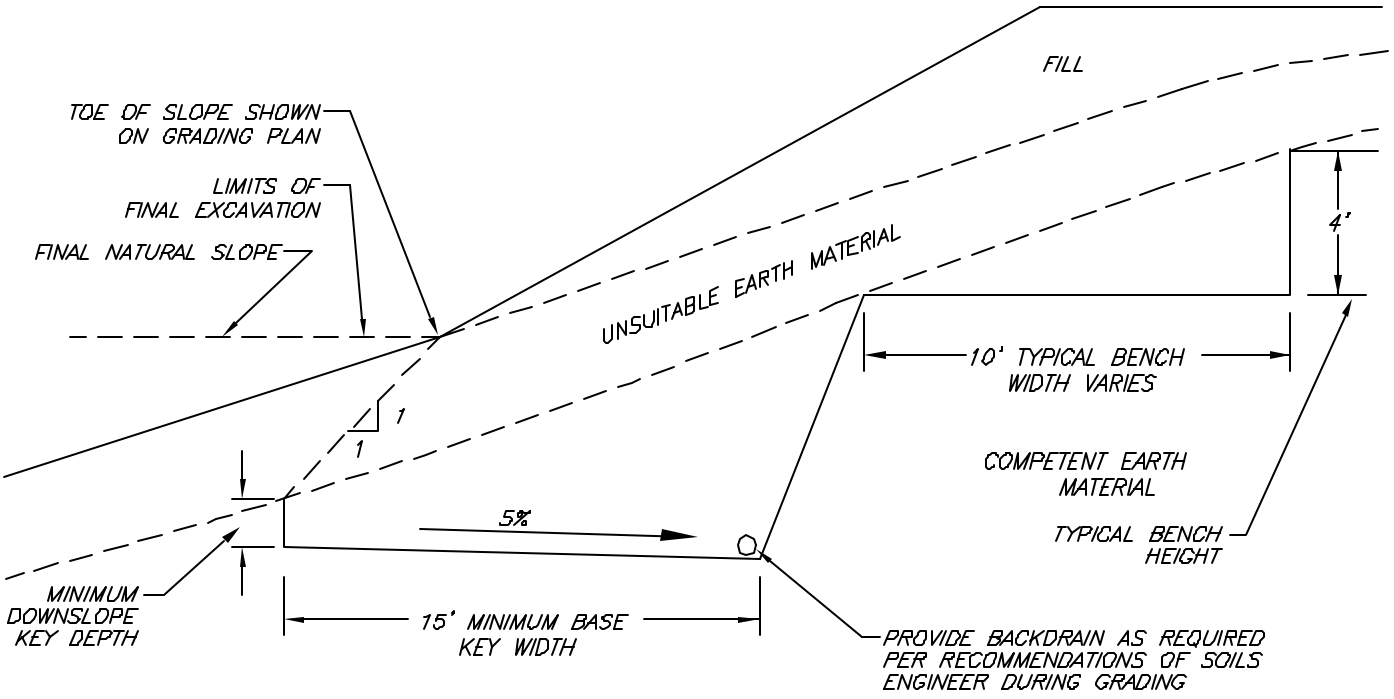
DAYLIGHT SHEAR KEY DETAIL

SALEM Engineering Group, Inc.



TYPICAL SHEAR KEY DETAIL

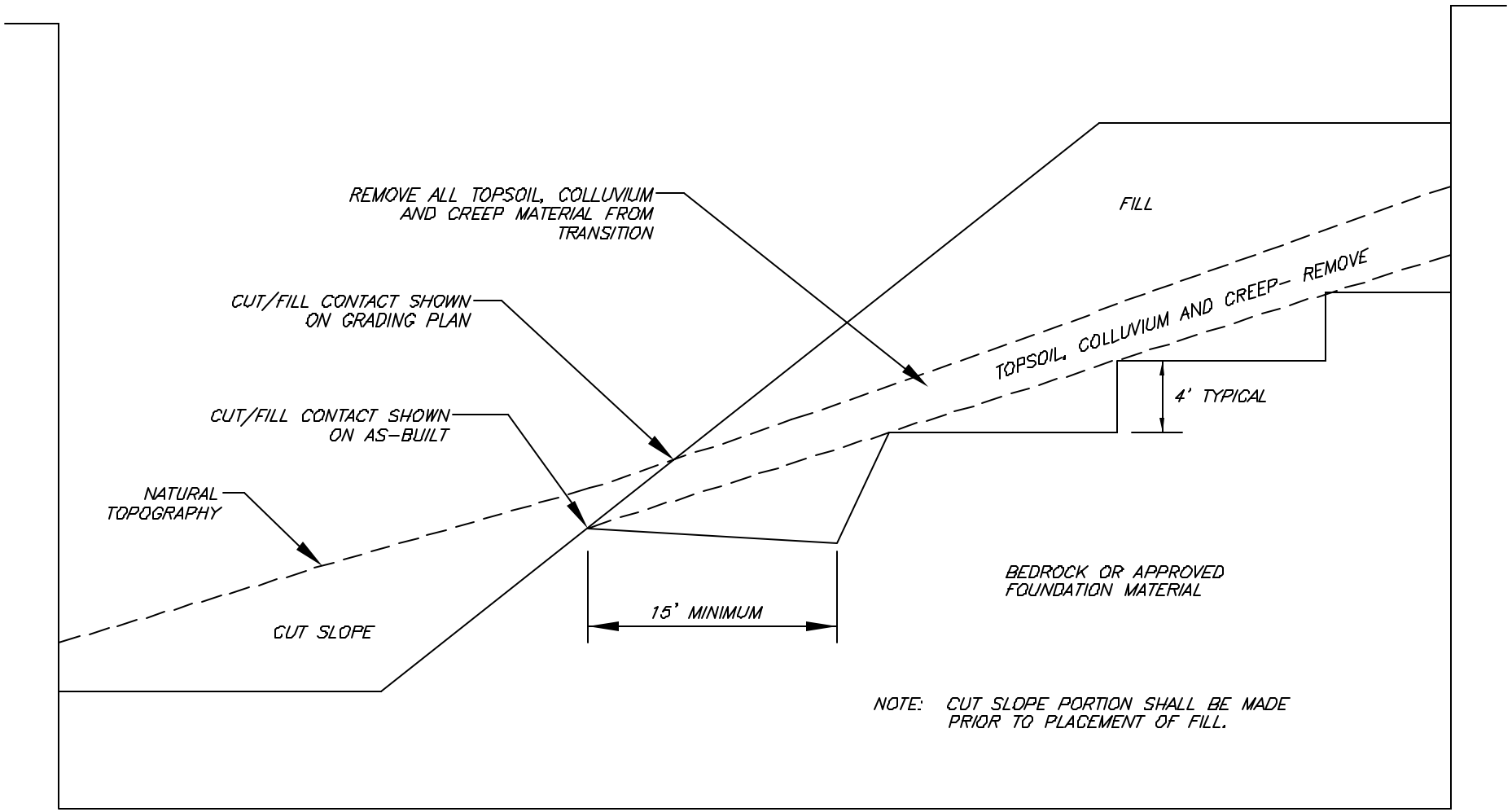
SALEM Engineering Group, Inc.



WHERE NATURAL SLOPE IS 5:1 OR LESS, BENCHING IS NOT NECESSARY, HOWEVER, FILL IS NOT TO BE PLACED ON COMPRESSIBLE OR UNSUITABLE MATERIAL.

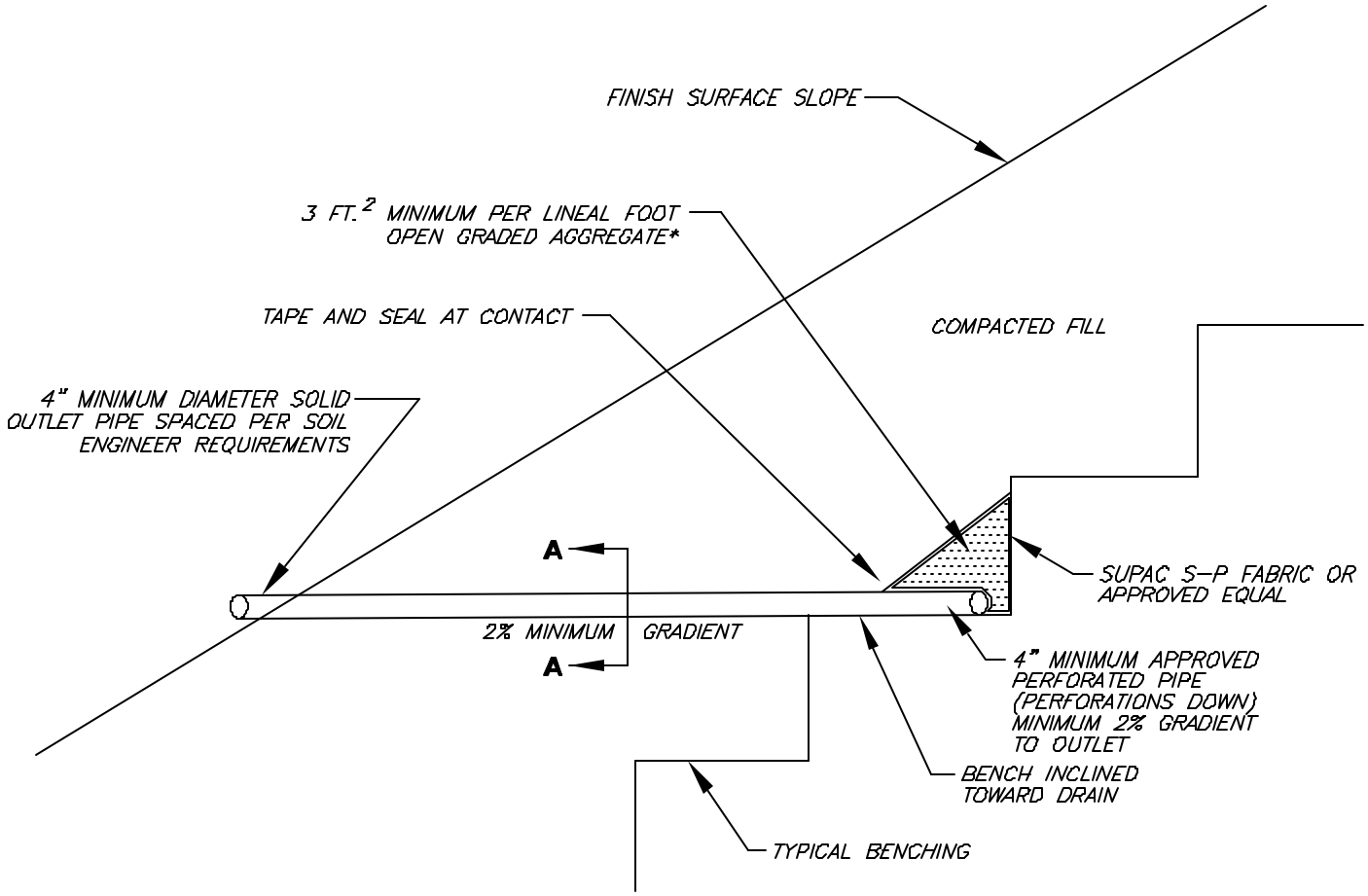
FILL SLOPE ABOVE NATURAL GROUND DETAIL

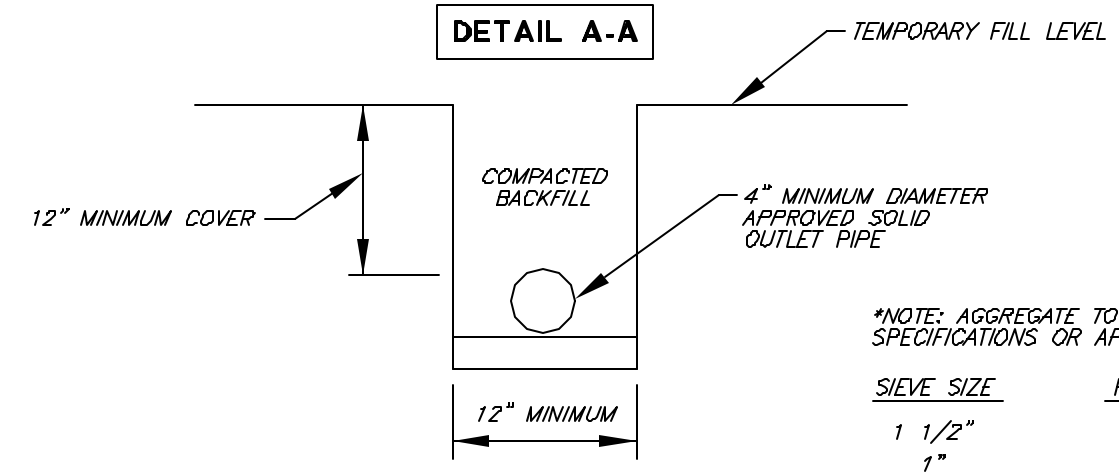
SALEM Engineering Group, Inc.



FILL SLOPE ABOVE CUT SLOPE DETAIL

SALEM Engineering Group, Inc.



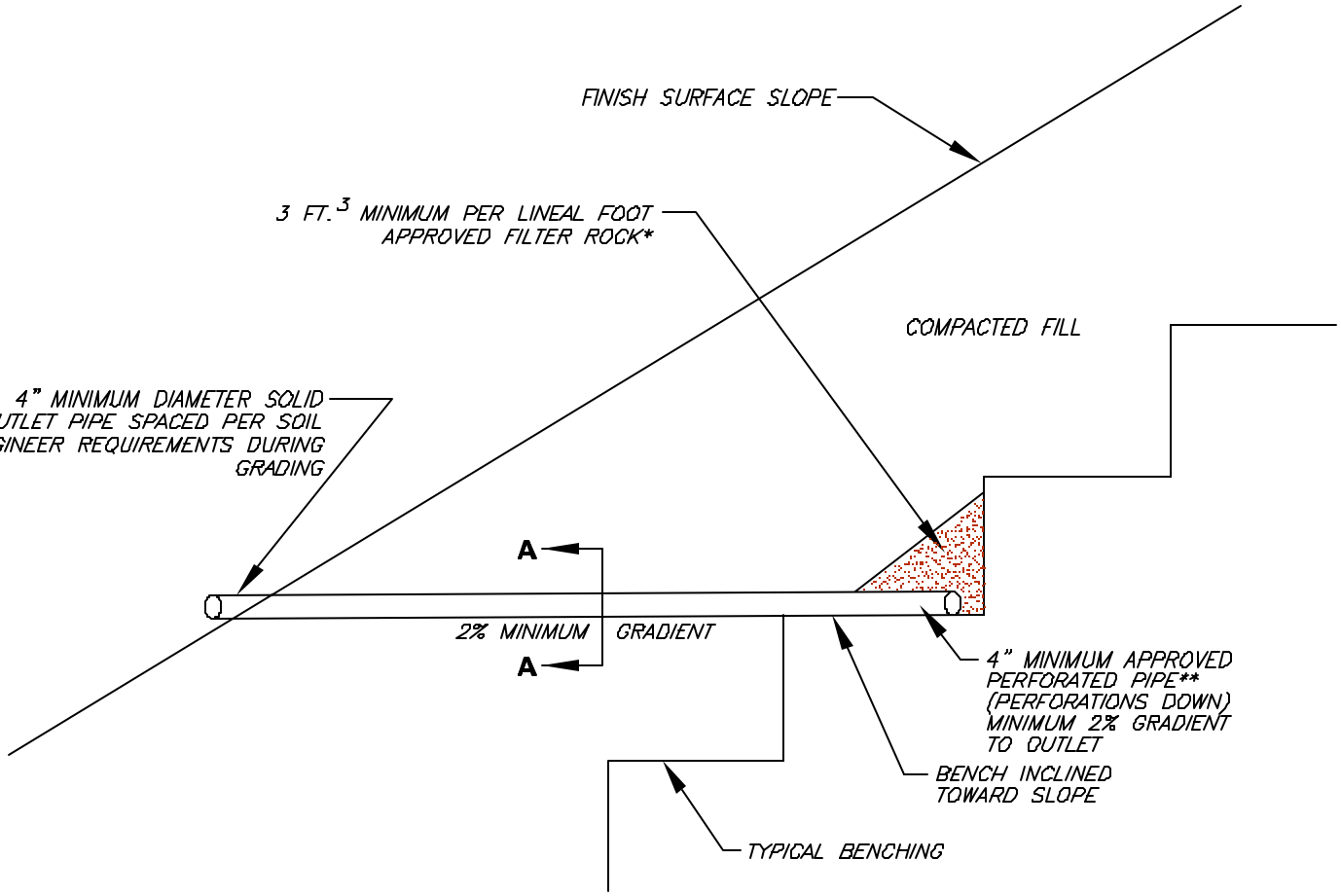


*NOTE: AGGREGATE TO MEET FOLLOWING SPECIFICATIONS OR APPROVED EQUAL:

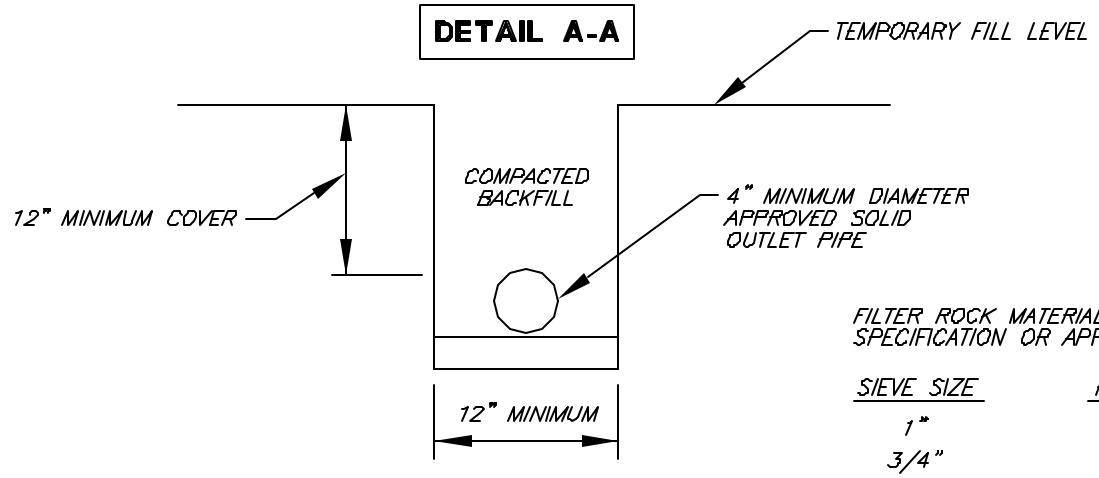
SIEVE SIZE	PERCENTAGE PASSING
1 1/2"	100
1"	5-40
3/4"	0-17
3/8"	0-7
NO. 200	0-3

BACKDRAIN DETAIL (GEOFABRIC)

SALEM Engineering Group, Inc.



DETAIL A-A



FILTER ROCK MATERIAL TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUAL:

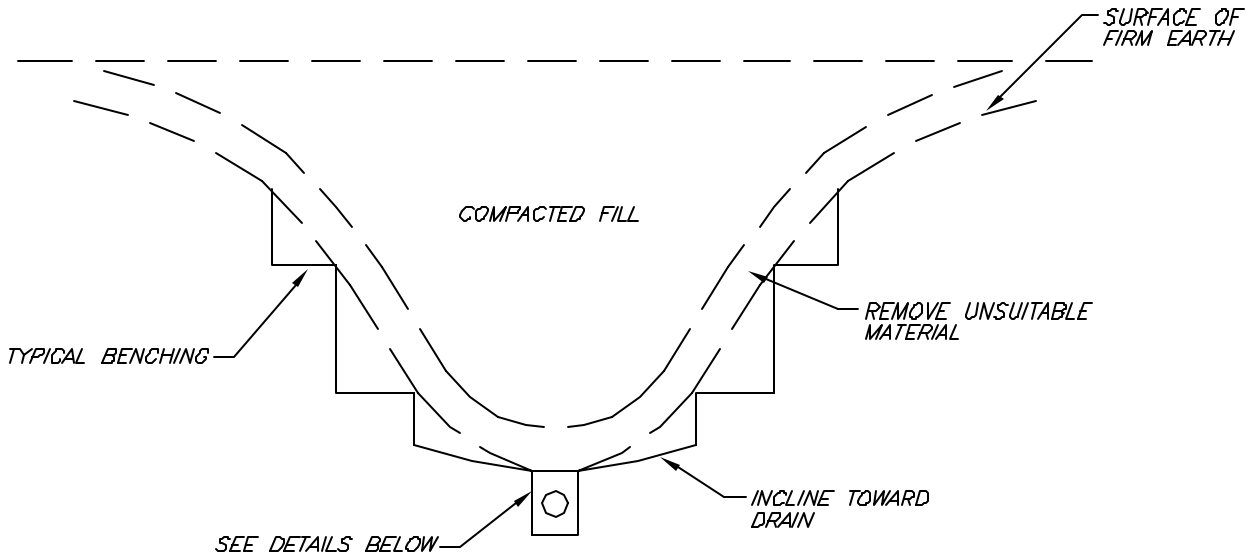
SIEVE SIZE	PERCENTAGE
1"	100
3/4"	90–100
3/8"	40–100
NO. 4	25–40
NO. 30	5–15
NO. 50	0–7
NO. 200	0–3

**APPROVED PIPE TYPE:

SCHEDULE 40 POLYVINYL CHLORIDE (P.V.C.) OR APPROVED EQUAL. MINIMUM CRUSH STRENGTH 1000 PSI.

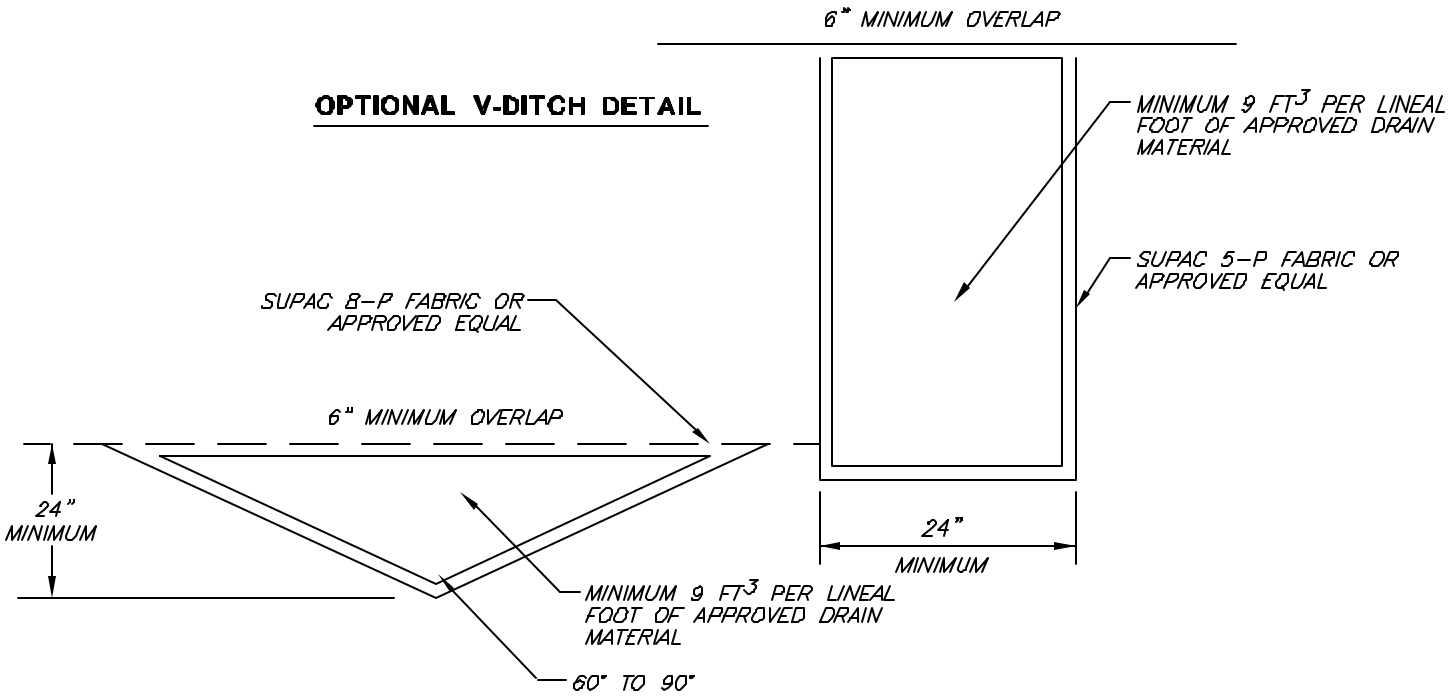
TYPICAL BACKDRAIN DETAIL

SALEM Engineering Group, Inc.



TRENCH DETAIL

OPTIONAL V-DITCH DETAIL



DRAIN MATERIAL TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUAL:

SIEVE SIZE	PERCENTAGE PASSING
1-1/2"	88-100
1"	5-40
3/4"	0-17
3/8"	0-7
NO.:200	0-3

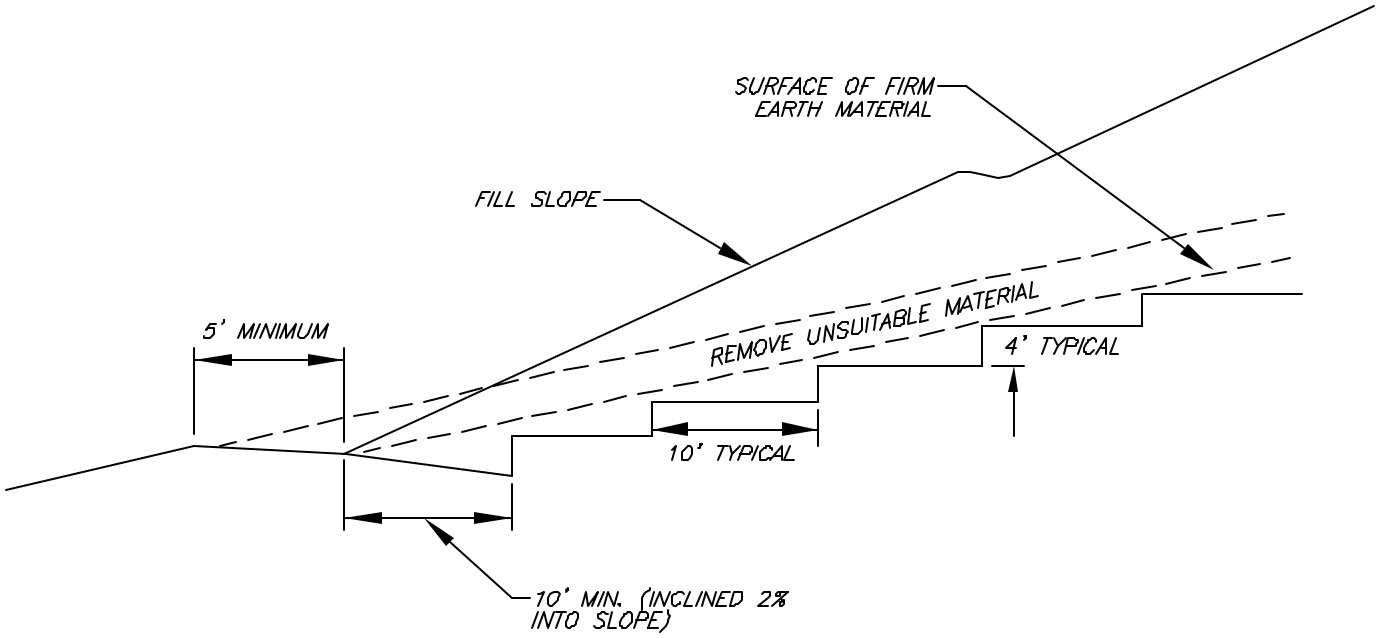
ADD MINIMUM 4" DIAMETER APPROVED PERFORATED PIPE WHEN GRADIENT IS LESS THAN 2%

APPROVED PIPE TO BE SCHEDULE 40 POLY-VINYL-CHLORIDE (P.V.C.) OR APPROVED EQUAL. MINIMUM CRUSH STRENGTH 1000 psi.

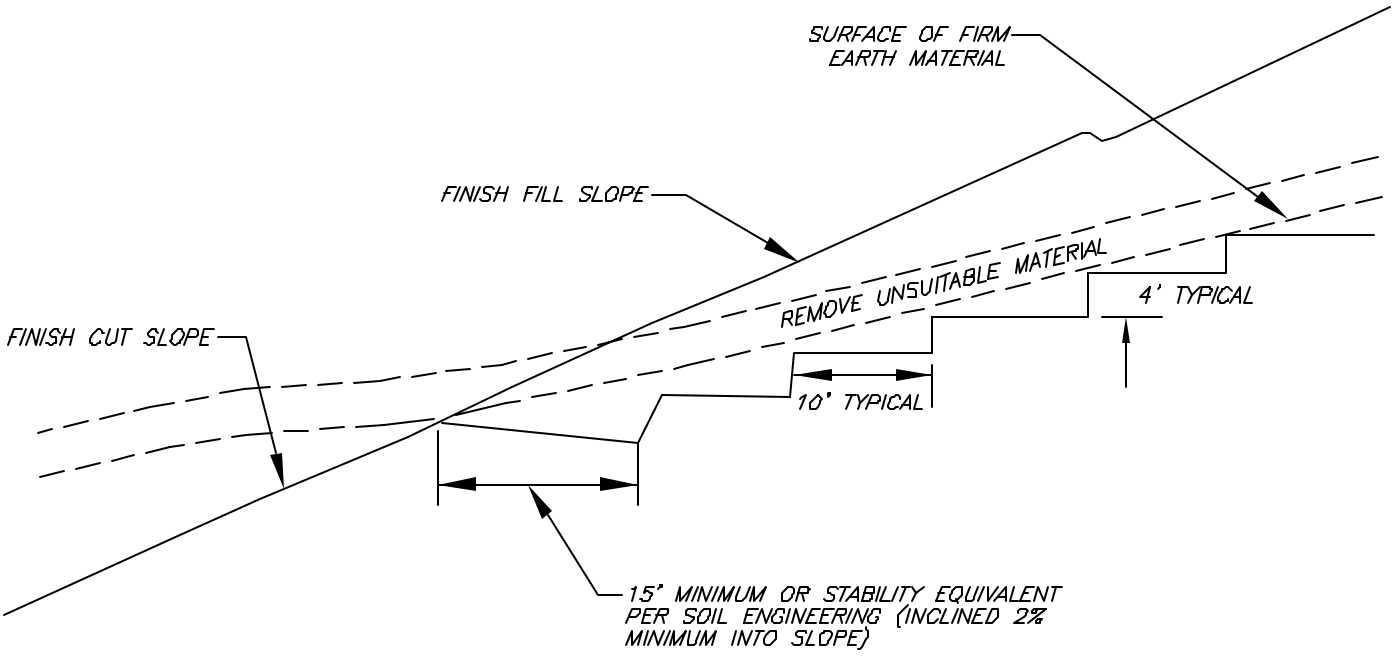
GEOFABRIC SUBDRAIN DETAIL

SALEM Engineering Group, Inc.

BENCHING FILL OVER NATURAL

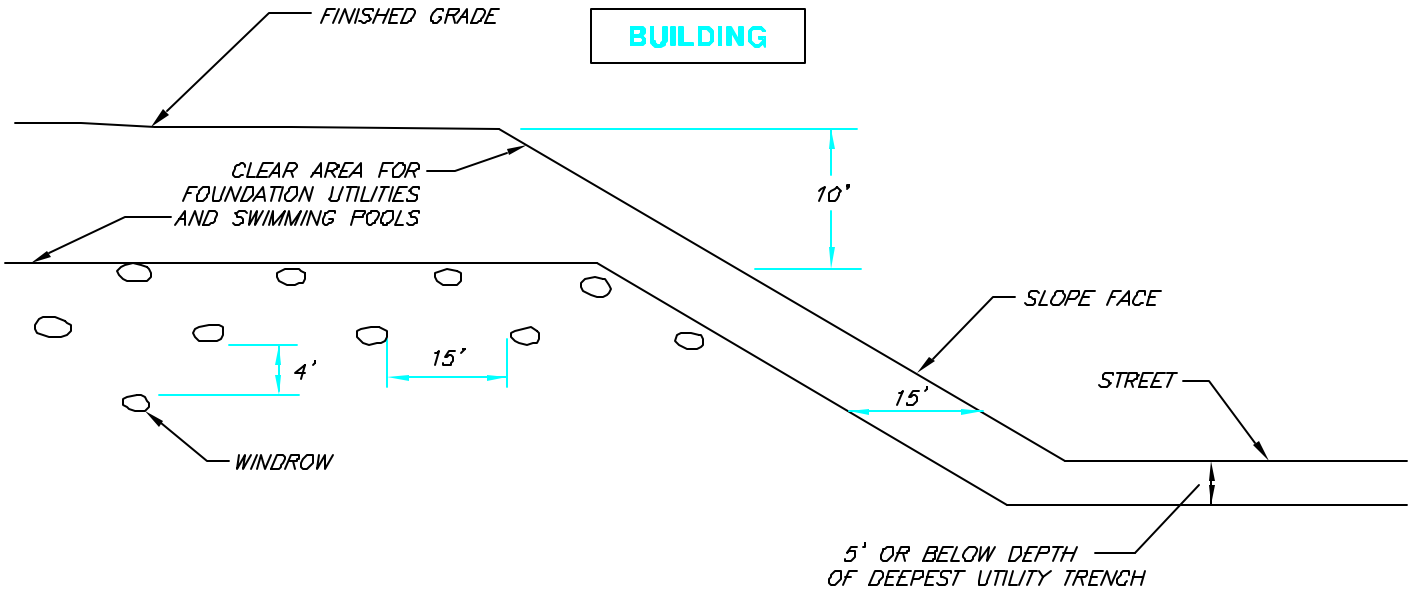


BENCHING FILL OVER CUT

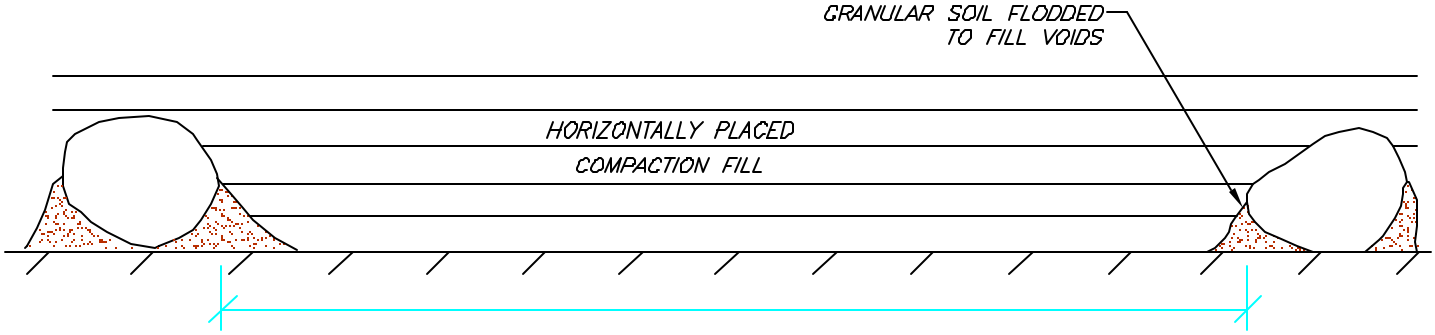


BENCHING FOR COMPACTED FILL DETAIL

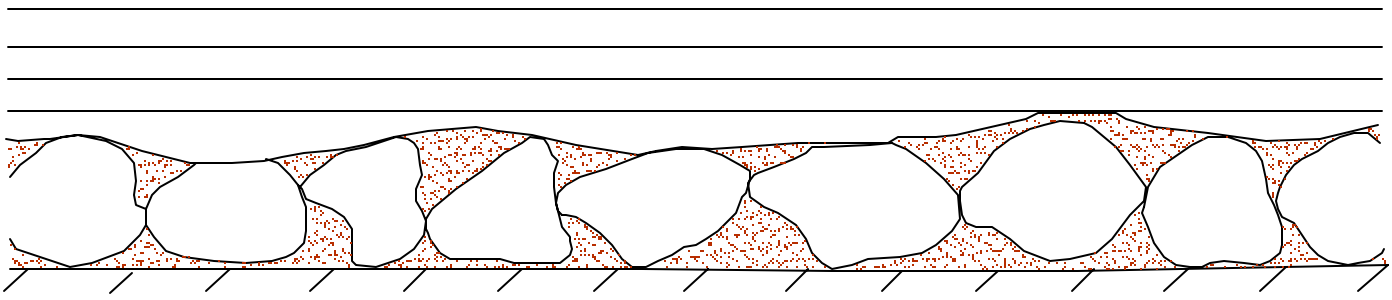
SALEM Engineering Group, Inc.



TYPICAL WINDROW DETAIL (EDGE VIEW)

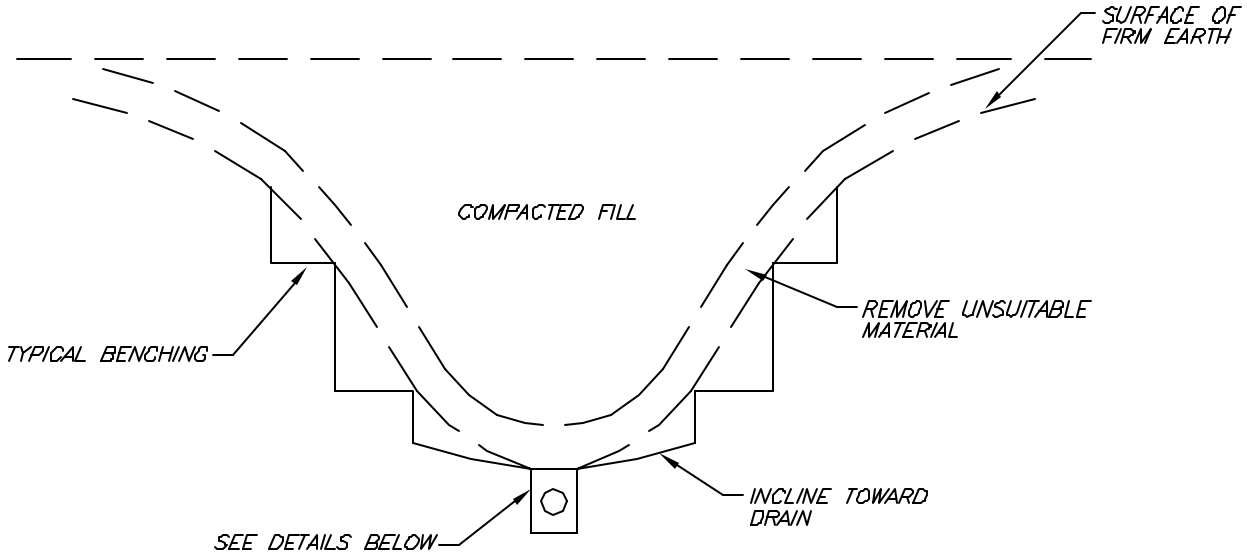


PROFILE VIEW

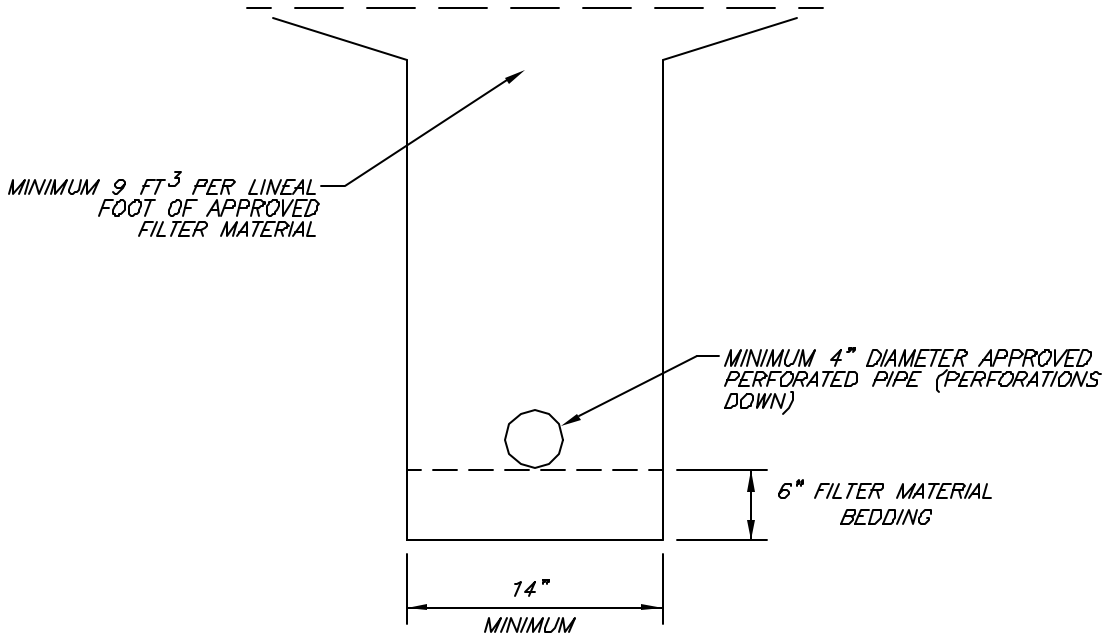


ROCK DISPOSAL DETAIL

SALEM
Engineering Group, Inc.



TRENCH DETAIL



FILTER MATERIAL TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUAL:

SIEVE SIZE	PERCENTAGE
1"	100
3/4"	90–100
3/8"	40–100
NO. 4	25–40
NO. 30	5–15
NO. 50	0–7
NO. 200	0–3

APPROVED PIPE TO BE SCHEDULE 40 POLY-VINYL-CHLORIDE (P.V.C.) OR APPROVED EQUAL. MINIMUM CRUSH STRENGTH 1000 psi.

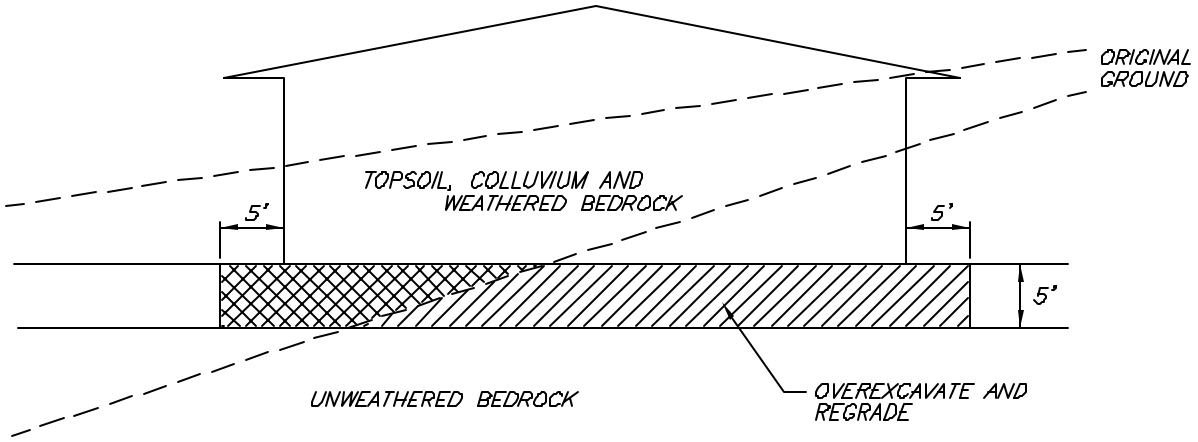
PIPE DIAMETER TO MEET THE FOLLOWING CRITERIA. SUBJECT TO FIELD REVIEW BASED ON ACTUAL GEOTECHNICAL CONDITIONS ENCOUNTERED DURING GRADING.

LENGTH OF RUN	PIPE DIAMETER
UPPER 500'	4"
NEXT 1000'	6"
> 1500'	8"

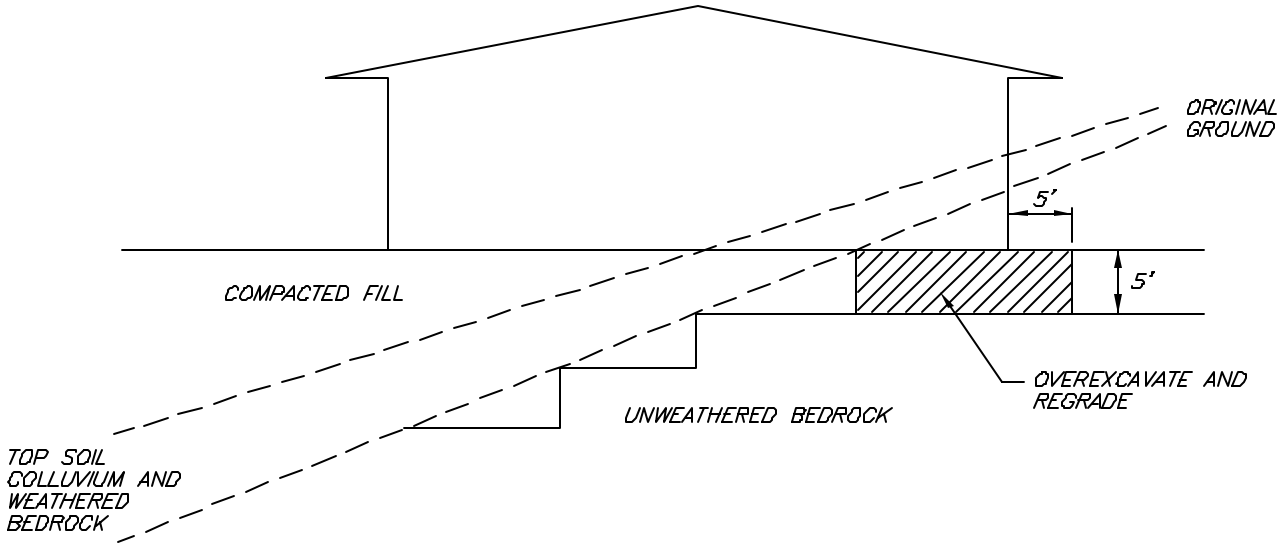
TYPICAL CANYON SUBDRAIN DETAIL

SALEM Engineering Group, Inc.

CUT LOT



CUT/FILL LOT (TRANSITION)



TRANSITION LOT DETAIL

SALEM Engineering Group, Inc.

GEOTECHNICAL • ENVIRONMENTAL • GEOLOGY • MATERIALS TESTING & INSPECTION • FORENSIC • LABORATORY

SALEM
engineering group, inc.

GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED COMMERCIAL DEVELOPMENT
AVENUE E AND DUNLAP BOULEVARD
YUCAIPA, CALIFORNIA

SALEM PROJECT NO. 3-218-0666A
AUGUST 24, 2018

PREPARED FOR:

MR. THOMAS N. ROBINSON
VANTAGEONE REAL ESTATE INVESTMENTS, LLC
4 CORPORATE PLAZA DRIVE, SUITE 210
NEWPORT BEACH, CA 92660

PREPARED BY:

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August 24, 2018 Project No. 3-218-0666A

Mr. Thomas N. Robinson
VantageOne Real Estate Investments, LLC
4 Corporate Plaza Drive, Suite 210
Newport Beach, CA 92660

SUBJECT: GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED COMMERCIAL DEVELOPMENT
AVENUE E AND DUNLAP BOULEVARD
YUCAIPA, CALIFORNIA

Dear Mr. Robinson:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this Geotechnical Engineering Investigation report for the Proposed Commercial Development to be located at the subject site.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.

Clarence Jiang, GE
Senior Geotechnical Engineer
RGE 2477



R. Sammy Salem, MS, PE, GE
Principal Engineer
RCE 52762 / RGE 2549



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GEOTECHNICAL ENGINEERING INVESTIGATION
PROPOSED COMMERCIAL DEVELOPMENT
AVENUE E & DUNLAP BOULEVARD
YUCAIPA, CALIFORNIA

1. PURPOSE AND SCOPE

This report presents the results of our Geotechnical Engineering Investigation for the Proposed Commercial Development to be located in Yucaipa, California (see Figure 1, Vicinity Map).

The purpose of our geotechnical engineering investigation was to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed. The scope of this investigation did not include a slope stability analysis.

The scope of this investigation included a field exploration, percolation testing, laboratory testing, engineering analysis and the preparation of this report. Our field exploration was performed on August 1, 2018 and included the drilling of four (4) small-diameter soil borings to a maximum depth of 29 feet at the site. Additionally, two (2) percolation tests were performed at a depth of approximately 10 feet below existing grade for the determination of the infiltration rate. The locations of the soil borings and percolation tests are depicted on Figure 2, Site Plan. A detailed discussion of our field investigation, exploratory boring logs are presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical properties for engineering analyses. Appendix B presents the laboratory test results in tabular and graphic format.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. If project details vary significantly from those described herein, SALEM should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

2. PROJECT DESCRIPTION

Based on the information provided to us, we understand that the proposed development of the site will include demolition of existing residential buildings and construction of a 5,000 square-foot drive-thru restaurant (Pad 1) and a 3,000 square-foot retail building (Shops 2). Retaining walls, on-site parking and landscaping are planned to be associated with the development.

A site grading plan was not available at the time of preparation of this report. As the existing project area is elevated from the neighboring ground, we anticipate that cuts during the earthwork will be moderate to substantial in providing level building pads, parking lots and positive site drainage. It's anticipated that the proposed grade will be relatively flat without significant slopes.

No fill is anticipated for the proposed development. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified. The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

3. SITE LOCATION AND DESCRIPTION

The site is irregular in shape and encompasses approximately 1.72 acres. The site is located at the west corner of the intersection of Avenue E and Dunlap Boulevard in the City of Yucaipa, California (see Site Plan A, Figure 2). The site is currently occupied by a single-family residence with 2 buildings and associated structures.

The site is elevated from the neighboring ground with gently to steeply slopes descending from the center of the site. The elevations of the site range between approximately 2,107 to 2,078 feet above mean sea level based on Google Earth imagery. It's anticipated that the proposed finish grade will be relatively flat with retaining walls along the property line and without significant slopes.

4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings (B-1 through B-4) were drilled on August 1, 2018 in the areas shown on the Site Plan, Figure 2. The test borings were advanced with a 6-inch diameter hollow stem auger rotated by a truck-mounted CME 55 drill rig. The test borings were extended to a maximum depth of 29 feet below existing grade. The depth of drilling was limited due to auger refusal on the very dense soil, gravel and cobbles.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer and stratification lines were approximated on the basis of observations made at the time of drilling. Visual classification of the materials encountered in the test borings were generally made in accordance with the Unified Soil Classification System (ASTM D2487). A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A."

The logs of the test borings are presented in Appendix "A." The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The location of the test borings were determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted. Soil samples were obtained from the test borings at the depths shown on the logs of borings. The MCS samples were recovered and capped at both ends to preserve the samples at their natural

moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content. The borings were backfilled with soil cuttings after completion of the drilling.

5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, density, shear strength, consolidation potential, expansion index, maximum density and optimum moisture determination, and gradation of the materials encountered.

In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

6. GEOLOGIC SETTING

The site is located within the northwestern portion of the San Gorgonio pass within the northernmost portion of the Peninsular Ranges Geomorphic Province. The San Gorgonio Pass is a tectonic physiographic feature that separates the San Bernardino Mountains of the Transverse Ranges on the north and the San Jacinto Mountains on the south. The San Gorgonio Pass is expressed as a narrow notch that cuts through the mountains into the Colorado Desert to the east. Most of the vicinity is underlain by a thick sequence of terrestrial sediments that rest on the basement comprising igneous-metamorphic rocks. Alluvium sediments have been deposited from Live Oak Creek and tributary channels. Deposits encountered on the subject site during exploratory drilling are discussed in detail in this report.

7. GEOLOGIC HAZARDS

7.1 Faulting and Seismicity

The Peninsular Range has historically been a province of high seismic activity. The nearest faults to the project site are associated with the San Jacinto Fault system located approximately 5.1 miles from the site. There are no known active fault traces in the project vicinity. Based on mapping and historical seismicity, the seismicity of the Peninsular Range has been generally high by the scientific community.

The site is not located within the Alquist-Priolo Earthquake Fault Zone (AP Zone) and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D in accordance with Chapter16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category E.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 34.0267° North; site longitude is 117.1170° West. The ten closest active faults are summarized below in Table 7.1.

TABLE 7.1
REGIONAL FAULT SUMMARY

Fault Name	Distance to Site (miles)	Maximum Earthquake Magnitude, M_w
San Jacinto; SBV+SJV+A+CC+B+SM	5.1	7.9
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB+SSB+BG+CO	5.3	8.2
San Jacinto; SBV	7.0	7.1
San Jacinto, A+CC+B+SM	9.4	7.6
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB	10.5	8.0
Cleghorn	18.4	6.8
S. San Andreas; BG+CO	18.4	7.4
Cucamonga	21.5	6.7
North Frontal (West)	21.9	7.2
Pinto Mtn	22.8	7.3

The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.

7.2 Surface Fault Rupture

The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low.

7.3 Ground Shaking

We used the USGS web-based application *US Seismic Design Maps* to estimate the peak ground acceleration adjusted for site class effects (PGA_M). Because of the proximity to the subject site and the maximum probable events for these faults, it appears that a maximum probable event along the fault zones could produce a peak horizontal acceleration of approximately 0.643g (2% probability of being exceeded in 50 years). While listing PGA is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including frequency and duration of motion and soil conditions underlying the site.

7.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. However, liquefaction has occurred in soils other than clean sand.

The soils encountered within the depth of 29 feet on the project site consisted predominately of loose to very dense clayey sand, silty sand, and silty sand/sand with various amounts of gravel and cobbles. Groundwater was not encountered during this investigation. Low to very low cohesion strength is associated with the sandy soil. A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands. The site was evaluated for liquefaction potential. The liquefaction analysis indicated that the soils had a low potential for liquefaction under seismic condition due the dense soil conditions. Therefore, no mitigation measures are warranted.

7.5 Seismic Densification

One of the most common phenomena during seismic shaking accompanying any earthquake is the induced settlement of loose unconsolidated soils. Based on site subsurface conditions and the seismicity of the region, any loose granular materials at the site could be vulnerable to this potential hazard. Our analysis of dynamic densification of "dry" soil in the upper 50 feet of soil profile was performed.

For the analysis, a maximum earthquake magnitude of 8.2 M_w and a peak horizontal ground surface acceleration of 0.64g (with a 2 percent probability of exceedance in 50 years) were considered appropriate for the analysis. The seismic densification of dry to damp alluvial sandy soils due to onsite seismic activity is calculated to have a total settlement of approximately 0.14 inch. The seismic settlement analysis is included in Appendix A.

7.6 Lateral Spreading

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relatively flat site topography and low potential for liquefaction, we judge the likelihood of lateral spreading to be low.

7.7 Landslides

There are no known landslides at the site, nor is the site in the path of any known or potential landslides. We do not consider the potential for a landslide to be a hazard to this project.

7.8 Tsunamis and Seiches

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

8. SOIL AND GROUNDWATER CONDITIONS

8.1 Subsurface Conditions

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted of alluvium deposits of loose to very dense clayey sand, silty sand, and silty sand/sand with various amounts of gravel and cobbles.

Fill soils may be present onsite between our test boring locations. Verification of the extent of fill should be determined during site grading. Field and laboratory tests suggest that the deeper native soils are moderately strong and slightly compressible. These soils extended to the termination depth of our borings.

The soils were classified in the field during the drilling and sampling operations. The stratification lines were approximated by the field engineer on the basis of observations made at the time of drilling. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted. The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The locations of the test borings were determined by measuring from feature shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

8.2 Groundwater

The test boring locations were checked for the presence of groundwater during and after the drilling operations. Free groundwater was not encountered during this investigation. It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

8.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2014 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water.

A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be 50 mg/kg. ACI 318 Tables 19.3.1.1 and 19.3.2.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 8.3 below.

TABLE 8.3
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS

Water Soluble Sulfate (SO_4) in Soil, % by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Min. Concrete Compressive Strength	Cementations Materials Type
0.0050	Negligible	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 31 mg/kg. This level of chloride concentration is not considered to be severely corrosive. It is recommended that a

qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

8.4 Percolation Testing

Two percolation tests (P-1 and P-2) were performed within assumed infiltration areas and were conducted in accordance with the guidelines established by the County of San Bernardino. The approximate locations of the percolation tests are shown on the attached Site Plan, Figure 2.

The boreholes were advanced to the depths shown on the percolation test worksheets. The holes were pre-saturated before percolation testing commenced. Percolation rates were measured by filling the test holes with clean water and measuring the water drops at a certain time interval. The difference in the percolation rates are reflected by the varied type of soil materials at the bottom of the test holes. The test results are shown on the table below.

PERCOLATION TEST RESULTS

Test No.	Depth (feet)	Measured Percolation Rate (min/inch)	Infiltration Rate* (inch/hour)	Soil Type
P-1	10.0	6.4	0.74	Silty SAND (SM)
P-2	10.0	5.6	1.57	Silty SAND (SM)

*** Tested infiltration Rate = $(\Delta H\ 60\ r) / (\Delta t(r + 2H_{avg}))$**

The soil infiltration or percolation rates are based on tests conducted with clear water. The infiltration/percolation rates may vary with time as a result of soil clogging from water impurities. The infiltration/percolation rates will deteriorate over time due to the soil conditions.

The soils may also become less permeable to impermeable if the soil is compacted. Thus, periodic maintenance consisting of clearing the bottom of the drainage system of clogged soils should be expected. The infiltration/percolation rate may become slower if the surrounding soil is wet or saturated due to prolonged rainfalls. Additional percolation tests should be conducted at bottom of the drainage system during construction to verify the infiltration/percolation rate. Groundwater, if closer to the bottom of the drainage system, will also reduce the infiltration/percolation rate.

The scope of our services did not include a groundwater study and was limited to the performance of percolation testing and soil profile description, and the submitted data only. Our services did not include those associated with septic system design. Neither did services include an Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands. Any statements, or absence of statements, in this report or on any boring logs regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

The geotechnical engineering information presented herein is based upon professional interpretation utilizing standard engineering practices. The work conducted through the course of this investigation,

including the preparation of this report, has been performed in accordance with the generally accepted standards of geotechnical engineering practice, which existed in the geographic area at the time the report was written. No other warranty, express or implied, is made.

Please be advised that when performing percolation testing services in relatively small diameter borings, that the testing may not fully model the actual full scale long term performance of a given site. This is particularly true where percolation test data is to be used in the design of large infiltration system such as may be proposed for the site. The measured percolation rate includes dispersion of the water at the sidewalls of the boring as well as into the underlying soils.

Subsurface conditions, including percolation rates, can change over time as fine-grained soils migrate. It is not warranted that such information and interpretation cannot be superseded by future geotechnical engineering developments. We emphasize that this report is valid for the project outlined above and should not be used for any other sites.

9. CONCLUSIONS AND RECOMMENDATIONS

9.1 General

9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction of improvements at the site as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.

9.1.2 The primary geotechnical constraints identified in our investigation is the presence of potentially compressible (collapsible) soils and very dense soil conditions at the site. Recommendations to mitigate the effects of these soils are provided in this report.

9.1.3 Fill materials may be present onsite between our test boring locations. Undocumented fill materials are not suitable to support any future structures and should be replaced with Engineered Fill. The extent and consistency of the fills should be verified during site construction. Prior to fill placement, Salem Engineering Group, Inc. should inspect the bottom of the excavation to verify the fill condition.

9.1.4 Site demolition activities shall include removal of all surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. It is suspected that possible demolition activities of the existing structures may disturb the upper soils. After demolition activities, it is recommended that disturbed soils be removed and/or re-compacted.

9.1.5 The scope of this investigation did not include subsurface exploration within the existing buildings or areas (e.g. steep slopes, utility lines) not accessible to our drill rig during field exploration. As such, subsurface soil conditions and materials present below the existing site

structures are unknown and may be different than those noted within this report. The presence of potentially unacceptable fill materials, undocumented fill, and/or loose soil material that may be present below existing site features shall be taken into consideration. Our firm shall be present at the time of demolition activities to verify soil conditions are consistent with those identified as part of this investigation.

9.1.6 The near-surface onsite soils are moisture-sensitive and are moderately compressible (collapsible soil) under saturated conditions. Proposed structures may experience excessive post construction settlement if the foundation soils become near saturated. The collapsible or weak soils should be removed and re-compacted according to the recommendations in the Grading section of this report (Section 9.5).

9.1.7 Based on the subsurface conditions at the site and the anticipated structural loading, we anticipate that the proposed buildings may be supported using conventional shallow foundations provided that the recommendations presented herein are incorporated in the design and construction of the project.

9.1.8 Provided the site is graded in accordance with the recommendations of this report and foundations constructed as described herein, we estimate that total settlement due to static and seismic loads utilizing conventional shallow foundations for the proposed building will be within 1 inch and corresponding differential settlement will be less than ½ inch over 20 feet.

9.1.9 SALEM shall review the project grading and foundation plans, and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required. If SALEM is not provided plans and specifications for review, we cannot assume any responsibility for the future performance of the project.

9.1.10 SALEM shall be present at the site during site demolition and preparation to observe site clearing/demolition, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

9.1.11 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

9.2 Seismic Design Criteria

9.2.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2016 CBC, our recommended parameters are shown below. These parameters are based on Probabilistic Ground Motion of 2% Probability of Exceedance in 50 years. The Site Class was determined based on the results of our field exploration.

TABLE 9.2.1
SEISMIC DESIGN PARAMETERS

Seismic Item	Symbol	Value	2010 ASCE 7 or 2016 CBC Reference
Site Coordinates (Datum = NAD 83)		34.0267 Lat -117.1170 Lon	
Site Class	--	D	ASCE 7 Table 20.3
Soil Profile Name	--	Stiff Soil	ASCE 7 Table 20.3
Risk Category	--	II	CBC Table 1604.5
Site Coefficient for PGA	F_{PGA}	1.000	ASCE 7 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	PGA_M	0.643g	ASCE 7 Equation 11.8-1
Seismic Design Category	SDC	E	ASCE 7 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	S_S	1.602 g	CBC Figure 1613.3.1(1-6)
Mapped Spectral Acceleration (1.0 sec. period)	S_1	0.752 g	CBC Figure 1613.3.1(1-6)
Site Class Modified Site Coefficient	F_a	1.000	CBC Table 1613.3.3(1)
Site Class Modified Site Coefficient	F_v	1.500	CBC Table 1613.3.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	S_{MS}	1.602 g	CBC Equation 16-37
MCE Spectral Response Acceleration (1.0 sec. period) $S_{M1} = F_v S_1$	S_{M1}	1.128 g	CBC Equation 16-38
Design Spectral Response Acceleration $S_{DS}=\frac{2}{3}S_{MS}$ (short period - 0.2 sec)	S_{DS}	1.068 g	CBC Equation 16-39
Design Spectral Response Acceleration $S_{D1}=\frac{2}{3}S_{M1}$ (1.0 sec. period)	S_{D1}	0.752 g	CBC Equation 16-40

9.2.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

9.3 Soil and Excavation Characteristics

9.3.1 Based on the soil conditions encountered in our soil borings, the upper soils can be excavated with moderate to intensive effort using conventional heavy-duty earthmoving equipment.

9.3.2 The deeper soils consisted of very dense silty sand with gravel and cobbles which should require consideration in grading. Large earthmoving equipment may be required for grading.

9.3.3 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health

Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

9.3.4 The upper soils are moisture-sensitive and moderately compressible (collapsible) under saturated conditions. These soils, in their present condition, possess moderate risk to construction in terms of possible post-construction movement of the foundations and floor systems if no mitigation measures are employed. Accordingly, measures are considered necessary to reduce anticipated collapse potential. Mitigation measures will not eliminate post-construction soil movement, but will reduce the soil movement. Success of the mitigation measures will depend on the thoroughness of the contractor in dealing with the soil conditions.

9.3.5 The near surface soils identified as part of our investigation are, generally, moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. Exposed native soils exposed as part of site grading operations shall not be allowed to dry out and should be kept continuously moist prior to placement of subsequent fill.

9.4 Materials for Fill

9.4.1 Excavated soils generated from cut operations at the site are suitable for use as general Engineered Fill in structural areas, provided they have an expansion index (EI) of less than 30; and do not contain deleterious matter, organic material, or rock material larger than 3 inches in maximum dimension.

9.4.2 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.

9.4.3 Import soil shall be well-graded, slightly cohesive silty fine sand or sandy silt, with relatively impervious characteristics when compacted. A clean sand or very sandy soil is not acceptable for this purpose. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.4.3.

TABLE 9.4.3
IMPORT FILL REQUIREMENTS

Minimum Percent Passing No. 200 Sieve	20
Maximum Percent Passing No. 200 Sieve	50
Minimum Percent Passing No. 4 Sieve	80
Maximum Particle Size	3"
Maximum Plasticity Index	12
Maximum CBC Expansion Index	20

9.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered.

9.4.5 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

9.5 Grading

9.5.1 A SALEM representative should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.

9.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.

9.5.3 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.

9.5.4 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 2 to 4 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, asphalt and concrete materials will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

9.5.5 Medium- to large- trees were present within the subject site. Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than ½ inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

9.5.6 Structural building pad areas should be considered as areas extending a minimum of 5 feet horizontally beyond the outside dimensions of buildings, including footings and non-cantilevered overhangs carrying structural loads.

9.5.7 To minimize post-construction soil movement and provide uniform support for the proposed buildings, it is recommended that the overexcavation and recompaction within the proposed building area be performed to a minimum depth of **three (3)** feet below existing grade or **one (1)** foot below proposed footing bottom, whichever is deeper. The overexcavation and recompaction should also extend laterally to a minimum of 5 feet beyond the building area.

9.5.8 Within pavement and canopy areas, it is recommended that the overexcavation and recompaction be performed to a minimum depth of **one (1) foot** below existing grade or proposed grade, whichever is deeper. The overexcavation and recompaction should also extend laterally to a minimum of 2 feet beyond the pavement area.

9.5.9 Final pavement subgrade should be finished to a smooth, unyielding surface. We further recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base.

9.5.10 Any fill materials encountered during grading should be removed and replaced with engineered fill. The actual depth of the overexcavation and recompaction should be determined by our field representative during construction.

9.5.11 Prior to placement of fill soils, the upper 8 to 10 inches of native subgrade soils should be scarified, moisture-conditioned to **no less** than the optimum moisture content and recompacted to a minimum of 95 percent of the maximum dry density based on ASTM D1557-07 Test Method.

9.5.12 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in thin lifts to allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).

9.5.13 All Engineered Fill soils should be placed, moisture conditioned to near optimum moisture content, and compacted to at least 95% relative compaction.

9.5.14 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.

9.5.15 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.

9.5.16 We do not anticipate groundwater or seepage to adversely affect construction if conducted during the drier moths of the year (typically summer and fall). However, groundwater and soil moisture conditions could be significantly different during the wet season (typically winter and spring) as surface soil becomes wet; perched groundwater conditions may develop. Grading during this time period will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If the construction schedule requires

grading operations during the wet season, we can provide additional recommendations as conditions warrant.

9.5.17 The soils, during wet winter months, may become very moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. The wet soils may become non conducive to site grading as the upper soils yield under the weight of the construction equipment. Therefore, mitigation measures should be performed for stabilization.

Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation.

To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose. If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 6 to 24 inches of ¾-inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 6 to 24 inches of crushed rock material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. A layer of geofabric is recommended to be placed on top of the compacted crushed rock to minimize migration of soil particles into the voids of the crushed rock, resulting in soil movement. Although it is not required, the use of geogrid (e.g. Tensar BX 1100 or TX 160) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization.

Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

9.6 Shallow Foundations

9.6.1 The site is suitable for use of conventional shallow foundations consisting of continuous footings and isolated pad footings bearing in properly compacted Engineered Fill.

9.6.2 The bearing wall footings considered for the structure should be continuous with a minimum width of 15 inches and extend to a minimum depth of 18 inches below the lowest adjacent grade. Isolated column footings should have a minimum width of 24 inches and extend a minimum depth of 18 inches below the lowest adjacent grade.

9.6.3 The bottom of footing excavations should be maintained free of loose and disturbed soil. Footing concrete should be placed into a neat excavation.

9.6.4 Footings proportioned as recommended above may be designed for the maximum allowable soil bearing pressures shown in the table below.

Loading Condition	Allowable Bearing
Dead Load Only	2,500 psf
Dead-Plus-Live Load	3,000 psf
Total Load, Including Wind or Seismic Loads	4,000 psf

9.6.5 For design purposes, total settlement due to static and seismic loadings on the order of 1 inch may be assumed for shallow footings. Differential settlement due to static and seismic loadings, along a 20-foot exterior wall footing or between adjoining column footings, should be ½ inch, producing an angular distortion of 0.002. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated. The footing excavations should not be allowed to dry out any time prior to pouring concrete.

9.6.6 Resistance to lateral footing displacement can be computed using an allowable coefficient of friction factor of 0.45 acting between the base of foundations and the supporting native subgrade.

9.6.7 Lateral resistance for footings can alternatively be developed using an equivalent fluid passive pressure of 450 pounds per cubic foot acting against the appropriate vertical native footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the 2016 CBC that includes wind or earthquake loads.

9.6.8 Minimum reinforcement for continuous footings should consist of four No. 4 steel reinforcing bars; two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

9.6.9 Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom edge of the footing.

9.6.10 The foundation subgrade should be sprinkled as necessary to maintain a moist condition without significant shrinkage cracks as would be expected in any concrete placement. Prior to placing rebar reinforcement, foundation excavations should be evaluated by a representative of SALEM for appropriate support characteristics and moisture content. Moisture conditioning may be required for the materials exposed at footing bottom, particularly if foundation excavations are left open for an extended period.

9.7 Concrete Slabs-on-Grade

9.7.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading. We recommend that non-structural slabs-on-grade be at least 4 inches thick and underlain by six (6) inches of compacted granular aggregate subbase material compacted to at least 95% relative compaction.

9.7.2 Granular aggregate subbase material shall conform to ASTM D-2940, Latest Edition (Table 1, bases) with at least 95 percent passing a 1½-inch sieve and not more than 8% passing a No. 200 sieve or its approved equivalent to prevent capillary moisture rise.

9.7.3 The use of processed asphalt in the granular aggregate subbase material (i.e. recycled or miscellaneous base) will have to be approved by the owner. Asphalt is a petroleum hydrocarbon with numerous components, including naphthalene and other semi-volatile constituents that are regulated by California. This material in the subsurface could become a potential vapor intrusion risk (naphthalene is a recent risk-driver that DTSC is actively pursuing).

9.7.4 We recommend reinforcing slabs, at a minimum, with No. 3 reinforcing bars placed 18 inches on center, each way.

9.7.5 Slabs subject to structural loading may be designed utilizing a modulus of subgrade reaction K of 200 pounds per square inch per inch. The K value was approximated based on inter-relationship of soil classification and bearing values (Portland Cement Association, Rocky Mountain Northwest).

9.7.6 The spacing of crack control joints should be designed by the project structural engineer. In order to regulate cracking of the slabs, we recommend that full depth construction joints or control joints be provided at a maximum spacing of 15 feet in each direction for 5-inch thick slabs and 12 feet for 4-inch thick slabs.

9.7.7 Crack control joints should extend a minimum depth of one-fourth the slab thickness and should be constructed using saw-cuts or other methods as soon as practical after concrete placement. The exterior floors should be poured separately in order to act independently of the walls and foundation system.

9.7.8 It is recommended that the utility trenches within the structure be compacted, as specified in our report, to minimize the transmission of moisture through the utility trench backfill. Special attention to the immediate drainage and irrigation around the structures is recommended.

9.7.9 Moisture within the structure may be derived from water vapors, which were transformed from the moisture within the soils. This moisture vapor penetration can affect floor coverings and produce mold and mildew in the structure. To minimize moisture vapor intrusion, it is recommended that a vapor retarder be installed in accordance with manufacturer's recommendations and/or ASTM guidelines, whichever is more stringent. In addition, ventilation of the structure is recommended to reduce the accumulation of interior moisture.

9.7.10 In areas where it is desired to reduce floor dampness where moisture-sensitive coverings are anticipated, construction should have a suitable waterproof vapor retarder (a minimum of 15 mils thick polyethylene vapor retarder sheeting, Raven Industries "VaporBlock 15, Stego Industries 15 mil "StegoWrap" or W.R. Meadows Sealtight 15 mil "Perminator") incorporated into the floor slab design. The water vapor retarder should be decay resistant material complying with ASTM E96 not exceeding 0.04 perms, ASTM E154 and ASTM E1745 Class A. The vapor barrier should be placed between the concrete slab and the compacted granular aggregate subbase material. The water vapor retarder (vapor barrier) should be installed in accordance with ASTM Specification E 1643-94.

9.7.11 The concrete maybe placed directly on vapor retarder. The vapor retarder should be inspected prior to concrete placement. Cut or punctured retarder should be repaired using vapor retarder material lapped 6 inches beyond damaged areas and taped.

9.7.12 The recommendations of this report are intended to reduce the potential for cracking of slabs due to soil movement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to soil movement. This is common for project areas that contain expansive soils since designing to eliminate potential soil movement is cost prohibitive. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

9.7.13 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

9.8 Lateral Earth Pressures and Frictional Resistance

9.8.1 Active, at-rest and passive unit lateral earth pressures against footings and walls are summarized in the table below:

Lateral Pressures Drained and Level Backfill Conditions	**Equivalent Fluid Pressure, pcf**
Active Pressure	32
At-Rest Pressure	50
Passive Pressure	450
Related Parameters	
Allowable Coefficient of Friction	0.45
In-Place Soil Density (lbs/ft^3)	120

9.8.2 Active pressure applies to walls, which are free to rotate. At-rest pressure applies to walls, which are restrained against rotation. The preceding lateral earth pressures assume sufficient drainage behind retaining walls to prevent the build-up of hydrostatic pressure.

9.8.3 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.

9.8.4 The foregoing values of lateral earth pressures represent equivalent soil values and a safety factor consistent with the design conditions should be included in their usage.

9.8.5 For stability against lateral sliding, which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.5. For stability against lateral sliding, which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended. For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.

9.8.6 For dynamic seismic lateral loading the following equation shall be used:

Dynamic Seismic Lateral Loading Equation
Dynamic Seismic Lateral Load = $\frac{3}{8}\gamma K_h H^2$
Where: γ = In-Place Soil Density
K_h = Horizontal Acceleration = $\frac{2}{3}PGA_M$
H = Wall Height

9.9 Retaining Walls

9.9.1 Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic-concrete or other suitable backfill to minimize surface drainage into the wall drain system. The gravel should conform to Class II permeable materials graded in accordance with the current CalTrans Standard Specifications.

9.9.2 Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer's recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.

9.9.3 Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The top of the perforated pipe should be placed at or below the bottom of the adjacent floor slab or pavements. The pipe should be placed in the center line of the drainage blanket and should have a minimum diameter of 4 inches. Slots should be no wider than 1/8-inch in diameter, while perforations should be no more than ¼-inch in diameter.

9.9.4 If retaining walls are less than 5 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 2-inch minimum diameter holes (concrete walls) or unmortared head joints (masonry walls) and placed no higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to the CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.

9.9.5 During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

9.10 Temporary Excavations

9.10.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA “Type C” soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved “competent person” onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.

9.10.2 It is the contractor’s responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.

9.10.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.

9.10.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in the following table:

RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	2:1

9.10.5 If, due to space limitation, excavations near property lines or existing structures are performed in a vertical position, slot cuts, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and

installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.

9.10.6 Braced shorings should be designed for a maximum pressure distribution of 30H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.

9.10.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM Engineering Group, Inc. should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

9.11 Underground Utilities

9.11.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 95% relative compaction at or above optimum moisture content.

9.11.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 6 to 12 inches above the crown of the pipe. Pipe bedding and backfill material should conform to the requirements of the governing utility agency.

9.11.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the building or structure to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.

9.11.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

9.12 Surface Drainage

9.12.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.

9.12.2 The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than 5 percent for a minimum distance of 10 feet.

9.12.3 Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building and drainage gradients maintained to carry all surface water to collection facilities and off site. These grades should be maintained for the life of the project. Ponding of water should not be allowed adjacent to the structure. Over-irrigation within landscaped areas adjacent to the structure should not be performed.

9.12.4 Roof drains should be installed with appropriate downspout extensions out-falling on splash blocks so as to direct water a minimum of 5 feet away from the structures or be connected to the storm drain system for the development.

9.13 Pavement Design

9.13.1 Based on site soil conditions, an R-value of 45 was used for the preliminary flexible asphaltic concrete pavement design. The R-value may be verified during grading of the pavement areas.

9.13.2 The pavement design recommendations provided herein are based on the State of California Department of Transportation (CALTRANS) design manual. The asphaltic concrete (flexible pavement) is based on a 20-year pavement life utilizing 1200 passenger vehicles, 10 single unit trucks, and 2 multi-unit trucks. The following table shows the recommended pavement sections for various traffic indices.

TABLE 9.13.2
ASPHALT CONCRETE PAVEMENT

Traffic Index	Asphaltic Concrete	Class II Aggregate Base*	Compacted Subgrade*
5.0 (Parking and Vehicle Drive Areas)	3.0"	4.0"	12.0"
6.0 (Heavy Truck Areas)	3.0"	5.0"	12.0"

95% compaction based on ASTM D1557-07 Test Method

9.13.3 The following recommendations are for light-duty and heavy-duty Portland Cement Concrete pavement sections.

TABLE 9.13.3
PORTLAND CEMENT CONCRETE PAVEMENT

Traffic Index	Portland Cement Concrete*	Class II Aggregate Base**	Compacted Subgrade**
5.0 (Light Duty)	5.0"	4.0"	12.0"
6.0 (Heavy Duty)	6.0"	4.0"	12.0"

**** Minimum Compressive Strength of 4,000 psi***
*****95% compaction based on ASTM D1557-07 Test Method***

10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING

10.1 Plan and Specification Review

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

10.2 Construction Observation and Testing Services

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

10.2.3 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the test borings drilled at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated.

If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction.

If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing.

The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction

compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and project design consultants.

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer's recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil. The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping.

The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully Submitted,

SALEM ENGINEERING GROUP, INC.





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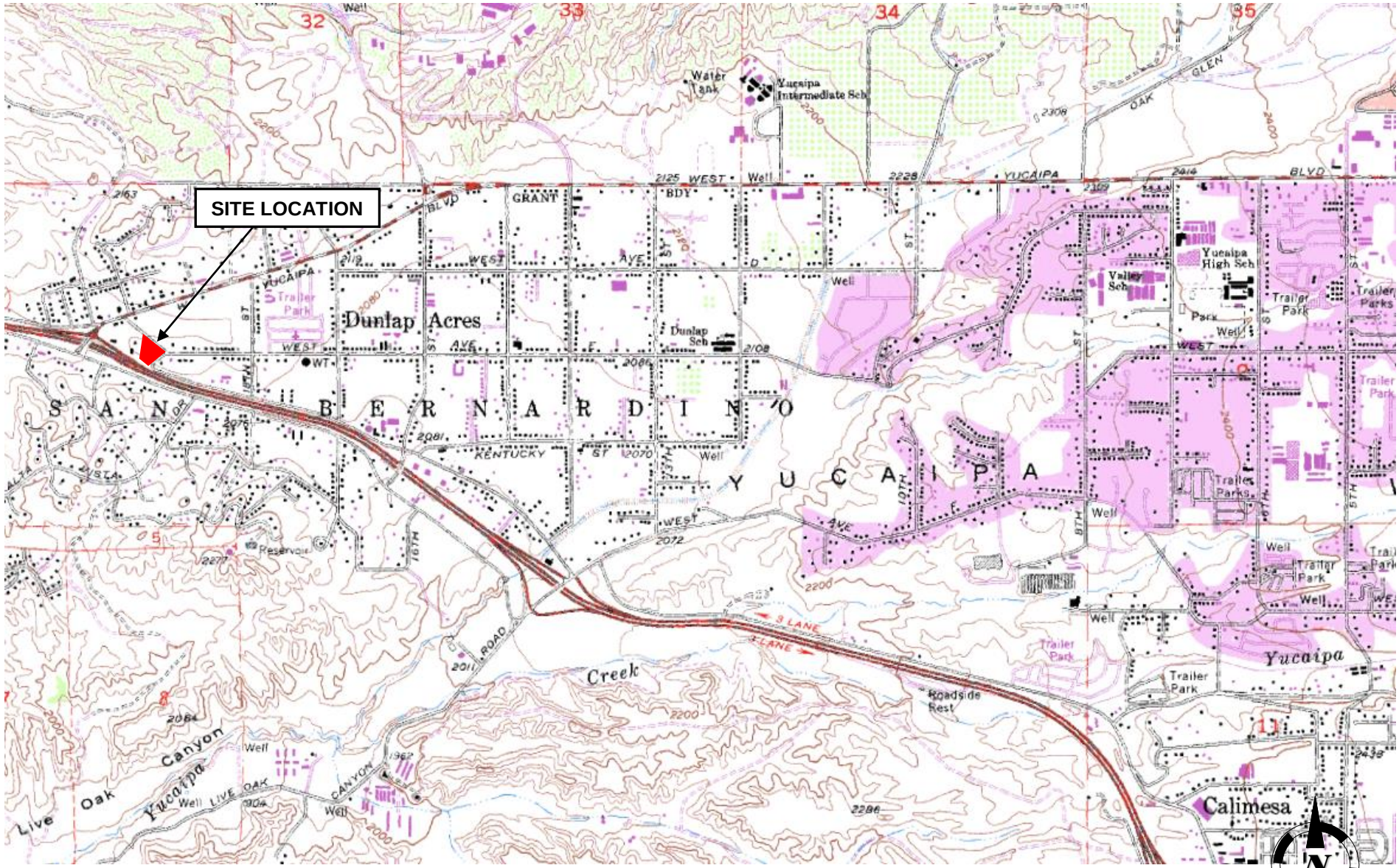


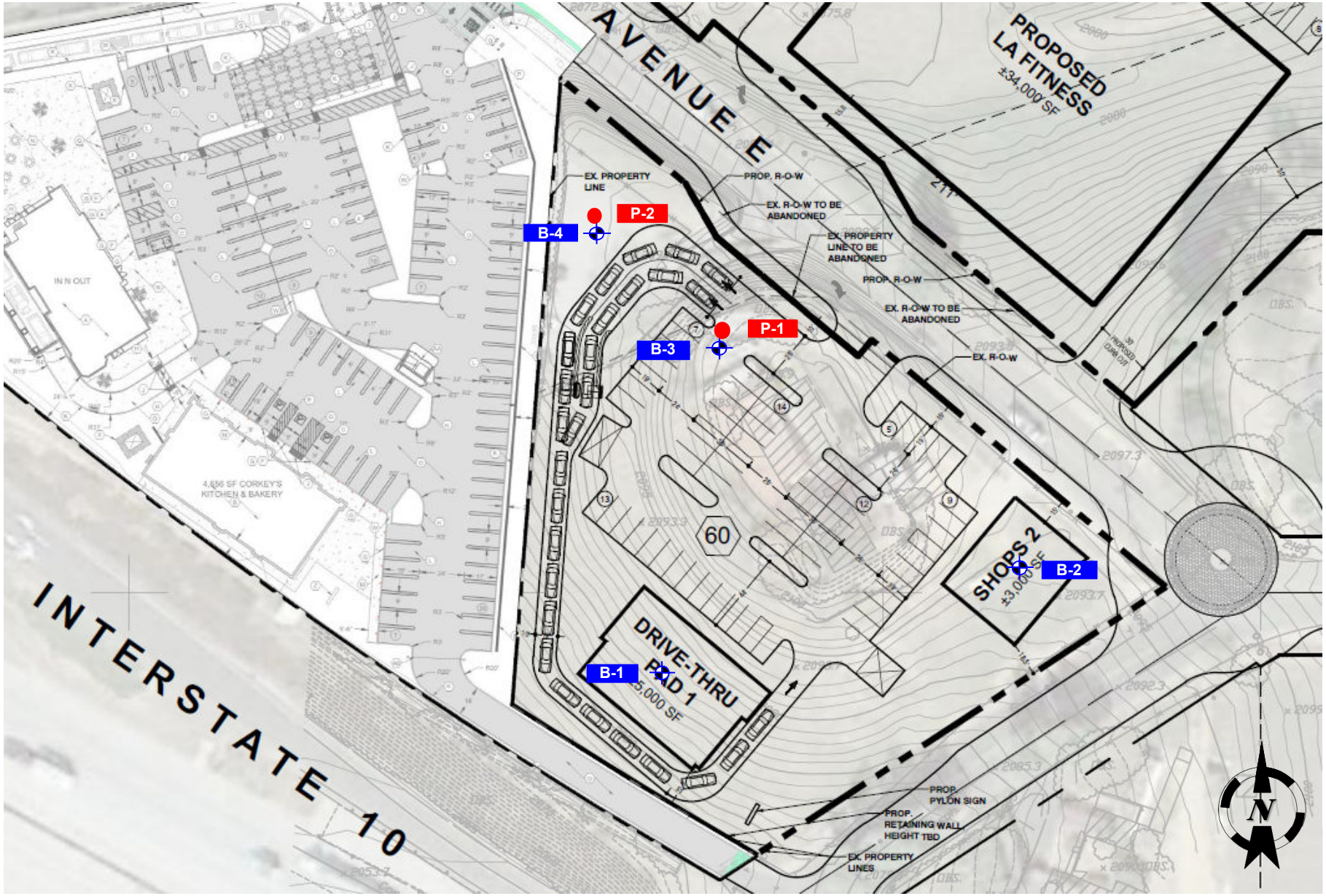
Source Image: U.S. Geological Survey Yucaipa, California 34117-A1-TF-024, 1967 (Photorevised 1988)

VICINITY MAP

GEOTECHNICAL ENGINEERING INVESTIGATION
Proposed Commercial Development
Avenue E and Dunlap Boulevard
Yucaipa, California

SCALE:	DATE:
NOT TO SCALE	08/2018
DRAWN BY:	APPROVED BY:
JC	CJ
PROJECT NO.	FIGURE NO.
3-218-0666A	1

SALEM engineering group, inc.



SITE PLAN

Geotechnical Engineering Investigation
Proposed Commercial Development
Avenue E and Dunlap Avenue
Yucaipa, California

SCALE:	DATE:
NOT TO SCALE	08/2018
DRAWN BY:	APPROVED BY:
JC	II
PROJECT NO.	FIGURE NO.
3-218-0666A	2

LEGEND:

B-1 Soil Boring Locations

P-1 Percolation Locations

All Locations Approximate

SALEM engineering group, inc.

APPENDIX

A

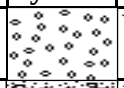
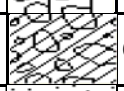
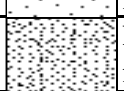
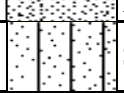
APPENDIX A
FIELD EXPLORATION

Fieldwork for our investigation (drilling) was conducted on August 1, 2018 and included a site visit, subsurface exploration, and soil sampling. Percolation testing was performed on August 2, 2018. The locations of the exploratory borings and percolation tests are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

In general, our borings were performed using a truck-mounted CME 55 drill rig equipped with a 6-inch diameter hollow stem auger. Sampling in the borings was accomplished using a hydraulic 140-pound hammer with a 30-inch drop. Samples were obtained with a 3-inch outside-diameter (OD), split spoon (California Modified) sampler, and a 2-inch OD, Standard Penetration Test (SPT) sampler. The number of blows required to drive the sampler the last 12 inches (or fraction thereof) of the 18-inch sampling interval were recorded on the boring logs. The blow counts shown on the boring logs should not be interpreted as standard SPT "N" values; corrections have not been applied. Upon completion, the borings were backfilled with drill cuttings.

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

Unified Soil Classification System

Major Divisions			Letter	Symbol	Description
Coarse-grained Soils More than ½ retained on the No. 200 Sieve	**Gravels** More than ½ coarse fraction retained on the No. 4 sieve	Clean Gravels	GW		Well-graded gravels and gravel-sand mixtures, little or no fines.
			GP		Poorly-graded gravels and gravel-sand mixtures, little or no fines.
		Gravels With Fines	GM		Silty gravels, gravel-sand-silt mixtures.
			GC		Clayey gravels, gravel-sand-clay mixtures.
	Sands More than ½ passing through the No. 200 sieve	Clean Sands	SW		Well-graded sands and gravelly sands, little or no fines.
			SP		Poorly-graded sands and gravelly sands, little or no fines.
		Sands With Fines	SM		Silty sands, sand-silt mixtures
			SC		Clayey sands, sandy-clay mixtures.
Fine-grained Soils More than ½ passing through the No. 200 Sieve	**Silts and Clays** Liquid Limit less than 50%		ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands.
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL		Organic clays of medium to high plasticity.
	Silts and Clays Liquid Limit greater than 50%		MH		Inorganic silts, micaceous or diatomaceous fines sands or silts, elastic silts.
			CH		Inorganic clays of high plasticity, fat clays.
			OH		Organic clays of medium to high plasticity.
Highly Organic Soils			PT		Peat, muck, and other highly organic soils.

Consistency Classification

Granular Soils			***Cohesive Soils***		
Description - Blows Per Foot (Corrected)			Description - Blows Per Foot (Corrected)		
	MCS	SPT		MCS	SPT
Very loose	<5	<4	Very soft	<3	<2
Loose	5 – 15	4 – 10	Soft	3 – 5	2 – 4
Medium dense	16 – 40	11 – 30	Firm	6 – 10	5 – 8
Dense	41 – 65	31 – 50	Stiff	11 – 20	9 – 15
Very dense	>65	>50	Very Stiff	21 – 40	16 – 30
			Hard	>40	>30

MCS = Modified California Sampler

SPT = Standard Penetration Test Sampler

Boring No. B-1

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: Avenue E & Dunlap Boulevard, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

Project No: 3-218-0666A
Figure No.: A-1
Logged By: SK
Initial: -
Depth to Water>
At Completion: -

Depth (ft)	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0	Ground Surface					
	Clayey SAND (SC) Medium dense; moist; brown; fine to medium grain sand. EI=30	105.3	6.4	MCS		18
5	Grades as above; dense; light brown.	113.4	11.1	MCS		44
	Silty SAND (SM) Very dense; moist; light brown; fine to medium grain sand; trace clay; trace gravel.	127.5	6.8	MCS		91
15	Grades as above; dense.	-	7.2	SPT		47
20	Auger refusal at 19.5 feet due to gravel and cobbles.					
25						

Penetration Test: 20 40 60 80

Water Level

Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-2

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: Avenue E & Dunlap Boulevard, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

Project No: 3-218-0666A
Figure No.: A-2
Logged By: SK
Initial: -
Depth to Water>
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Clayey SAND (SC) Medium dense; slightly moist; brown; fine to medium grain sand.	117.8	5.9	MCS		29
5		Grades as above; slightly moist.	120.3	11.4	MCS		34
		Silty SAND (SM) Meduim dense; moist; light brown; fine to medium grain sand; trace clay.	-	10.4	SPT		22
15		**Well-graded SAND with Silt (SW-SM)** Medium dense; moist; light brown; fine to coarse grain sand; trace gravel.	-	6.4	SPT		28
		Silty SAND (SM) Very dense; moist; light brown; fine to coarse grain sand; trace gravel.	-	4.4	SPT		52
25		Grades as above.	-	5.5	SPT		53

Penetration Test: 20 40 60 80

Water Level

Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 2

Drill Date: 8/1/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-2

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: Avenue E & Dunlap Boulevard, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

Depth to Water>

Project No: 3-218-0666A
Figure No.: A-2
Logged By: SK
Initial: -
At Completion: -

SUBSURFACE PROFILE			SAMPLE						
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
30		Auger efusal at 29 ft due to gravel and cobbles.							
35									
40									
45									
50									

Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 2 of 2

Drill Date: 8/1/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-3

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: Avenue E & Dunlap Boulevard, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

Project No: 3-218-0666A
Figure No.: A-3
Logged By: SK
Initial: -
Depth to Water>
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	Penetration Test (20 40 60 80)	Water Level
0		Ground Surface							
		Silty SAND (SM) Loose; slightly moist; yellowish brown; fine to medium grain sand; trace clay.	115.2	4.3	MCS		13		
5		Grades as above; trace gravel; no clay.	112.3	3.5	MCS		11		
10		Grades as above; medium dense.	-	3.6	SPT		11		
		End of Borehole							
15									
20									
25									

Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Boring No. B-4

Project: Proposed Commercial Development
Client: VantageOne Real Estate Investments, LLC
Location: Avenue E & Dunlap Boulevard, Yucaipa, California
Grnd. Surf. Elev. (Ft. MSL) -

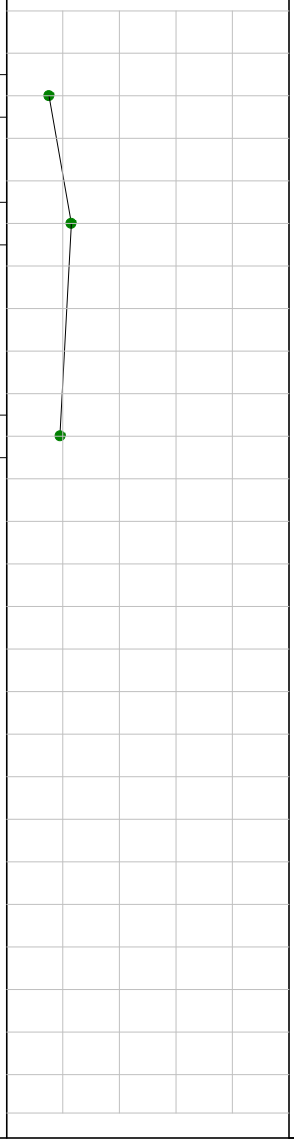
Project No: 3-218-0666A
Figure No.: A-4
Logged By: SK
Initial: -
Depth to Water>
At Completion: -

Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count
0		Ground Surface					
		Silty SAND (SM) Loose; slightly moist; yellowish brown; fine to medium grain sand; trace clay.	102.9	5.0	MCS		15
5		Grades as above; medium dense; moist.	116.7	7.6	MCS		23
10		Grades as above; slightly moist; no clay.	-	3.6	SPT		19
		End of Borehole					
15							
20							
25							

SUBSURFACE PROFILE | **SAMPLE**

Penetration Test
20 40 60 80

Water Level



Drill Method: Hollow Stem
Drill Rig: CME 55
Driller: SALEM
Sheet: 1 of 1

Drill Date: 8/1/18
Borehole Size: 6 in.
Hammer Type: Automatic Trip
Weight & Drop: 140 lb/30 in

SALEM

Percolation Test Worksheet

Project: **Proposed Commercial Development**
Avenue E & Dunlap Blvd.
Yucaipa, California

Job No.: **3-218-0666A**
Date Drilled: **8/1/2018**
Soil Classification: **Silty SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 120 in.

Test Hole No.: **P-1**
Tested by: **JC**
Drilled Hole Depth: **10** ft.

Presoaking Date: **8/1/2018**
Test Date: **8/2/2018**

Pipe Stick up: 0.2 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill-Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
9:20	9:45	10.2	Y	0:25	7.40	7.92	6.24	25	4.0	33.6	27.4	30.5	0.92
9:47	10:12	10.2	Y	0:25	7.25	7.76	6.12	25	4.1	35.4	29.3	32.3	0.86
10:15	10:25	10.2	Y	0:10	7.35	7.55	2.40	10	4.2	34.2	31.8	33.0	0.82
10:25	10:35	10.2	N	0:10	7.55	7.73	2.16	10	4.6	31.8	29.6	30.7	0.79
10:35	10:45	10.2	N	0:10	7.73	7.89	1.92	10	5.2	29.6	27.7	28.7	0.75
10:45	10:55	10.2	N	0:10	7.89	8.04	1.80	10	5.6	27.7	25.9	26.8	0.75
10:55	11:05	10.2	N	0:10	8.04	8.18	1.68	10	6.0	25.9	24.2	25.1	0.74
11:05	11:15	10.2	N	0:10	8.18	8.31	1.56	10	6.4	24.2	22.7	23.5	0.74
Recommended for Design:										**Infiltration Rate**			**0.74**

Measured from top of pipe

SALEM engineering group, inc.

Percolation Test Worksheet

Project: **Proposed Commercial Development**
Avenue E & Dunlap Blvd.
Yucaipa, California

Job No.: **3-218-0666A**
Date Drilled: **8/1/2018**
Soil Classification: **Silty SAND (SM)**

Hole Radius: 4 in.
Pipe Dia.: 3 in.
Total Depth of Hole: 120 in.

Test Hole No.: **P-2**
Tested by: **SK**
Drilled Hole Depth: **10** ft.

Presoaking Date: **8/1/2018**
Test Date: **8/2/2018**

Pipe Stick up: 0.4 ft.

Time Start	Time Finish	Depth of Test Hole (ft)#	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level# (ft)	Final Water Level# (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
9:15	9:40	10.4	Y	0:25	8.03	8.82	9.48	25	2.6	28.4	19.0	23.7	1.77
9:42	10:07	10.4	Y	0:25	8.22	8.92	8.40	25	3.0	26.2	17.8	22.0	1.68
10:10	10:20	10.4	Y	0:10	8.25	8.54	3.48	10	2.9	25.8	22.3	24.1	1.60
10:20	10:30	10.4	N	0:10	8.54	8.80	3.12	10	3.2	22.3	19.2	20.8	1.64
10:30	10:40	10.4	N	0:10	8.80	9.02	2.64	10	3.8	19.2	16.6	17.9	1.59
10:40	10:50	10.4	N	0:10	9.02	9.21	2.28	10	4.4	16.6	14.3	15.4	1.57
10:50	11:00	10.4	N	0:10	9.21	9.38	2.04	10	4.9	14.3	12.2	13.3	1.60
11:00	11:10	10.4	N	0:10	9.38	9.53	1.80	10	5.6	12.2	10.4	11.3	1.62

Recommended for Design: **Infiltration Rate** **1.57**

Measured from top of pipe

SALEM engineering group, inc.

DRY SETTLEMENT DUE TO EARTHQUAKE SHAKING

Job No. 3-218-0666A **Job Name** Proposed Commercial Development
Boring No. B-2 **Drill Date** 08/01/18

* Use Fig. 11 of Tokimatsu & Seed (1987)
** Use Fig. 13 of Tokimatsu & Seed (1987)
*** $MSF=10^{2.24}/Mw^{2.56}$
# $C_N=2.2/(1.2+\sigma'_o/P_a)$
+ From Pradel, D. (1998) equations for modulus reduction curves

User Input Section			
Earthquake Data		Drilling GW Depth (ft)	-
Mag. (M_w)	8.2	Earthquake GW Depth (ft)	50
a_{max}/g	0.64	Rod Stick-Up (ft)	3
MSF***	0.80	SPT N-Value Correction Factors	
		Energy Ratio C_E	1.60 Notes
		Borehole Dia. C_B	1.05 Notes
		Sampling Method C_S	1.2 Notes
		Factor of Safety FS	1.0
		Rod Length C_R	Calculated
		Overburden Press C_N	Calculated

Lookup Tables

% Fines	ΔN	Length	C_R
0	0	1	0.75
10	1	12	0.85
25	2	20	0.95
50	4	30	0.98
75	5	33	1

Δ = -0.0006(% Fines)^2 + 0.1088(% Fines) - 0.0852
C_R = -0.0002(Length)^2 + 0.0131(Length) + 0.7324

Depth		Dry Unit		Fines	SPT	Layer	Unit	Total σ_o bottom	Total σ_o mid-pt.	During Drilling Eff. σ'_o		SPT		Fines Corct'd SPT	During EQ Eff. σ'_{oeq}			Shear Modulus	Cyclic Shear Stress	Shear Strain/Shear Modulus Ratio	Eff. Shear Strain	Vol. Strain (1-way)	Vol. Strain Mw Corct'd	S (2-way)
(ft)	USCS	Wt (pcf)	w (%)	%	Field N	(ft)	Wt (pcf)	(psf)	(psf)	(psf)	C_N#	$(N_1)_{60}$	ΔN	$(N_1)_{60f}$	(psf)	$\sigma_o/\sigma_{o'eq}$	r_d	G_{max} ##	T_{av}	$\gamma_{eff}(G_{eff}/G_{max})$	γ(%)*	V%**	V%*	in.
2	SC	118	5.9	38	18	2.0	124.8	250	125	125	1.74	47.4	2.0	49.4	125	1.000	0.997	6.61E+05	51.8	7.83E-05	1.6E-02	4.5E-3	0.01	0.00
5	SC	120	11.4	29.3	21	3.0	134.0	652	451	451	1.54	49.0	2.0	51.0	451	1.000	0.990	1.27E+06	185.6	1.46E-04	3.6E-02	9.5E-3	0.01	0.01
10	SM	120	10.4	29.3	22	5.0	132.5	1314	983	983	1.30	49.0	2.0	51.0	983	1.000	0.979	1.87E+06	400.2	2.13E-04	5.8E-02	1.5E-2	0.02	0.02
15	SW-SM	120	6.4	11.9	28	5.0	127.7	1952	1633	1633	1.09	52.3	1.0	53.3	1633	1.000	0.968	2.45E+06	657.8	2.68E-04	7.6E-02	1.9E-2	0.02	0.03
20	SM	120	4.4	13.9	52	5.0	125.3	2579	2266	2266	0.94	93.9	1.0	94.9	2266	1.000	0.956	3.50E+06	901.4	2.57E-04	5.7E-02	6.5E-3	0.01	0.01
25	SM	120	5.5	13.9	53	5.0	126.6	3212	2895	2895	0.83	84.3	1.0	85.3	2895	1.000	0.941	3.82E+06	1133.3	2.97E-04	6.9E-02	9.2E-3	0.01	0.01
30	SM	120	5.5	13.9	53	5.0	126.6	3845	3528	3528	0.74	79.3	1.0	80.3	3528	1.000	0.919	4.13E+06	1349.0	3.27E-04	7.8E-02	1.1E-2	0.00	0.00
35	SM	120	5.5	13.9	53	5.0	126.6	4478	4161	4161	0.67	71.7	1.0	72.7	4161	1.000	0.888	4.34E+06	1537.7	3.54E-04	8.6E-02	1.4E-2	0.00	0.00
40	SM	120	5.5	13.9	53	5.0	126.6	5111	4794	4794	0.61	65.3	1.0	66.3	4794	1.000	0.848	4.52E+06	1690.6	3.74E-04	9.1E-02	1.7E-2	0.00	0.00
45	SM	120	5.5	13.9	53	5.0	126.6	5744	5427	5427	0.56	60.1	1.0	61.1	5427	1.000	0.799	4.68E+06	1804.7	3.86E-04	9.1E-02	1.9E-2	0.02	0.03
50	SM	120	5.5	13.9	53	5.0	126.6	6377	6060	6060	0.52	55.6	1.0	56.6	6060	1.000	0.748	4.82E+06	1885.5	3.91E-04	8.9E-02	2.0E-2	0.02	0.03
																							Total	0.14

The total seismic-induced settlement calculation is based on a water table depth of **50** *feet below grade*

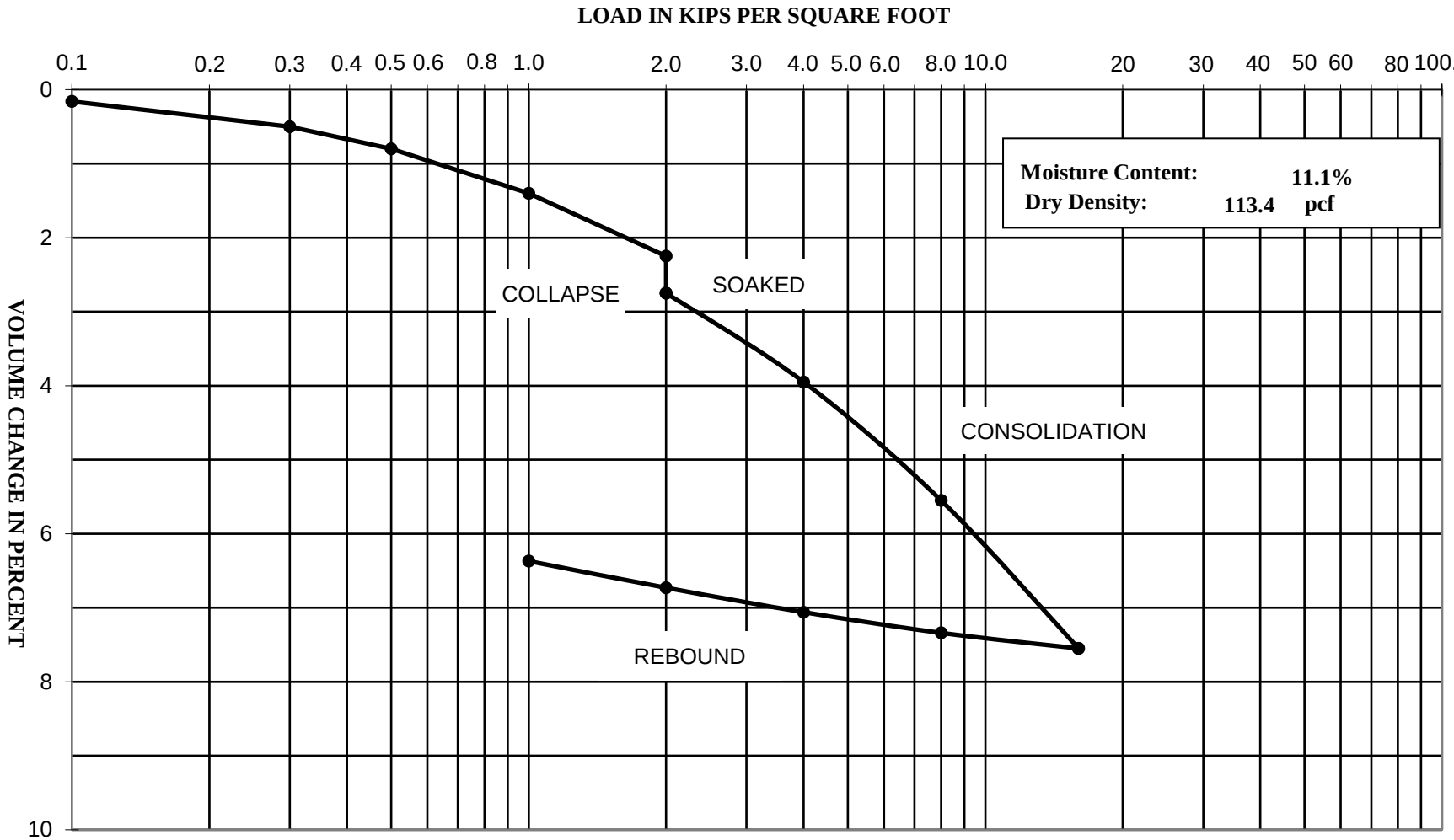
APPENDIX

B

APPENDIX B
LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ dry density and moisture content, corrosivity, consolidation, shear strength, expansion index, maximum dry density and optimum moisture, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



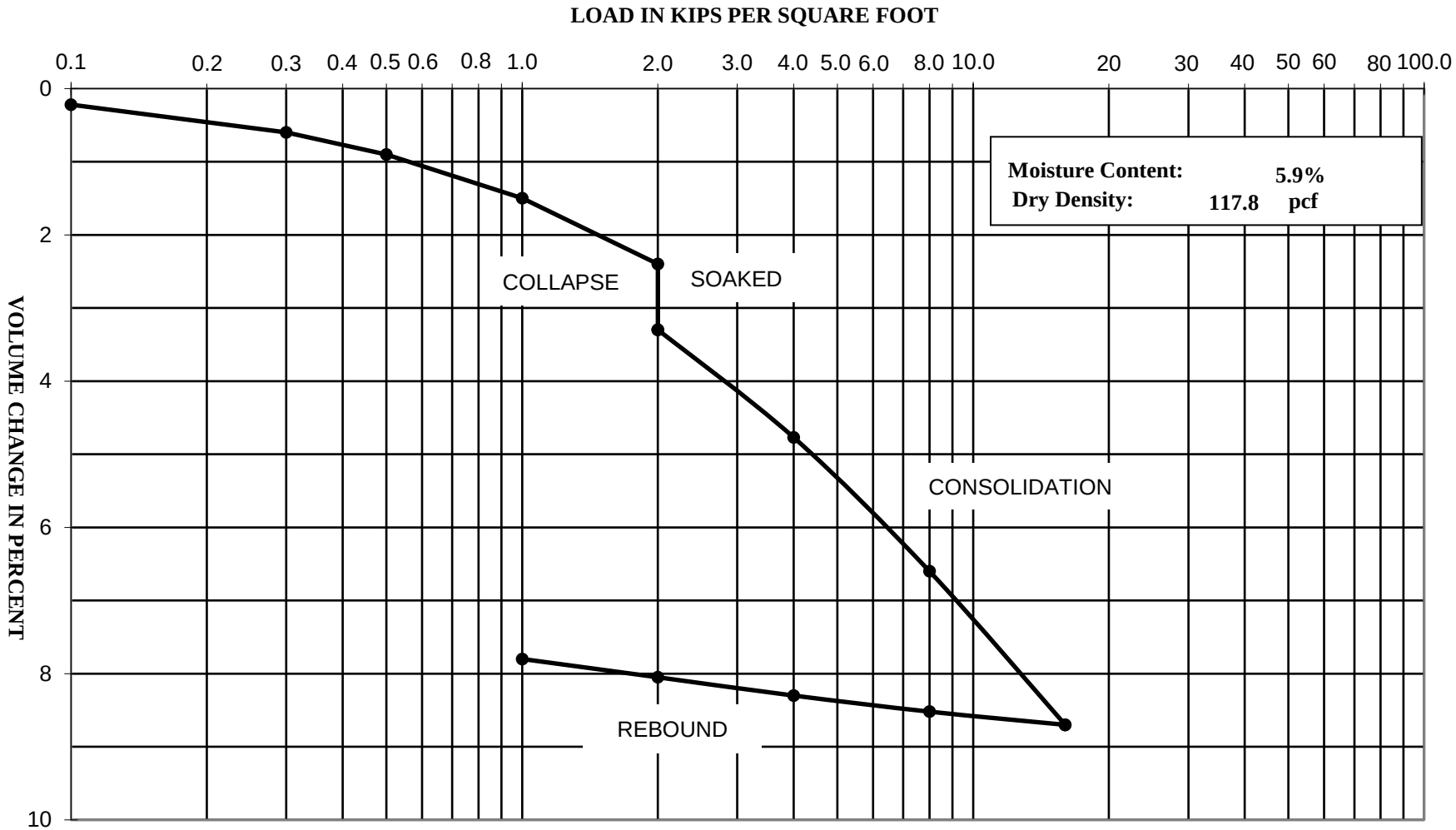
Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-1 @ 5'

SALEM engineering group, inc.

CONSOLIDATION - PRESSURE TEST DATA
ASTM D2435



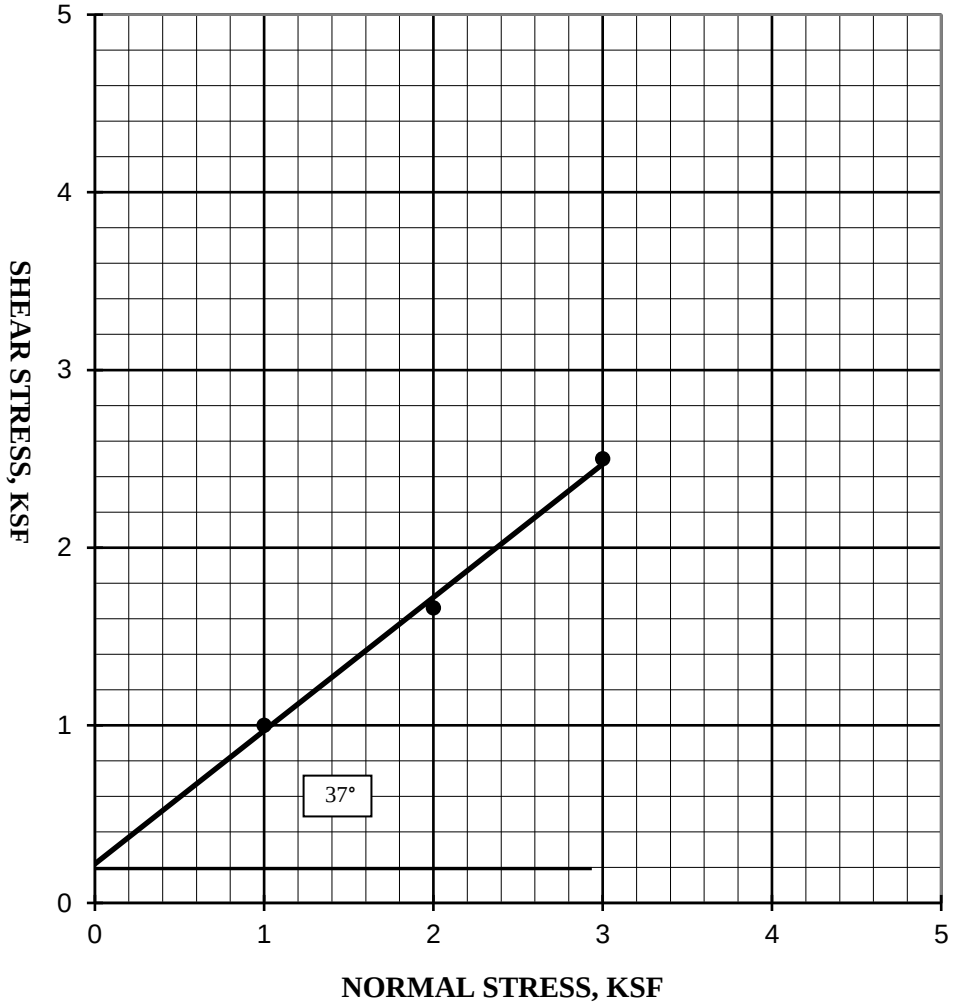
Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-2 @ 2'

SALEM engineering group, inc.

SHEAR STRENGTH DIAGRAM
(DIRECT SHEAR)
ASTM D3080



Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

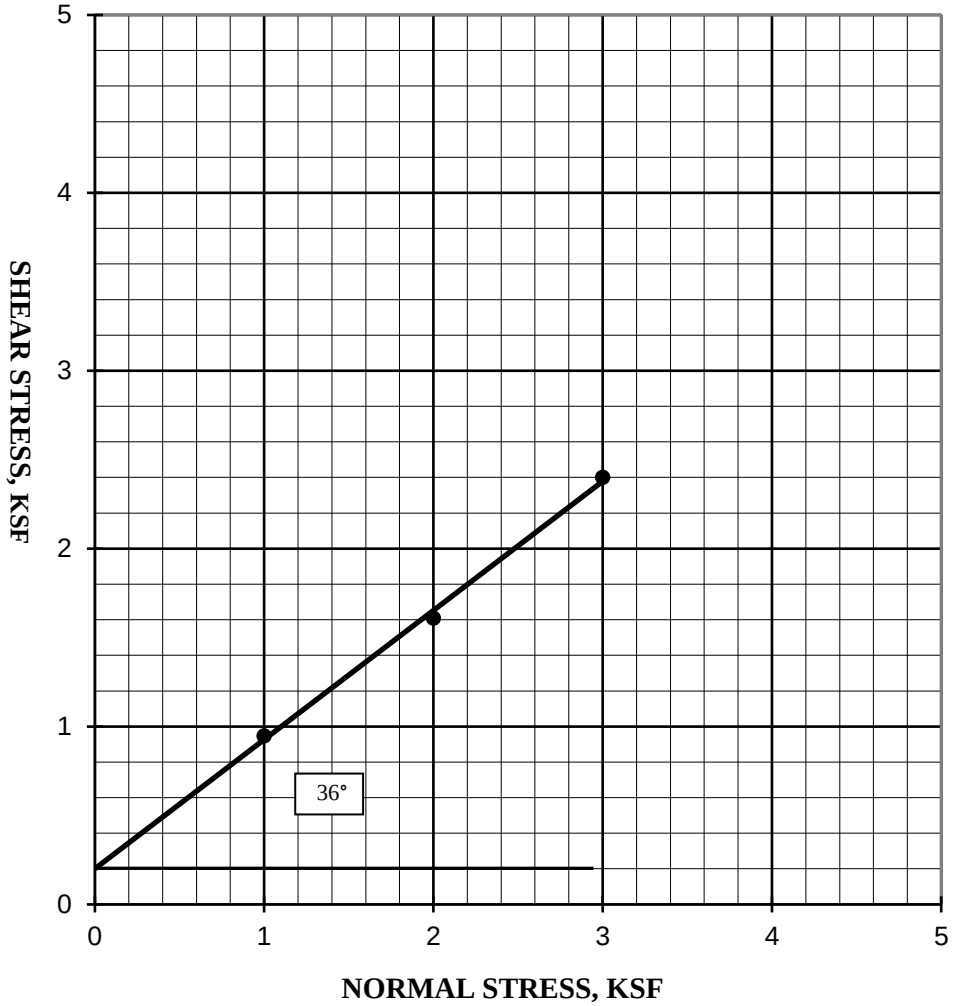
Boring: B-1 @ 2'
Soil Type: Clayey SAND (SC)

Friction Angle:	**37**	**degrees**
Cohesion:	**220**	**psf**

Moisture Content	**6.4%**
Dry Density	**105.3 pcf**

SALEM engineering group, inc.

SHEAR STRENGTH DIAGRAM
(DIRECT SHEAR)
ASTM D3080



Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-2 @ 5'
Soil Type: Clayey SAND (SC)

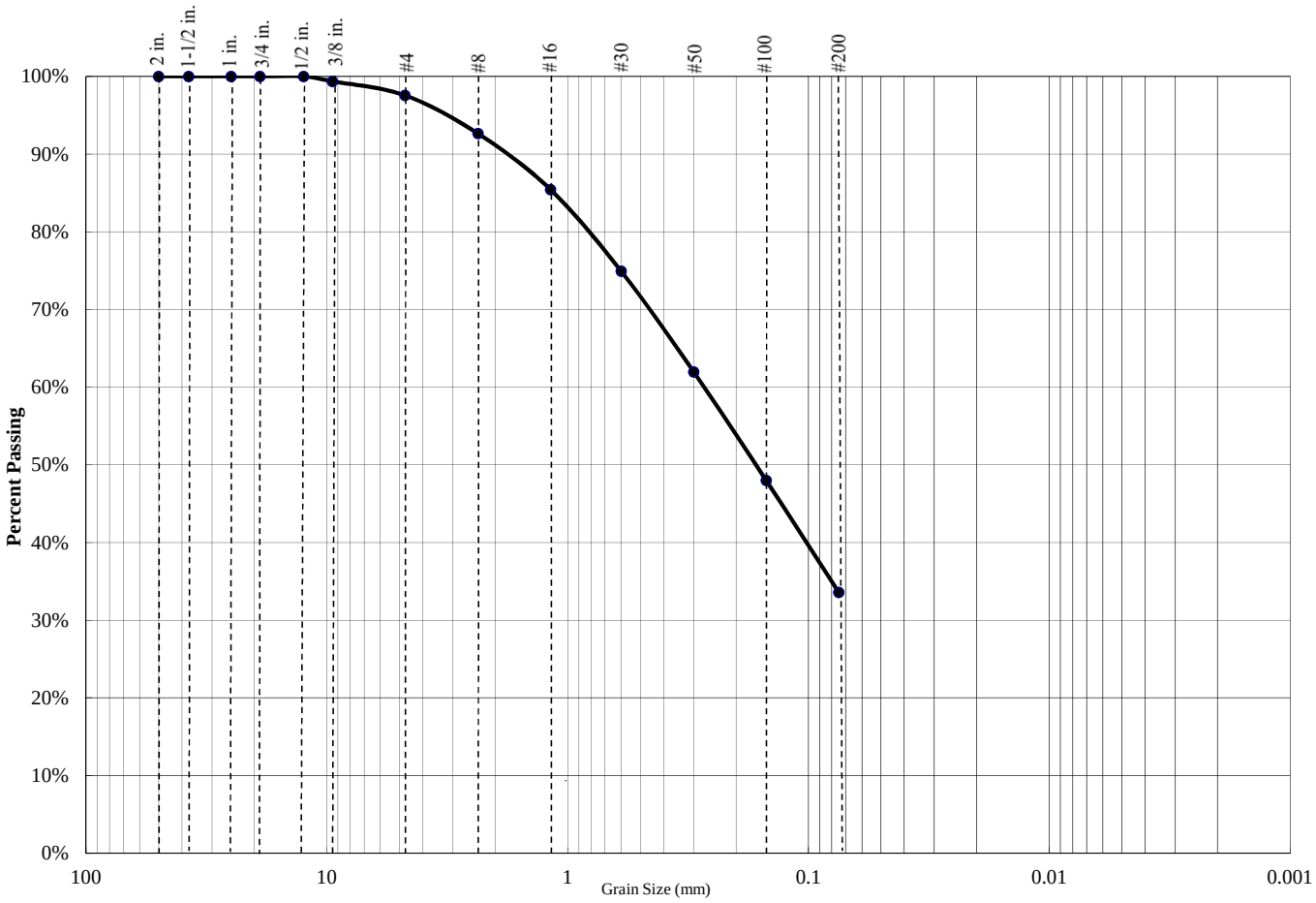
Friction Angle:	**36**	**degrees**
Cohesion:	**200**	**psf**

Moisture Content	**11.4%**
Dry Density	**120.3 pcf**

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
2%	64%	34%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	99.4%
#4	97.6%
#8	92.6%
#16	85.4%
#30	74.9%
#50	62.0%
#100	48.0%
#200	33.6%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Clayey SAND (SC)

Project Name: Comm Development - Yucaipa, CA

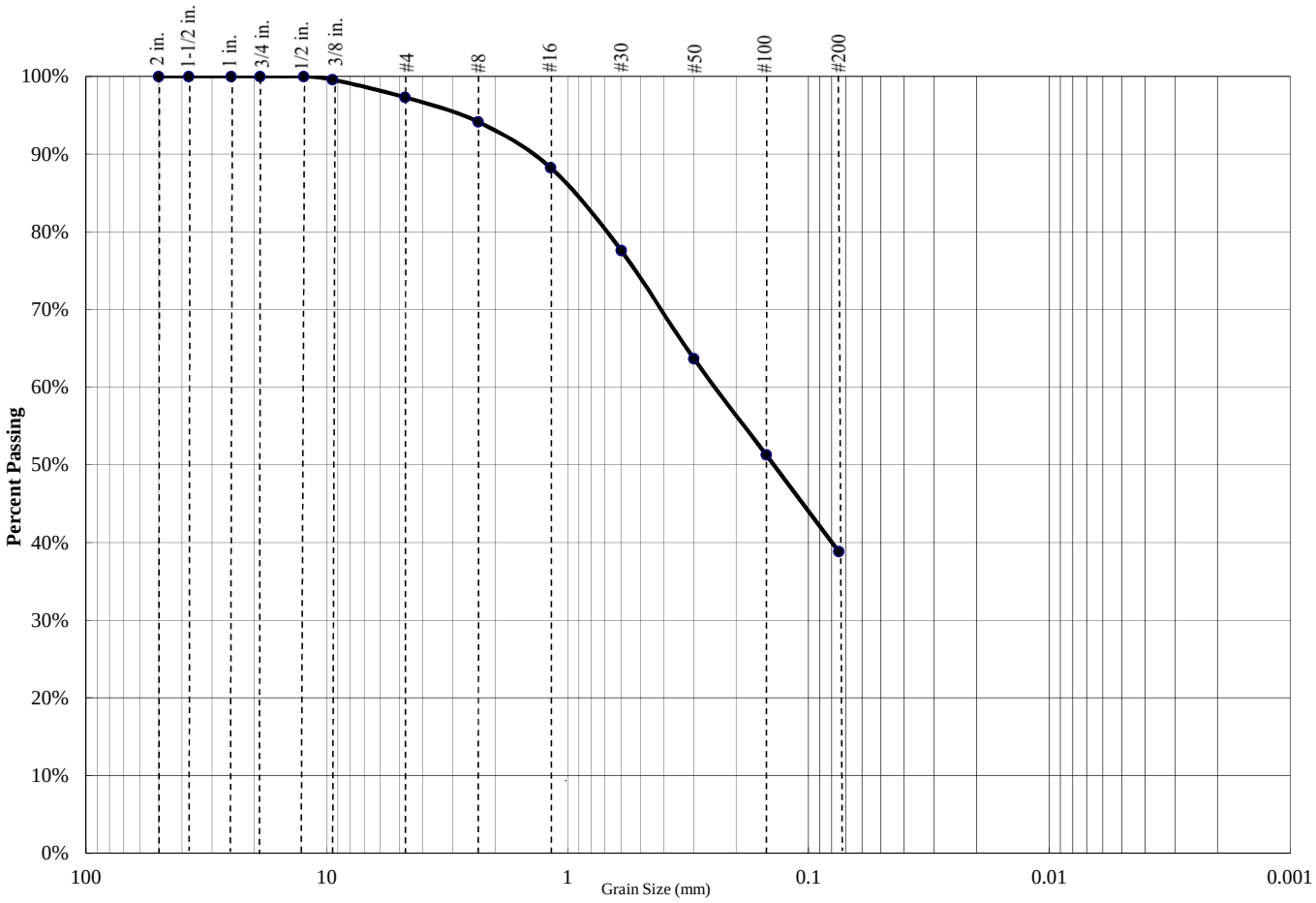
Project Number: 3-218-0666

Boring: B-1 @ 2'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
3%	58%	39%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	99.6%
#4	97.3%
#8	94.2%
#16	88.3%
#30	77.6%
#50	63.7%
#100	51.3%
#200	38.8%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Clayey SAND (SC)

Project Name: Comm Development - Yucaipa, CA

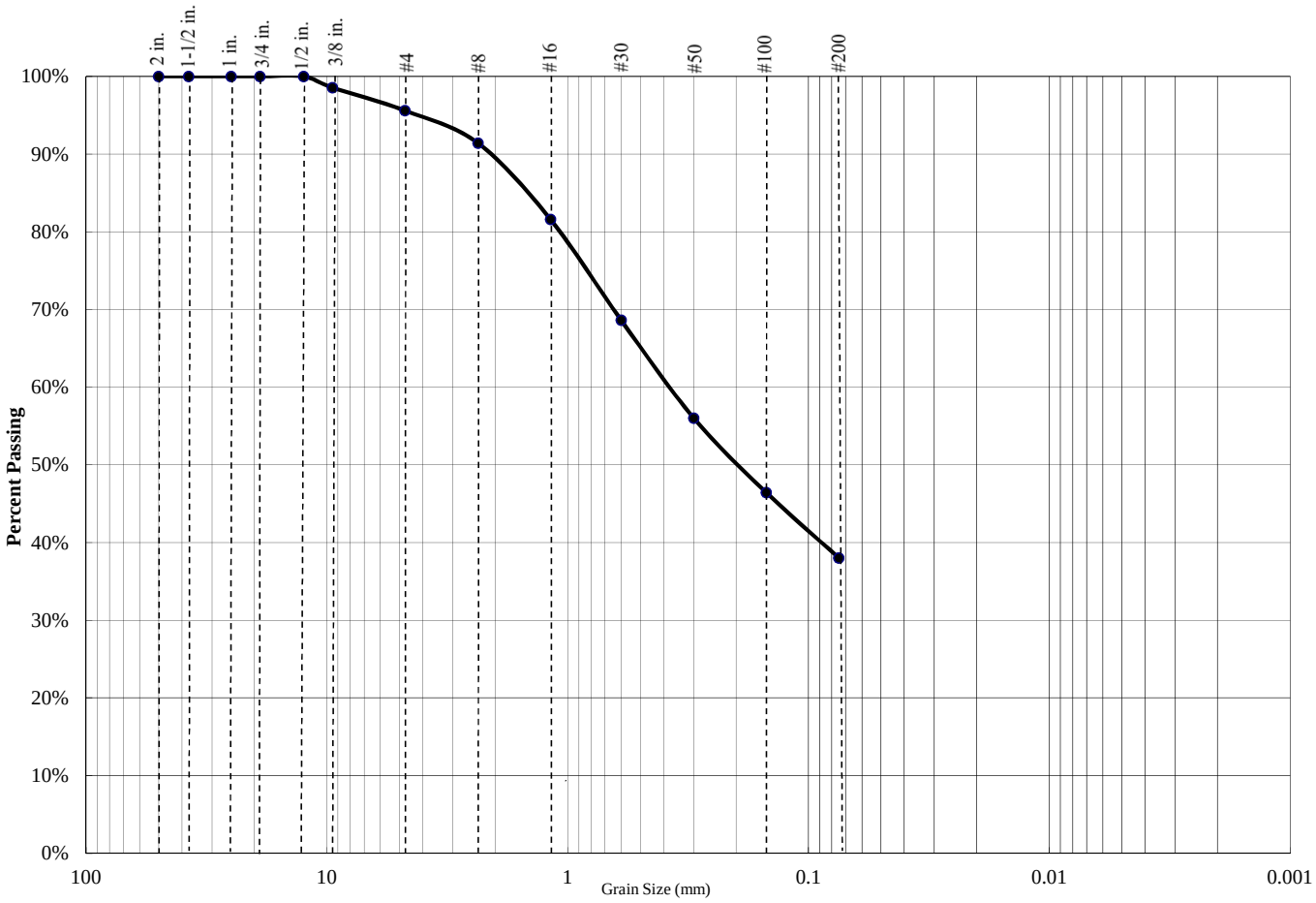
Project Number: 3-218-0666

Boring: B-1 @ 5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
4%	58%	38%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	98.6%
#4	95.6%
#8	91.4%
#16	81.6%
#30	68.6%
#50	56.0%
#100	46.4%
#200	38.0%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients					
D_{85}=		**D_{60}=**		**D_{50}=**	
D_{30}=		**D_{15}=**		**D_{10}=**	
C_u=	N/A	**C_c=**	N/A		

USCS CLASSIFICATION
Clayey SAND (SC)

Project Name: Comm Development - Yucaipa, CA

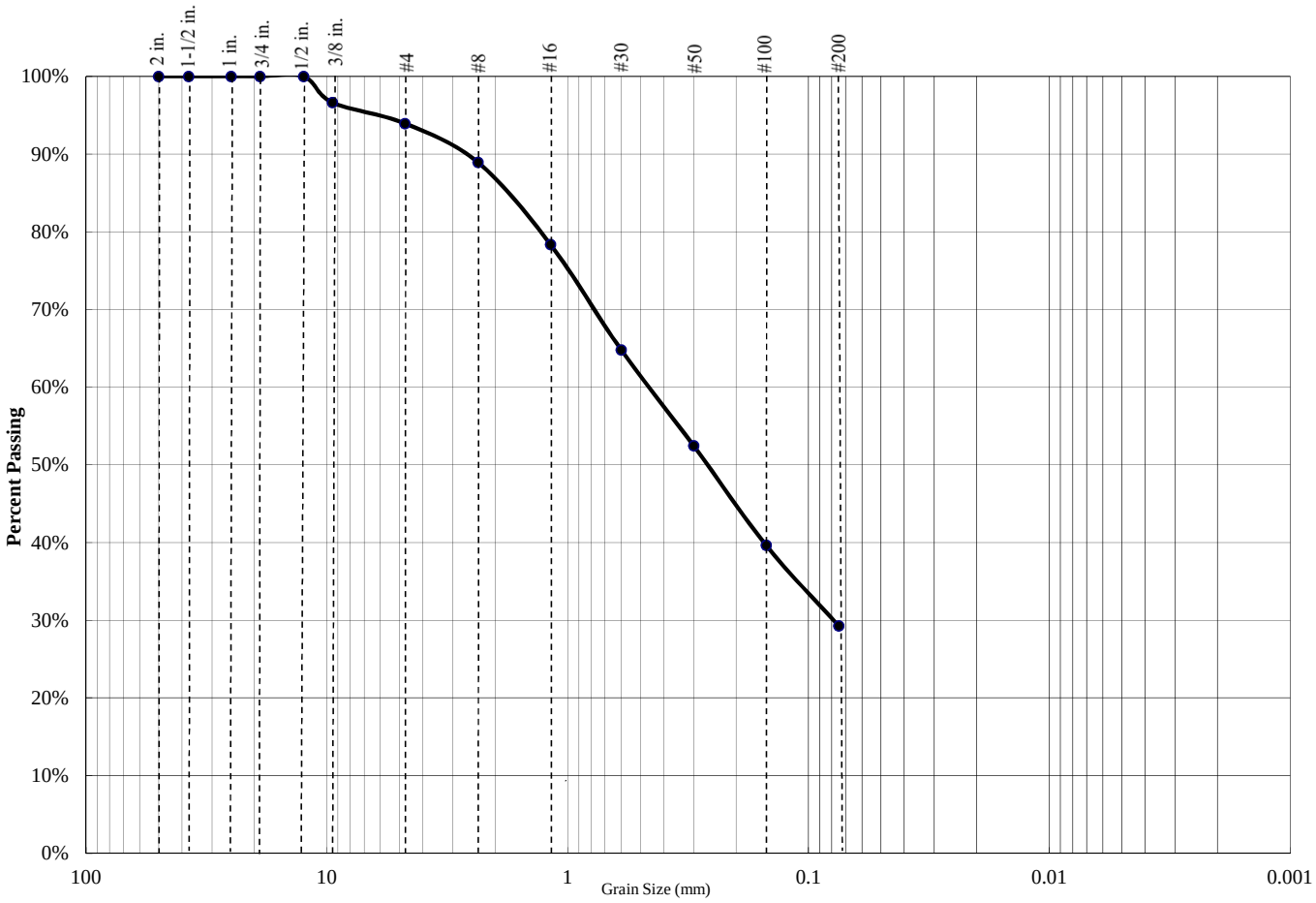
Project Number: 3-218-0666

Boring: B-2 @ 2'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
6%	65%	29%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	96.6%
#4	93.9%
#8	88.9%
#16	78.4%
#30	64.8%
#50	52.5%
#100	39.6%
#200	29.3%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=		D_{50}=	
D_{30}=		D_{15}=		D_{10}=	
C_u=	N/A	C_c=	N/A		

USCS CLASSIFICATION
Clayey SAND (SC)

Project Name: Comm Development - Yucaipa, CA

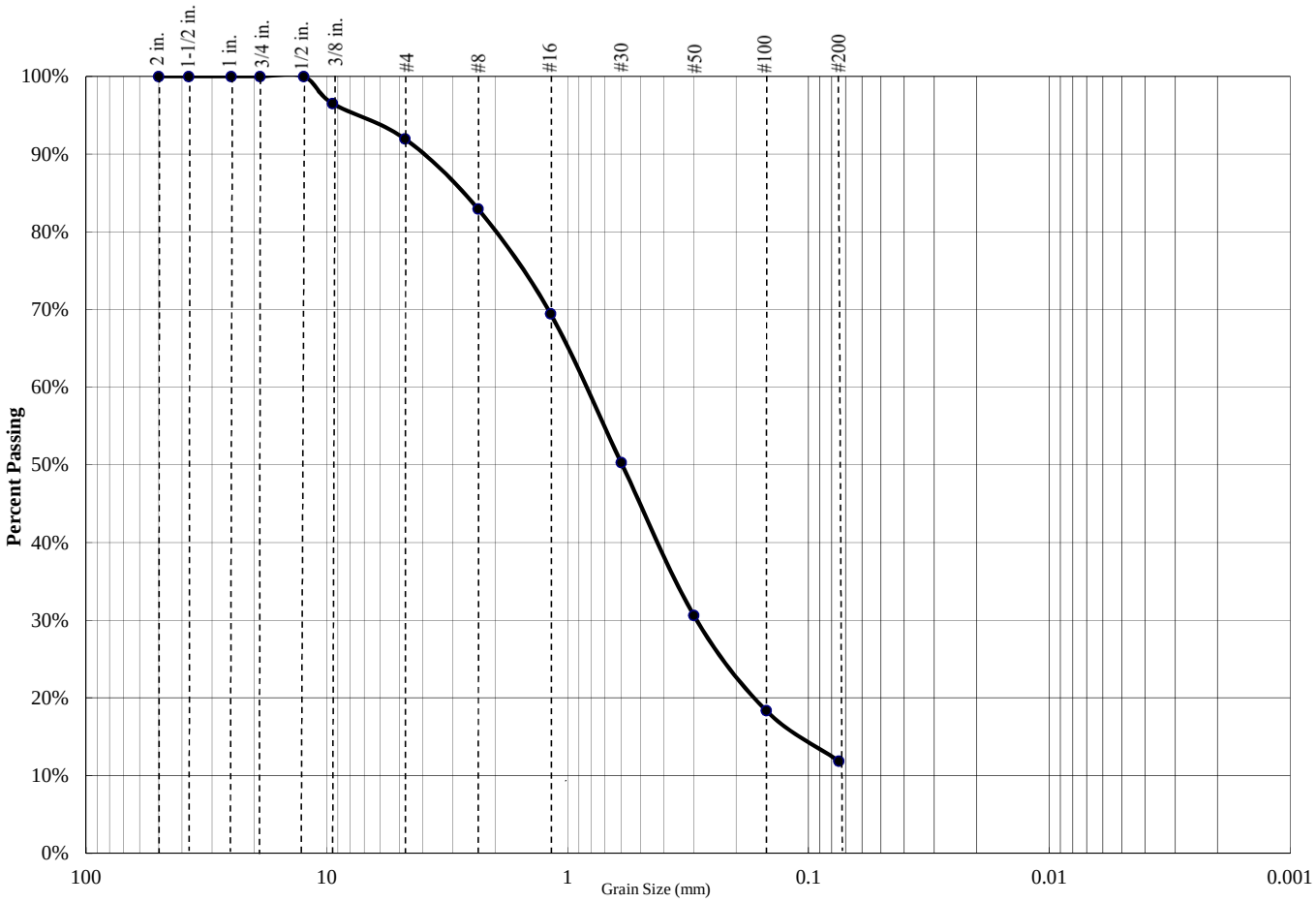
Project Number: 3-218-0666

Boring: B-2 @ 5'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
8%	80%	12%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	96.5%
#4	92.0%
#8	82.9%
#16	69.5%
#30	50.3%
#50	30.7%
#100	18.4%
#200	11.9%

Atterberg Limits		
PL=	LL=	PI=

Coefficients					
D_{85}=		D_{60}=	0.85	D_{50}=	
D_{30}=	0.3	D_{15}=		D_{10}=	0.07
C_u=	12.14	C_c=	1.51		

USCS CLASSIFICATION
Well-graded SAND with Silt (SW-SM)

Project Name: Comm Development - Yucaipa, CA

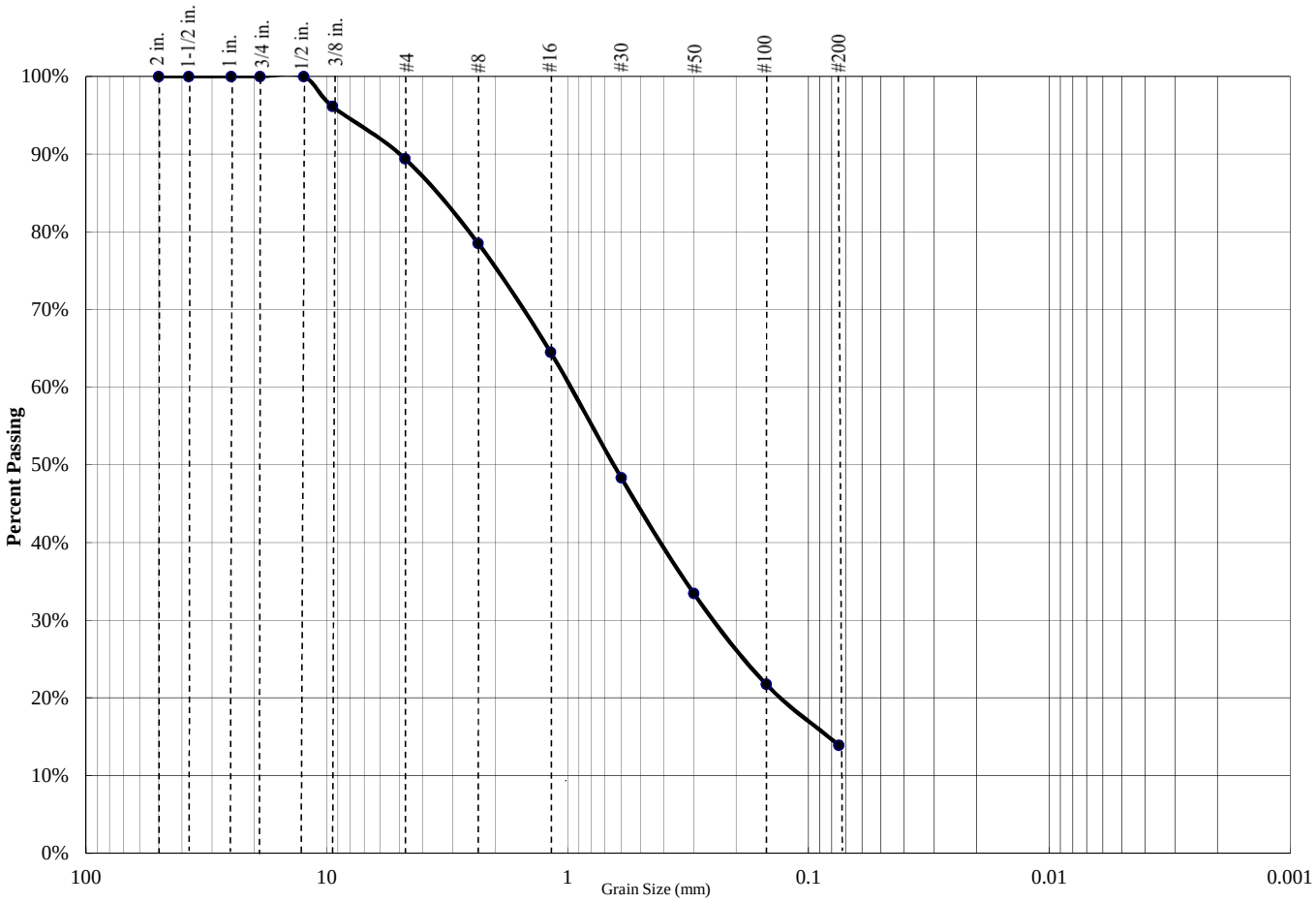
Project Number: 3-218-0666

Boring: B-2 @ 15'

SALEM engineering group, inc.

PARTICLE SIZE DISTRIBUTION DIAGRAM

GRADATION TEST - ASTM C136



Percent Gravel	Percent Sand	Percent Silt/Clay
11%	75%	14%

Sieve Size	Percent Passing
3/4 inch	100.0%
1/2 inch	100.0%
3/8 inch	96.1%
#4	89.4%
#8	78.5%
#16	64.5%
#30	48.3%
#50	33.5%
#100	21.8%
#200	13.9%

Atterberg Limits		
PL=	**LL=**	**PI=**

Coefficients			
D_{85}=		**D_{60}=**	**D_{50}=**
D_{30}=		**D_{15}=**	**D_{10}=**
C_u=	N/A	**C_c=**	N/A

USCS CLASSIFICATION
Silty SAND (SM)

Project Name: Comm Development - Yucaipa, CA

Project Number: 3-218-0666

Boring: B-2 @ 25'

SALEM engineering group, inc.

EXPANSION INDEX TEST
ASTM D4829

Project Name: Comm Development - Yucaipa, CA
Project Number: 3-218-0666
Date Sampled: 8/1/18 to 8/3/18 Date Tested: 8/13/18
Sampled By: SEG Tested By: NL
Sample Location: B-1 @ 0 - 3'
Soil Description: Brown Clayey SAND (SC)

Trial #	1	2	3
Weight of Soil & Mold, g.	595.5		
Weight of Mold, g.	188.2		
Weight of Soil, g.	407.3		
Wet Density, pcf	122.8		
Weight of Moisture Sample (Wet), g.	835.0		
Weight of Moisture Sample (Dry), g.	765.6		
Moisture Content, %	9.1		
Dry Density, pcf	112.6		
Specific Gravity of Soil	2.7		
Degree of Saturation, %	49.4		

Time	Inital	30 min	1 hr	6 hrs	12 hrs	24 hrs
Dial Reading	0	0.024	0.0258	0.0283	--	0.029

Expansion Index $_{measured}$ = 29
Expansion Index $_{50}$ = 28.6

Expansion Index = **29**

Expansion Potential Table	
Exp. Index	Potential Exp.
0 - 20	Very Low
21 - 50	Low
51 - 90	Medium
91 - 130	High
>130	Very High

SALEM engineering group, inc.

CHEMICAL ANALYSIS

SO_4 - Modified CTM 417 & Cl - Modified CTM 417/422

Project Name: Comm Development - Yucaipa, CA
Project Number: 3-218-0666
Date Sampled: 8/1/18 to 8/3/18 Date Tested: 8/9/18
Sampled By: SEG Tested By: RA
Soil Description: Brown Clayey SAND (SC)

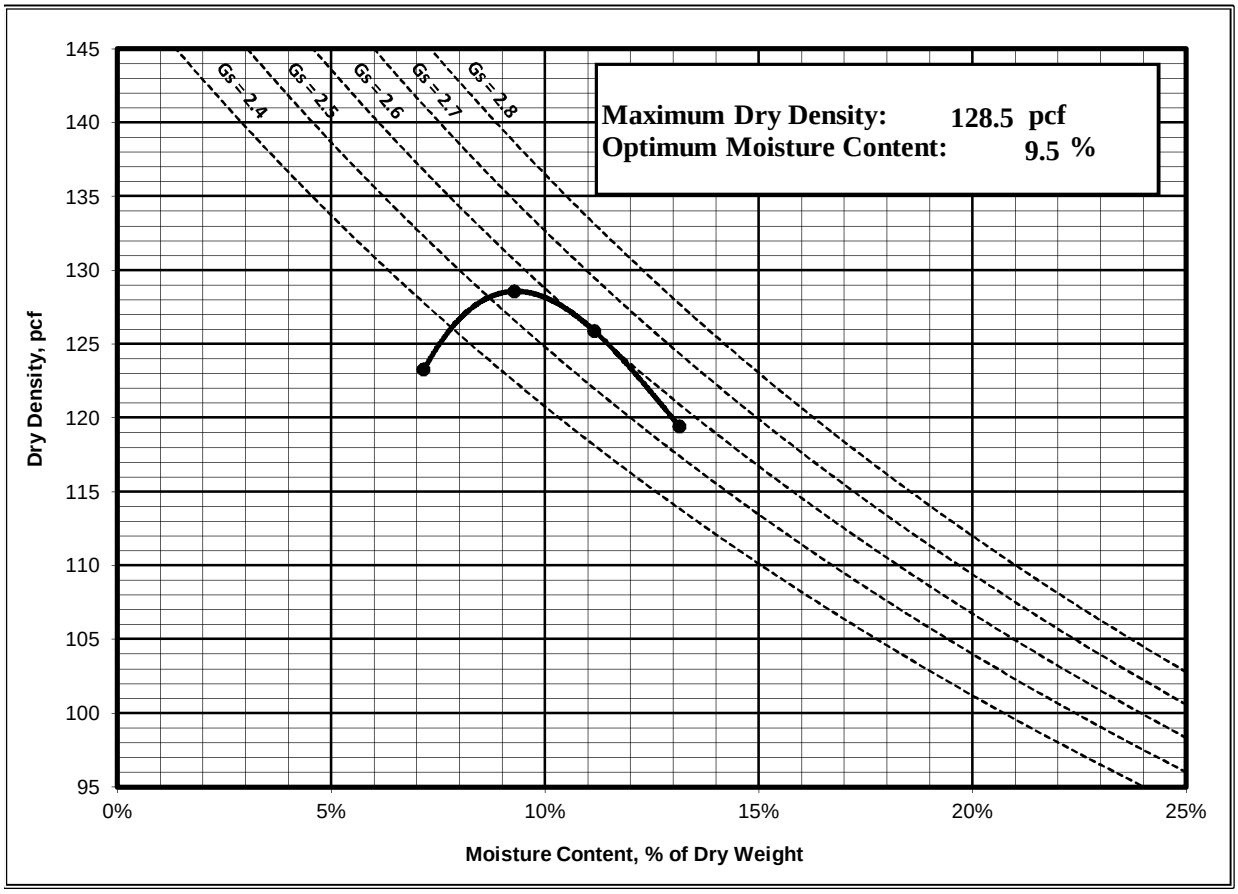
Sample Number	Sample Location	Soluble Sulfate SO_4-S	Soluble Chloride Cl	pH
1a.	B-1 @ 0 - 3'	50 mg/kg	31 mg/kg	7.7
1b.	B-1 @ 0 - 3'	50 mg/kg	31 mg/kg	7.7
1c.	B-1 @ 0 - 3'	50 mg/kg	31 mg/kg	7.7
Average:		**50 mg/kg**	**31 mg/kg**	**7.7**

SALEM engineering group, inc.

Laboratory Compaction Curve
ASTM D1557

Project Name: Comm Development - Yucaipa, CA
Project Number: 3-218-0666
Date Sampled: 8/1/18 to 8/3/18 Date Tested: 8/9/18
Sampled By: SEG Tested By: JG
Sample Location: B-1 @ 0 - 3'
Soil Description: Brown Clayey SAND (SC)
Test Method: Method A

	1	2	3	4
Weight of Moist Specimen & Mold, (g)	3982.5	4109.5	4100.5	4027.9
Weight of Compaction Mold, (g)	1985.2	1985.2	1985.2	1985.2
Weight of Moist Specimen, (g)	1997.3	2124.3	2115.3	2042.7
Volume of Mold, (ft^3)	0.0333	0.0333	0.0333	0.0333
Wet Density, (pcf)	132.1	140.5	139.9	135.1
Weight of Wet (Moisture) Sample, (g)	336.4	336.4	336.4	336.4
Weight of Dry (Moisture) Sample, (g)	313.9	307.8	302.6	297.3
Moisture Content, (%)	7.2%	9.3%	11.2%	13.2%
Dry Density, (pcf)	123.3	128.6	125.8	119.4



SALEM engineering group, inc.

APPENDIX

C

APPENDIX C
GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

1.0 SCOPE OF WORK: These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

2.0 PERFORMANCE: The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

3.0 TECHNICAL REQUIREMENTS: All compacted materials shall be densified to no less that 95 percent of relative compaction (90 percent for fine grained cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

4.0 SOILS AND FOUNDATION CONDITIONS: The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

5.0 DUST CONTROL: The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

6.0 CLEARING AND GRUBBING: The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

7.0 SUBGRADE PREPARATION: Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for fine grained cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for fine grained cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

8.0 EXCAVATION: All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

9.0 FILL AND BACKFILL MATERIAL: No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

10.0 PLACEMENT, SPREADING AND COMPACTION: The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.

11.0 SEASONAL LIMITS: No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

12.0 DEFINITIONS - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed. The term "Standard Specifications": hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

13.0 PREPARATION OF THE SUBGRADE - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent (90 percent for fine grained cohesive soils) based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

14.0 AGGREGATE BASE - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

15.0 AGGREGATE SUBBASE - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

16.0 ASPHALTIC CONCRETE SURFACING - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.

FORCE ENVIRONMENTAL

License # 867264

PHASE I Site Assessment Report

Prepared for:
VantageOne Real Estate Investments, LLC
4 Corporate Plaza, Suite 210
Newport Beach, CA 92660

For the Project
located at:

12.85 +/- Acres of Land Southeast Corner of
Yucaipa Boulevard and Avenue E Yucaipa, California

12288 Rancho Heights Road, Pala, CA 92059 Phone: (951) 299-9393 Fax (951) 848-9467

THE REYNOLDS GROUP
a California corporation

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT



May 21, 2018

12.85 +/- Acres of Land
Southeast Corner of
Yucaipa Boulevard and Avenue E
Yucaipa, California

TRG Project #8460-1

Tel 714-730-5397 PO Box 1996, Tustin, California 92781-1996 Fax 714-730-6476
www.reynolds-group.com

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12.85 +/- Acres of Land
Southeast Corner of
Yucaipa Boulevard and Avenue E
Yucaipa, California

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Appendix E - Select File Review Documentation
Appendix F - Limited Phase II Vapor Soil Sampling Report, dated 5/15/18

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT

12.85 +/- Acres of Land
Southeast Corner of
Yucaipa Boulevard and Avenue E
Yucaipa, California

1.0 EXECUTIVE SUMMARY

In May 2018, a Phase I Environmental Site Assessment (Phase I ESA), consistent with American Society for Testing Materials (ASTM) Standard E1527-13, was performed for the five adjoining parcels located at the southeast corner of Yucaipa Boulevard and Avenue E in Yucaipa, California (the Property, see **Figure 1** – Property Location Map).

Identified as adjoining County of San Bernardino Assessor Parcel Numbers (APNs) 0300-191-17, -28, -29, -30, and -31, the 12.85 +/- acre Property exists primarily as undeveloped land, except two of the five parcels at the southwest area of the Property which are occupied by single family homes. According to historical research performed during this investigation, it appears that the Property has remained generally the same as today (undeveloped and residential) since at least 1968, preceded by agricultural use dating back to 1938 (the oldest documentation available to TRG).

On May 3, 2018, The Reynolds Group (TRG) conducted an inspection of the Property and vicinity and took photographs. No adverse environmental conditions were observed during the inspection, nor were any discovered in historical research of the Property.

The Property lies in a mixed commercial and residential area of Yucaipa. Based on the Property's close proximity to two gasoline service stations to the northwest and two auto repair facilities to the north (see **Figure 2** – Property and Area Map), the Client opted to perform a limited Phase II at the Property to assess whether shallow soils at the Site may be impacted by operations at the gas stations and auto repair businesses. On May 5, 2018, twelve (12) shallow soil vapor samples

between 4 and 5 feet below ground surface (ft bgs) were collected at various locations on the Property. Laboratory analytical results for all soil vapor samples were "non-detect" for volatile organic compounds (VOCs), indicating that vapor intrusion health risk at the Site is not likely. The Phase II work is summarized in Section 8.8 of this report. The complete *Limited Phase II Soil Vapor Sampling Report*, dated May 15, 2018, is provided as **Appendix F**.

A few sites further out in the general area are listed in the historical environmental database report, however, they are not considered environmental concerns to the Property for reasons detailed in Section 7.3 of this report, including distance from the Property and regulatory closure.

Based on historical research and the Property reconnaissance the following recognized environmental condition (REC) was identified at the Property:

1. Possible pesticide and/or herbicide impact to shallow soils from approximately 30 years (1938 to 1968) of agricultural use.

It is the opinion of TRG that shallow soil sampling should be performed throughout the Property to mitigate or confirm the pesticide/herbicide REC.

2.0 INTRODUCTION

2.1 Purpose

TRG was contracted by Force Environmental, Inc. (the Client) to perform the Phase I ESA at the Property as due diligence for a possible real estate transaction.

The purpose of the Phase I ESA was to identify any RECs at the Property. The Phase I ESA was performed using generally accepted Phase I ESA industry standards in accordance with ASTM E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. In this report, and as defined by the ASTM, a REC is "the presence or likely

presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment or under conditions that pose a material threat of future release. De minimis conditions are not recognized environmental conditions."

2.2 Scope of Work

The following scope of work was performed to accomplish the Phase I ESA objectives:

- Visual Reconnaissance – A visual evaluation of the Property was conducted in readily accessible areas to identify RECs. Additionally, visual observations of adjoining properties were made from the vantage point of the subject Property as well as from public right-of-ways to determine the potential impact of these sites on the subject Property.
- Interviews – Verbal or written interviews with individuals knowledgeable and familiar with the Property.
- Records Review – Available environmental reports, agency records, appropriate permits, and historical aerial photographs of the subject Property and surrounding areas were reviewed.
- Agency Document Review – Appropriate regulatory agencies were contacted for information regarding any hazardous materials use, storage, and/or releases at the Property.
- Published Database Review – Reviewed published governmental agency databases to identify sites within ASTM-specified radii of the subject Property with a reported environmental concern or incident. TRG subcontracts the government agency database search to Environmental Data Resources, Inc. (EDR).
- Report Preparation – Prepare a summary report of the Phase I ESA work.
- Environmental Professional – All work associated with the project was performed by an environmental professional or under the supervision of an environmental professional.

2.3 Limitations and Exceptions

Topics not explicitly discussed within this document should not be assumed to have been investigated, such as physical testing, other than any specifically detailed in this report. The work performed in conjunction with this study and data developed are intended as a description of available information on the dates and at the locations described. This report does not warrant against future operations or conditions, nor does it warrant against:

- Operations that are not in evidence from visual observations or search of published agency records, or facts that were concealed, withheld, or not fully disclosed at the time the reconnaissance was conducted.
- Conditions that could only be determined by physical sampling or intrusive testing.
- Conditions or locations other than the Client-provided subject Property address and/or legal parcel description(s).

This report summarizes Phase I ESA work conducted by TRG in May 2018 at the subject Property. Although conditions at neighboring sites may impact the subject Property and, to the extent they were identified and included in the subject Property evaluation, this report does not serve as an assessment of sites other than the subject Property.

The conclusions and opinions presented are based on the scope of work outlined in this report. Evaluation of potential issues such as geotechnical soil conditions, air quality, flood plains, seismic conditions, asbestos-containing materials, mold, radon, lead-based paint, lead in drinking water and wetlands are not required by ASTM E1527-13 standards and, thus, were not included in the scope of services. TRG makes no warranties or guarantees as to the accuracy or completeness of information obtained from or compiled by others. Information may exist beyond the scope of this investigation. Additional information not found/available to TRG at the time of report writing may result in modifications of the conclusions presented. This report is not a legal opinion.

2.4 Reliance

The Phase I ESA was performed for the exclusive use of the Client and its investors, assignees, designees, and successors (collectively "Authorized Parties"). These Authorized Parties intend to rely upon this report as an assessment of the existing environmental condition of the subject Property. TRG recommends that any Authorized Party intending to rely upon the report independently determine whether the scope of services meets their expectations.

TRG's professional services were performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental professionals. No other warranty, expressed or implied, is made as to the professional opinions described in this report. TRG is not responsible or liable for any claims that are associated with the interpretation of the available information. Additionally, TRG is not responsible for any claims from third parties not associated with the Client, unless this report is assigned in its entirety to a party acceptable to TRG.

TRG exercised usual and customary professional care in its efforts to assess property environmental law/code/regulation compliance. However, due to the existence of literally thousands of laws, codes, and regulations pertaining to the environment, TRG cannot provide a definitive opinion concerning compliance with all laws/codes/regulations.

2.5 Proprietary Notice

This document and its contents are privileged and confidential information and should not be duplicated or copied under any circumstances without the expressed permission of TRG. Any unauthorized reuse of TRG reports or data will be at the unauthorized user's sole risk and liability.

3.0 USER PROVIDED INFORMATION

3.1 Reason for Performing the Phase I ESA

According to Tom Robinson, Managing Member of VantageOne Real Estate Investments (potential new owner of the Property), the work was performed as due diligence for a potential Property purchase (see **Appendix B** – Owner Response to Interview Questions).

3.2 Title Records and Property Use Limitations

The Client elected to have TRG perform the ASTM-required environmental lien search. As such, TRG obtained deed related information from Environmental Data Resources (EDR) as part of the Environmental Lien Search (see **Appendix D**), based on the property APNs. Lien Search results show no Property use limitations, and the current Property owners as follows:

APN	Current Owner	Previous Owner	Deed Date
0300-191-17	Stater Bros. Markets	Michael S. Murray and Karin E. Murray, Husband and Wife	8-9-90
0300-191-28	Stater Bros. Markets	Petrolane Properties	3-29-83
0300-191-29	Stater Bros. Markets	Charles E. Irvin III Successor Trustee of The Charles E. Irvin, Jr., and Ardis L. Irvin Trust (1-5-96)	12-23-10
0300-191-30	Stater Bros. Markets	Charles E. Irvin III Successor Trustee of The Charles E. Irvin, Jr., and Ardis L. Irvin Trust (1-5-96)	12-23-10
0300-191-31	Stater Bros. Markets	Sherri Laffey-Long	11-5-13

3.3 Value Reduction for Environmental Issues

With reference to the sale price versus fair market value of the subject Property, according to Mr. Robinson, representing the potential buyer, the sale price of the Property is reasonable and not notably discounted due to potential environmental issues (see **Appendix B**).

4.0 PROPERTY AND ADJOINING SITE CHARACTERISTICS

Figure 1 shows the Property location, **Figure 2** is a plot plan of the Property, **Figure 3** includes historical topographic maps of the area, and **Figure 4** consists of historical aerial photographs of the vicinity. Photographs of the Property and the immediate area by the Consultant in January 2018 are included in **Appendix A** of this report.

4.1 Location

The Property is located in a mixed commercial and residential area of Yucaipa, adjoining south of Yucaipa Boulevard and east of Avenue E. Area landmarks include Interstate 10 approximately 400 feet to the south, the San Bernardino Mountains one mile further south, and Crafton Hills College and Library one mile to the northeast.

4.2 Property Description

The Property currently exists as primarily undeveloped land, except two single-family residential homes at the southwest corner of the Property. The Property slopes north to south, particularly at the approximate east boundary where a 10 to 20-foot slope exists. Bound by Yucaipa Boulevard to the north and Avenue E to the west, the Property is covered primarily with native grass and a few mature trees at the west and south sides. A graded dirt road runs east-west near the north boundary of the Property. The Property's legal description is provided in the Environmental Lien Search portion of **Appendix D.**

Potable water and sewer services for the Property are provided by Yucaipa Valley Water District. Natural gas is supplied by Southern California Gas Company, and electrical service by Southern California Edison.

4.3 Adjacent Sites

The subject Property sits in a mixed commercial and residential area of Yucaipa. Adjoining north of the Property, north of Yucaipa Boulevard, are several retail businesses including auto repair facilities, real estate offices, restaurants, and fitness and dance studios. On each side of Avenue E, south of the Property, are single family residential homes, some with large yards and/or acreage. East of the Property is undeveloped land similar to the subject Property, except a construction office, equipment staging area, and stockpiled dirt and asphalt at the northeast corner of the adjoining east Property. These appeared to be related to sewer/water pipeline construction in Yucaipa Boulevard at the time of inspection. A Mobil gasoline service station adjoins the Property at the northwest corner. Further west, west of Avenue E, are restaurants and residential homes.

5.0 ENVIRONMENTAL SETTING

According to information obtained from Geotracker at sites in Yucaipa (geotracker.swrcb.ca.gov, Global ID T0607100543 and T0607100136), sediments beneath the Property vicinity consist of Quaternary-aged alluvial fan deposits. Drilling logs at these nearby Sites indicate soils containing primarily sand and silty sand with occasional thin layers of sandy silt or clayey silt to 180 feet below ground surface (ft bgs, the deepest depth explored at the nearby site), and groundwater was not encountered. Groundwater is reported in Yucaipa at depths greater than 200 ft bgs. Groundwater flow direction beneath the Site is likely to the south, in the direction of local topography.

6.0 PROPERTY RECONNAISSANCE

6.1 Property Inspection Observations

On May 3, 2018, a representative of TRG conducted an inspection of the Property. Weather conditions were sunny and warm. Property photographs are included in **Appendix A**. The

inspection was performed from the west side to the east moving in a large grid pattern. The subject Property is described in detail in Section 4.2 of this report.

No hazardous chemical use or storage was noted during the Property inspection.

No hazardous dumping or disposal was observed on the Property. Some domestic trash such as food wrappers, cardboard, and beverage containers were viewed on the Property.

No evidence of wells, underground storage tanks, hydraulic lifts, or other potentially hazardous anomalies were observed on the Property.

No environmentally hazardous leaks or spills were observed during the inspection.

Numerous pole-mounted electrical transformers were observed along the north and west perimeter of the Property. All appeared in satisfactory condition with no obvious leaks or staining on or around the transformer poles. Maintenance and repair of the transformers is the responsibility of Edison Company.

No pungent or noxious air emissions were noted during the Property inspection.

No pits, ponds, lagoons, other standing water or wetlands were observed on the Property during the inspection.

6.2 Adjacent Site and Vicinity Observations

Adjacent sites are described in Section 4.3 of this report. No obvious issues of environmental concern were noted during the adjacent site inspections, as viewed from public right of ways. Gasoline and diesel operated construction equipment observed parked at the northeast corner of the adjoining east site and operating along the north boundary appeared to be newer and being temporarily used for the sewer/water pipeline installation in Yucaipa Boulevard. As such, gasoline

and diesel impact from construction equipment is not an issue of environmental concern at the Site. A few sites further out from the Property are listed in the Environmental Radius Map Report (see Section 7.1 and **Appendix C**), however, none are considered issues of concern to the Property for reasons including distance and direction from the Property and regulatory closure of the cases.

6.3 Interviews

Lists of standard due diligence questions was provided to TRG's contact for response from the current Property owners, however, the questionnaire was returned having been completed by a representative of the prospective buyer of the Property. Mr. Tom Robinson, Managing Member of VantageOne Real Estate Investments, LLC, (the potential Property owner) indicated in his response that he was unaware of any existing or historical environmental hazards at the Property, that no former operations have been performed at the Property, and that it has always existed as "vacant land". The complete questionnaire executed by Tom Robinson is provided as **Appendix B** of this report.

7.0 REGULATORY AGENCY DATABASE REVIEW

TRG retained EDR to provide a list of facilities within the Property vicinity that are currently under review, management, or notification by a regulatory agency as indicated in an EDR Radius Map with GeoCheck Report (see **Appendix C**). The following presents the regulatory files reviewed. The results of the subject Property and surrounding site listings are summarized in Sections 7.2 and 7.3.

Depending on the database, and in compliance with ASTM Standards, the approximate search distance includes only the subject Property or between 0.25 and 1.0 miles from the subject Property.

7.1 Government Databases Searched

The United States Environmental Protection Agency (EPA) National Priority List (NPL) and Delisted NPLs: The NPL is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site, to be included on the NPL, must either meet or surpass a predetermined hazard ranking system score, or be chosen as a state's top-priority site, or meet all three criteria of: 1) the US Department of Health and Human Services issues a health advisory recommending that people be removed from the site to avoid exposure; 2) EPA determines that the site represents a significant threat, and 3) EPA determines that the remedial action is more cost-effective. Delisted NPLs are those sites that may be deleted from the NPL where no further response is appropriate as determined by the EPA. The required minimum search distance is one mile from the Property for NPLs and ½ mile for Delisted NPLs.

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) and CERCLIS No Further Remedial Action Planned (NFRAP): The CERCLIS database contains information on potentially hazardous waste sites that have been reported to the US EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the CERCLA. CERCLIS contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. CERCLIS NFRAP contains information pertaining to facilities that have been removed from the CERCLIS database due to the absence of contamination following further investigation, sufficient remedial action of any contamination, or where contamination is not serious enough to warrant federal Superfund action or NPL consideration. The required minimum search distance for both CERCLIS and CERCLIS NFRAP is ½ mile from the subject Property.

Resource Conservation and Recovery Act (RCRIS): is a database which includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The list is developed and maintained by the EPA. The purpose of this listing is to summarize registration information and does not imply that contamination has occurred on the property,

but does identify potential sources of contamination. The RCRIS database is divided into small quantity generator (SQG) sites, large quantity generator (LQG) sites, and transfer, storage and disposal (TSD) sites. The required minimum search distance for RCRIS SQG and LQG is limited to the subject Property and adjoining sites, and is ½ mile for RCRIS TSD sites.

Institutional and Engineering Controls (IECs): IECs 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 the Property. Deed restrictions are generally required as part of the institutional controls and 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 affect human health. The search includes only the subject Property.

Emergency Response Notification System (ERNS): This listing is a database of incident notification information regarding incidents of reported releases of oil and hazardous substances. The search includes only the subject Property.

Consent: This database lists addresses involved in major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund). It is release periodically by the United States District Courts after settlement by the parties to the litigation matters. The search includes only the subject Property.

Records of Decision (RODs): RODs documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup. The required minimum search radius for RODs is one mile from the subject Property.

Mines: The Mines database is a record of mine locations maintained by the U.S. Department of Labor, Mine Safety, and Health Administration. The required minimum search radius is ¼ mile from the subject Property.

State Hazardous Waste Sites (SHWS): The SHWS database is maintained by the DTSC and is the State's equivalent to CERCLIS. The required minimum search distance from the subject Property is one mile.

Groundwater Contamination Inventory (GWCI): The GWCI is an inventory of all groundwater contamination cases. The required minimum search radius for this database is ½ mile from the Property.

Solid Waste Facilities/Landfills (SWF/LF): This is a database that is maintained by the Integrated Waste Management Board and identifies permitted solid waste facilities or landfills. These facilities may be active, inactive, or closed facilities, or open dumps that failed to meet RCRA criteria for solid waste landfills or disposal facilities. The required minimum search distance for the SWF/LF database is ½ mile from the Property.

Underground Storage Tanks (USTs) and Tribal USTs: is a list of registered underground storage tanks and those on Indian Land. The database is maintained by local agencies, most notably the fire departments, and contains a comprehensive listing of all registered USTs. The required minimum search distance is limited to the subject Property and adjacent sites for both USTs and Tribal USTs.

Leaking Underground Storage Tanks (LUST) and Tribal LUST: This is a list that compiles the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) identified facilities that have had unauthorized releases from USTs and those on Indian Land. The required minimum search distance for both LUST and Tribal LUST cases is ½ mile from the subject Property.

Above Ground Storage Tanks (ASTs): The AST database is maintained by the RWQCB and contains listings of registered ASTs. The required search distance for this database is limited to the subject Property and adjacent sites.

Spill, Leaks, Investigations, and Clean-Ups (SLIC) is a database showing cases impacted by environmental incidents other than USTs. The required minimum search radius for the SLIC database is ½ mile from the subject Property.

Land Use Controls (AUL): This database lists sites in California that have institutional controls or engineering controls in place. The search requirement includes the subject Property only.

Voluntary Cleanup Program (VCP): The VCP is a listing of facilities and/or sites registered on the voluntary cleanup program database. Upon completion of the negotiated work in the VCP contract agreed upon by the DTSC and the non-responsible party, the non-responsible party received State Superfund liability protection. The required minimum search distance from the Property is ½ mile.

Dry Cleaners is a database listing dry cleaning facilities that have EPA ID numbers. The Dry Cleaning Facility Restoration Fund database is used to access, prioritize, and clean up contaminated registered dry-cleaning sites. The minimum required search distance for this database is ¼ mile from the subject Property.

Brownfields: The Brownfields is a component of the VCP, which allows a non-responsible party to acquire a contaminated property with State Superfund liability protection for existing contamination by agreeing to perform an environmental assessment and/or remediation. The required minimum search radius for the Brownfields database is ½ mile from the Property.

National Pollutant Discharge Elimination System (NPDES): The NPDES database maintains a database of waste water treatment facility locations. The EDR search radius for this database is limited to the subject Property. The required minimum search distance is limited to the subject Property.

Airs: This is a database listing permitted air facilities. The required minimum search distance is limited to the subject Property.

The aforementioned databases and search distances include those that are required by ASTM standards. Other supplemental database information is available in the full environmental disclosure report provided in **Appendix C**.

7.2 Subject Property Database Summary

There are no listings in the EDR database report for the subject Property.

7.3 Adjacent and Nearby Sites Database Summary

The following summary includes sites adjacent to or near the subject Property within the ASTM E1527-13 search radii. Where available, information from the EDR database report was updated using the State's Geotracker website (geotracker.swrcb.ca.gov). A review of the EDR database report by TRG is summarized below.

Database	Business Name/Address	Association with Listing	Concern to Property?
RCRA-SQG	• Chevron – 31412 Yucaipa	Generator of small quantities of haz waste.	No. No violations reported.
ENVIROSTOR	• Sorenson Engineering – 32032 Dunlap • Jorco Chemical Co. – 32185 E. Outer Hwy 10	Under investigation or evaluation by the DTSC.	No. According to Geotracker, both cases have been "closed" since at least 2012.
LUST HIST CORTESE	• European Auto – 31516 Yucaipa • Circle K – 31933 Yucaipa • Sorenson Engineering – 32032 Dunlap	Former leaking USTs	No. All three cases have received regulatory closure for having sufficiently cleaned impacted soil and/or groundwater.
UST	• Circle Service – 31491 Yucaipa • Mobil – 31429 Yucaipa (adjoining northwest) • Chevron– 31412 Yucaipa	Currently registered USTs	No, not at this time. None are shown to have experienced a leak or spill (LUST/SLIC) and, therefore, are not a concern at this time.

	• Arco AM/PM – 31340 Yucaipa • Yucaipa Gas Mart – 31340 Hampton • GK Market – 31583 E. Outer Hwy 10		
SLIC	• Sorenson Engineering – 32032 Dunlap	Spill and/or leak of chlorinated hydrocarbons	No. Open case, however, according to Geotracker (SL0607135888) groundwater impact does not extend beyond 17th Street, east of the subject Property.
EDR HIST CLEANERS	• Nash's Cleaners – 31776 Yucaipa • Steamers Dry Cleaner – 31364 Hampton	Former Dry Cleaning Facility	No. Not shown in SLIC database above as having experience a leak or spill.

8.0 PROPERTY HISTORY/LAND USE REVIEW

8.1 Historical Topographic Maps

Historical topographic maps provided by EDR were also reviewed. Maps were available periodically from 1899 to 2012. The topographic gradient on all maps, where visible, is shown to vary, sloping in a southerly direction north of the Site from the Crafton Hills and in a northerly direction south of the Site from the San Bernardino Mountains. The Property is shown at the most westerly side of the Yucaipa Valley at approximately 2,100 feet above mean sea level (amsl). Yucaipa Creek approximately one mile south of the Property is the main water feature on all maps. Agricultural use on the Property and two small structures (likely residential/farm housing) appear on the 1954 map. Two or more structures appear on the Property, primarily along Yucaipa Boulevard at the north side, on the 1967 through 1996 maps. No structures appear on the Property in the most recent 2012 topographic map. Based on the size of the structures (small) and the lack of evidence indicating commercial use from other research performed during this investigation, the markings shown on the Property are likely residential use.

8.2 Historical Aerial Photographs

Aerial photographs of the Property and vicinity, as provided by EDR, were reviewed in order to ascertain historical land uses that may have been responsible for the generation/or storage of potentially hazardous materials at and near the Property. Copies of the aerial photographs are provided as **Figure 4** of this report.

1938 and 1949

The Property appears with agricultural use at the northeast area. The south and west areas are undeveloped land. One structure, likely a farm house, exists at the northeast corner of the Property. Yucaipa Boulevard to the north and Avenue E to the south are paved.

1953 and 1959

The subject Property remains agricultural use at the northeast area, however, additional structures now exist at the north-center boundary and at the south side. Development in the vicinity has increased notably, although several agricultural parcels remain in the area. Interstate 10 first appears in the 1953 photograph.

1968, 1975, and 1978

There is no longer agricultural use visible on the Property, but the 2 to 3 structures along the north boundary still appear, as do the two structures at the south side. The vicinity can be characterized as mixed residential and undeveloped land.

1985, 1989, and 1995

Only the two structures at the south side remain on the Property, likely residences that currently exist. The rest of the Property is undeveloped land. The immediate vicinity is primarily residential with some commercial buildings along each side of Interstate 10, south of the Property, and along the north side of Yucaipa Boulevard.

2006, 2010, and 2014

The Property and vicinity appear much like today. Two structures surrounded by trees occupy the south side of the Property, while the remainder of the Property is undeveloped. To the north, north of Yucaipa Boulevard, are commercial (larger) structures followed further north by residential housing. South of the Property also appears with residential use except businesses operating along Interstate 10. The adjoining east parcels are undeveloped, followed further east by primarily residential except a public storage facility along Yucaipa Boulevard and an Edison substation along Avenue E. A commercial building (currently a Mobil gas station) occupies the northwest corner of Yucaipa and Avenue E, adjoining northwest of the Property. Further west are mixed commercial buildings and vacant land extending west to the freeway on/off ramp.

8.3 Sanborn Fire Insurance Maps

No Sanborn Fire Insurance Maps were available for the subject Property addresses through EDR (see **Appendix D**).

8.4 City Directory Search

TRG also retained EDR to perform a City Directory Search. The complete City Directory as provided by EDR is included in **Appendix D** of this report. No businesses are shown for the Property based on the APNs provided to EDR by TRG. Listings for adjacent and nearby sites

include personal names (indicating residential use), landscape services, construction companies, real estate offices, and other environmentally benign businesses. The auto repair facilities adjacent north of the Property, north of Yucaipa Boulevard, and the gas station adjoining northwest are also listed in the City Directory, however, they are not issues of concern to the Property for reasons detailed elsewhere in this report.

8.5 Environmental Lien Search

A search for environmental liens was performed for the Property location using assessor parcel numbers associated with the Property. No environmental liens or activity and use limitations currently exist for the subject Property (see **Appendix D**). Lien Search results show the current Property owners as identified in Section 3.2 of this report. The Property's legal description is included in the Lien Search provided in **Appendix D**.

8.6 Vapor Encroachment Screen

A search for vapor encroachment at the Property was performed by EDR in accordance with ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600-10). This screening assist parties seeking to meet the search requirements in Real Estate Transactions. The Property is not listed in the federal or state databases, nor are any adjacent sites, suggesting no vapor intrusion risk at the Property. In addition, a soil vapor survey was performed at the Property in May 2018 showing non-detect results for VOCs (see Section 8.8 and **Appendix F**).

8.7 Agency Records Review

Agency file review findings are summarized below. Select file review documentation is provided in **Appendix E**.

- *City of Yucaipa Building and Planning Department* – TRG visited the Yucaipa Building and Planning Departments on May 3, 2018, to investigate any records related to the Site. According to Benjamin J. Matlock, Associate Planner, no records exist with the City for the subject Property (ref: 909-797-2489 Ext. 261 / bmatlock@yucaipa.org.

- *San Bernardino County Department of Environmental Health (SBCODEH)* – TRG submitted a public information request for the Property to the SBCODEH. As of the writing of this report, no response was received from the SBCODEH. This is considered a "Data Gap" as defined by ASTM E1527-13, however, it is the opinion of TRG that the SBCODEH data gap does not affect the findings of this investigation since no records for the Property are anticipated to exist with the SBCODEH based on other research performed.

- *Santa Ana Regional Water Quality Control Board (SARWQCB)* – A request for file review was submitted by TRG to the SARWQCB (filereview8@waterboards.ca.gov) for the subject Property APNs/location description. No response was received from the SARWQCB as of the writing of this report. This is considered a "Data Gap" as defined by ASTM E1527-13, however, it is the opinion of TRG that the SARWQCB data gap does not affect the findings of this investigation since no records are anticipated to exist with the SARWQCB based on other research performed.

- *State Water Resources Control Board Geotracker Web Site (geotracker.waterboards.ca.gov)* – The subject Property location is not shown as a case on the Geotracker website. One site adjacent north of the Property is shown, north of Yucaipa Boulevard (European Auto, 31516 Yucaipa Blvd., Global ID T0607100415). Details regarding this case indicate that it was soils only impact, and that is was issued regulatory closure back in 1996. As such, the European Auto case is not considered an issue of concern to the subject Property. No other cases are shown on Geotracker in the immediate vicinity.

- *Division of Oil, Gas, and Geothermal Resources (DOGGR, www.conservation.ca.gov/doggr/wellfinder)* – TRG accessed the DOGGR web site to research oil well information at the Property. The map shows no oil wells on or near the Property. The nearest well (API 06500108) is located roughly 3.5 miles south-southeast of the Property and, due to its distance, is not considered an issue to the Property.

- *South Coast Air Quality Management District (SCAQMD)* – TRG accessed the SCAQMD online public records portal at http://www3.aqmd.gov/webappl/fim/prog/search. The system does not allow for searching by APNs. A physical address is required. This is considered a "Data Gap" as defined by ASTM E1527-13, however, it is the opinion of TRG that the SCAQMD data gap does not affect the findings of this investigation since no records are anticipated to exist based on other research performed.

8.8 Synopsis of Previous Environmental Investigations

Other than the May 2018 limited Phase II soil vapor survey at the Property summarized below, no known previous environmental investigations have been performed at the Property.

- 2018 Soil Vapor Investigation – On May 3, 2018, TRG collected a total of 12 soil vapor samples (SV-1 through SV-12) to depths between 4 and 5 ft bgs at various locations throughout the Property and the adjoining east parcel, particularly near the adjoining northwest gas station at 31429 Yucaipa Boulevard. As detailed in the *Limited Phase II Soil Vapor Sampling Report*, dated May 15, 2018 (see **Appendix F**), no VOCs were detected in any of the 12 soil vapor samples collected.

9.0 CONCLUSIONS & OPINIONS

In May 2018, a Phase I Environmental Site Assessment (Phase I ESA), consistent with American Society for Testing Materials (ASTM) Standard E1527-13, was performed for the five adjoining parcels located at the southeast corner of Yucaipa Boulevard and Avenue E in Yucaipa, California (APNs: 0300-191-17, -28, -29, -30, and -31).

Based on historical research and the Property reconnaissance the following recognized environmental condition (REC) was identified at the Property:

1. Possible pesticide and/or herbicide impact to shallow soils from approximately 30 years (1938 to 1968) of agricultural use.

It is the opinion of TRG that shallow soil sampling should be performed throughout the Property to mitigate or confirm the pesticide/herbicide REC.

10.0 PROFESSIONAL CREDENTIALS

All work associated with this Environmental Site Assessment was performed by or under the direct supervision of F. Edward Reynolds, Jr. Mr. Reynolds has worked in the environmental industry for more than 25 years and holds several credentials including those of a Registered Environmental Property Assessor (#963067) and California Registered Civil Engineer (No. 38677). Mr. Reynolds meets the certification, licensing, education, and experience required under EPA's 40 CFR Part 312 for "Environmental Professionals". TRG, established in 1989, provides environmental consulting and contracting services.

Rosanne Fischer has worked in the environmental industry for more than 20 years. Ms. Fischer is a Registered Environmental Property Assessor (REPA No. 419564) and performs numerous

Phase I Environmental Site Assessments each year. Ms. Fischer meets the certification, licensing, education, and experience required under EPA's 40 CFR Part 312 for "Environmental Professionals".

THE REYNOLDS GROUP
a California corporation by:





F. Edward Reynolds, Jr.
California Registered Civil Engineer #38677

Rosanne Fischer, REPA #419564
Project Manager

11.0 REFERENCES

1. Environmental Data Resources, Inc., 6 Armstrong Road, 4th Floor, Shelton, Connecticut.

2. State Water Resources Control Board Geotracker Web Site at http://geotracker.waterboards.ca.gov.

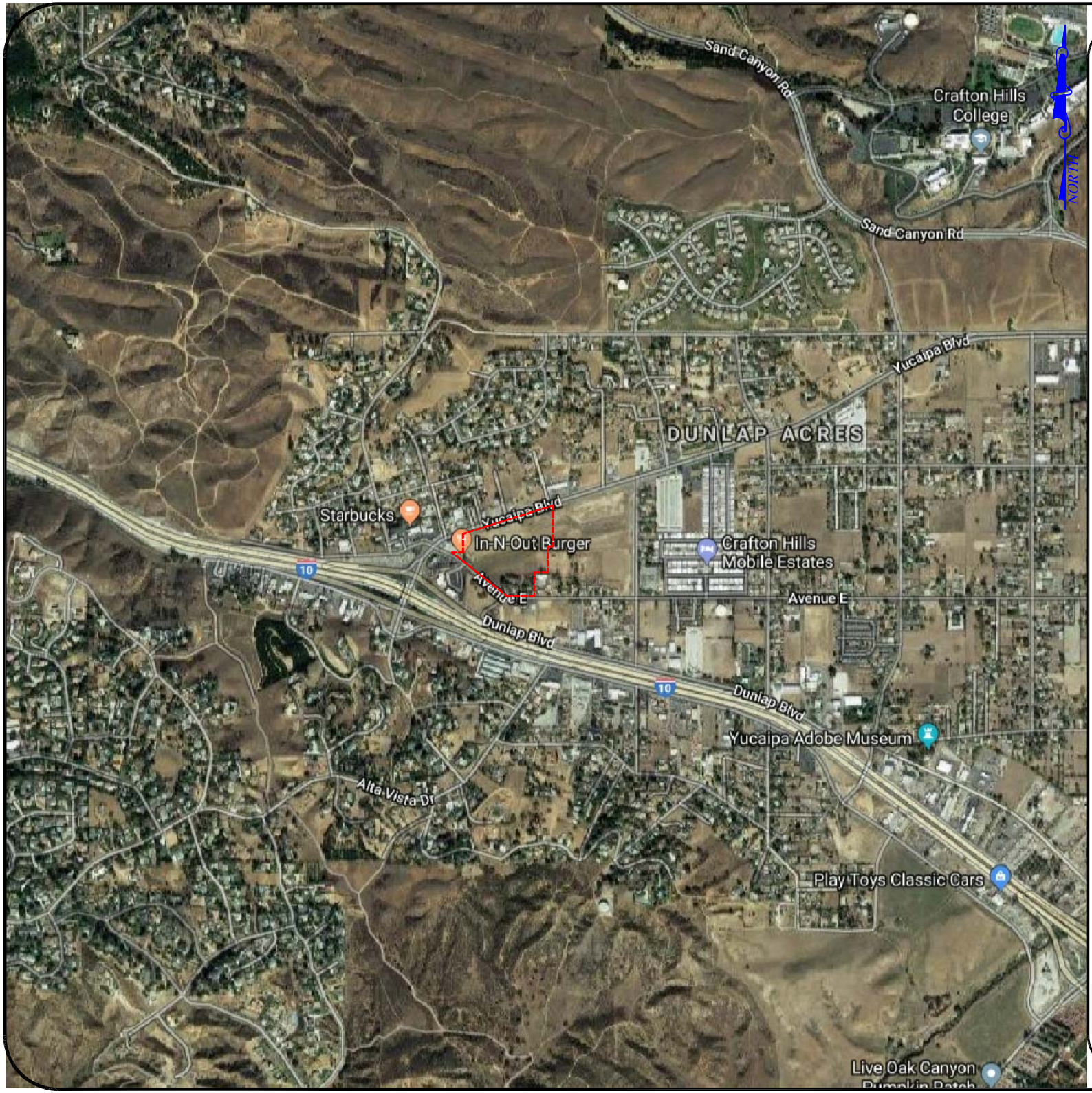
3. Yucaipa Building & Planning Department – 34272 Yucaipa Blvd., Yucaipa, CA.

4. San Bernardino County Department of Environmental Health – 385 N. Arrowhead Avenue, San Bernardino, CA.

5. Santa Ana Regional Water Quality Control Board –filereview8@waterboards.ca.gov

6. Division of Oil, Gas, and Geothermal Resources – www.conservation.ca.gov

7. South Coast Air Quality Management District – publicrecordsrequests@aqmd.gov



General Notes

- - - - - - Approximate Property Boundary

Project Details

Name
12.85 Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460-A

Figure Details

SITE LOCATION MAP

Figure #
Figure 1

Revise Date
July 2018

*Not To Scale

Scale

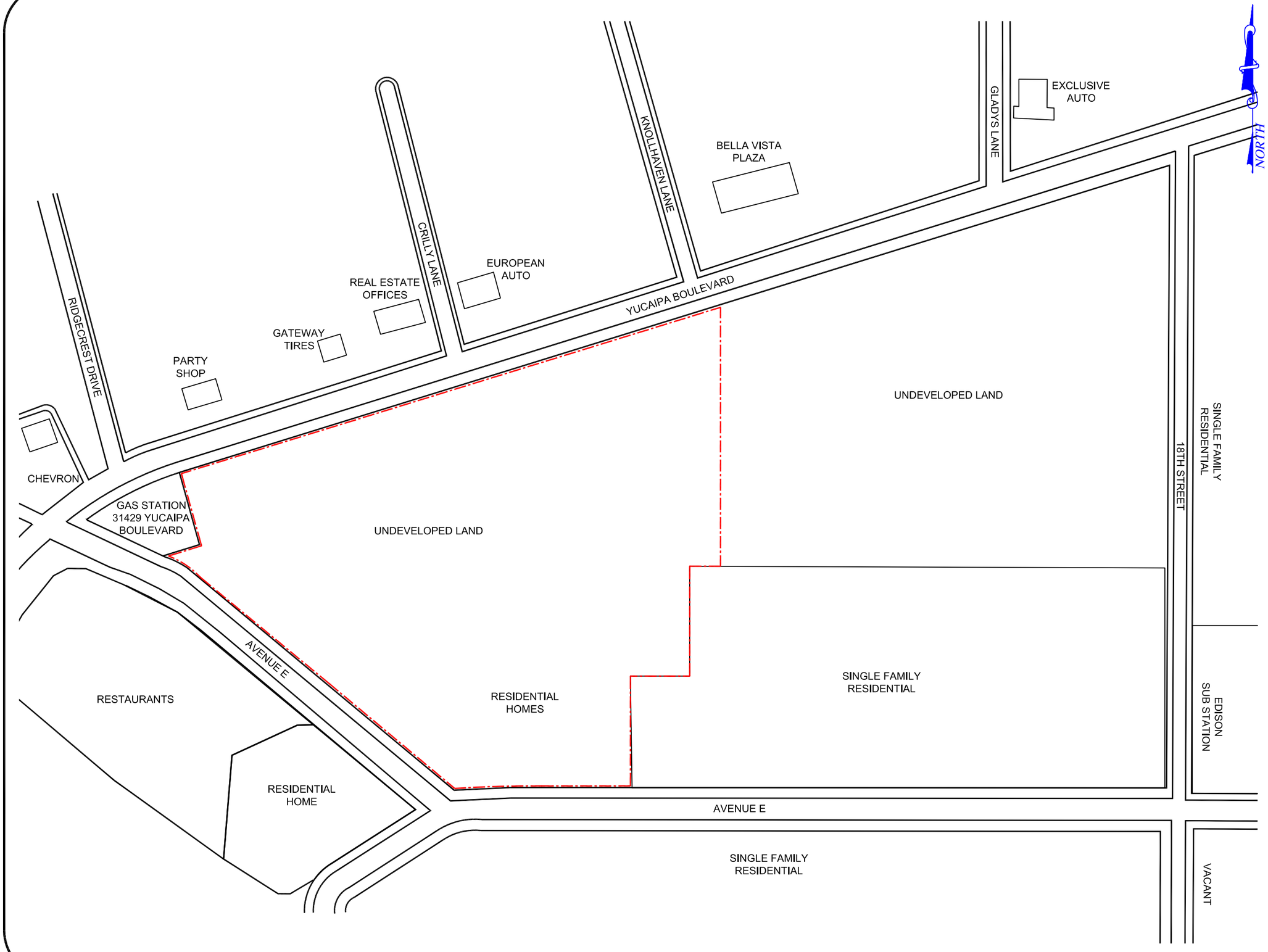
Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES



General Notes

-·-·-· - Property Boundary

Project Details

Name
12.85 Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460-A

Figure Details

PROPERTY AND AREA MAP

Figure #
Figure 2

Revise Date
July 2018

0' 180'
Approximate Scale

Scale
1" = 180'

Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES

23.84 Acres

SEC of Yucaipa Blvd. and Avenue E

Yucaipa, CA 92399

Inquiry Number: 5260584.4

April 16, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FIGURE 3

EDR Historical Topo Map Report

04/16/18

Site Name:

23.84 Acres
SEC of Yucaipa Blvd. and Aver
Yucaipa, CA 92399
EDR Inquiry # 5260584.4

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by The Reynolds Group were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 8460

Project: 8460 PSG Yucaipa

Coordinates:

Latitude:	34.028403 34° 1' 42" North
Longitude:	-117.114556 -117° 6' 52" West
UTM Zone:	Zone 11 North
UTM X Meters:	489424.52
UTM Y Meters:	3765311.17
Elevation:	2091.74' above sea level

Maps Provided:

2012	1899
1996	
1988	
1980	
1973	
1967	
1954	
1901	

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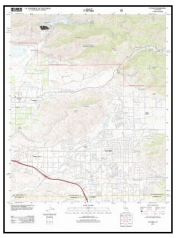
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Redlands
2012
7.5-minute, 24000

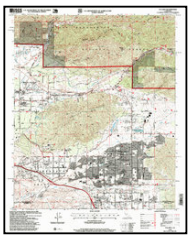


Yucaipa
2012
7.5-minute, 24000

1996 Source Sheets

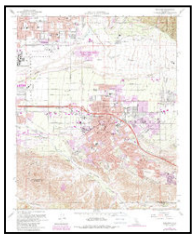


Redlands
1996
7.5-minute, 24000
Aerial Photo Revised 1994

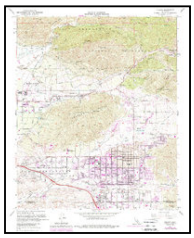


Yucaipa
1996
7.5-minute, 24000
Aerial Photo Revised 1994

1988 Source Sheets



Redlands
1988
7.5-minute, 24000
Aerial Photo Revised 1985



Yucaipa
1988
7.5-minute, 24000
Aerial Photo Revised 1985

1980 Source Sheets



Yucaipa
1980
7.5-minute, 24000
Aerial Photo Revised 1978

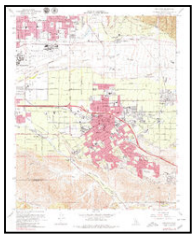


Redlands
1980
7.5-minute, 24000
Aerial Photo Revised 1978

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1973 Source Sheets

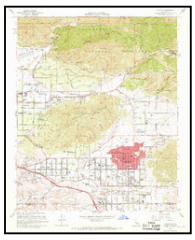


Redlands
1973
7.5-minute, 24000
Aerial Photo Revised 1973

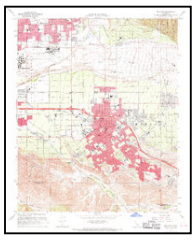


Yucaipa
1973
7.5-minute, 24000
Aerial Photo Revised 1973

1967 Source Sheets

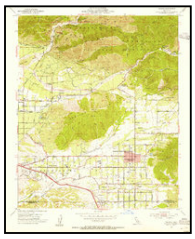


Yucaipa
1967
7.5-minute, 24000
Aerial Photo Revised 1966



Redlands
1967
7.5-minute, 24000
Aerial Photo Revised 1966

1954 Source Sheets



Yucaipa
1954
7.5-minute, 24000
Aerial Photo Revised 1952



Redlands
1954
7.5-minute, 24000
Aerial Photo Revised 1952

1901 Source Sheets



Redlands
1901
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

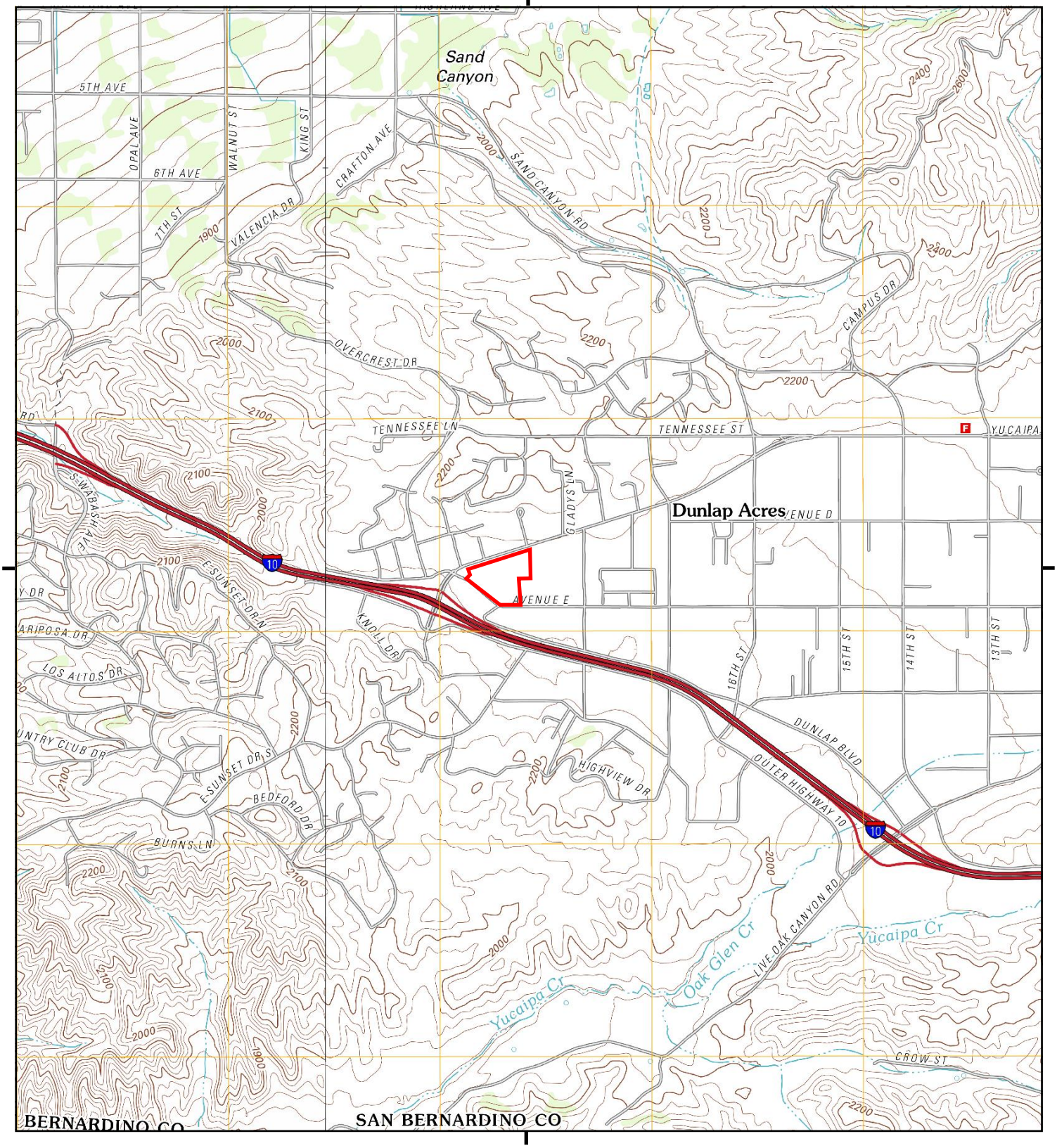
1899 Source Sheets



Redlands
1899
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

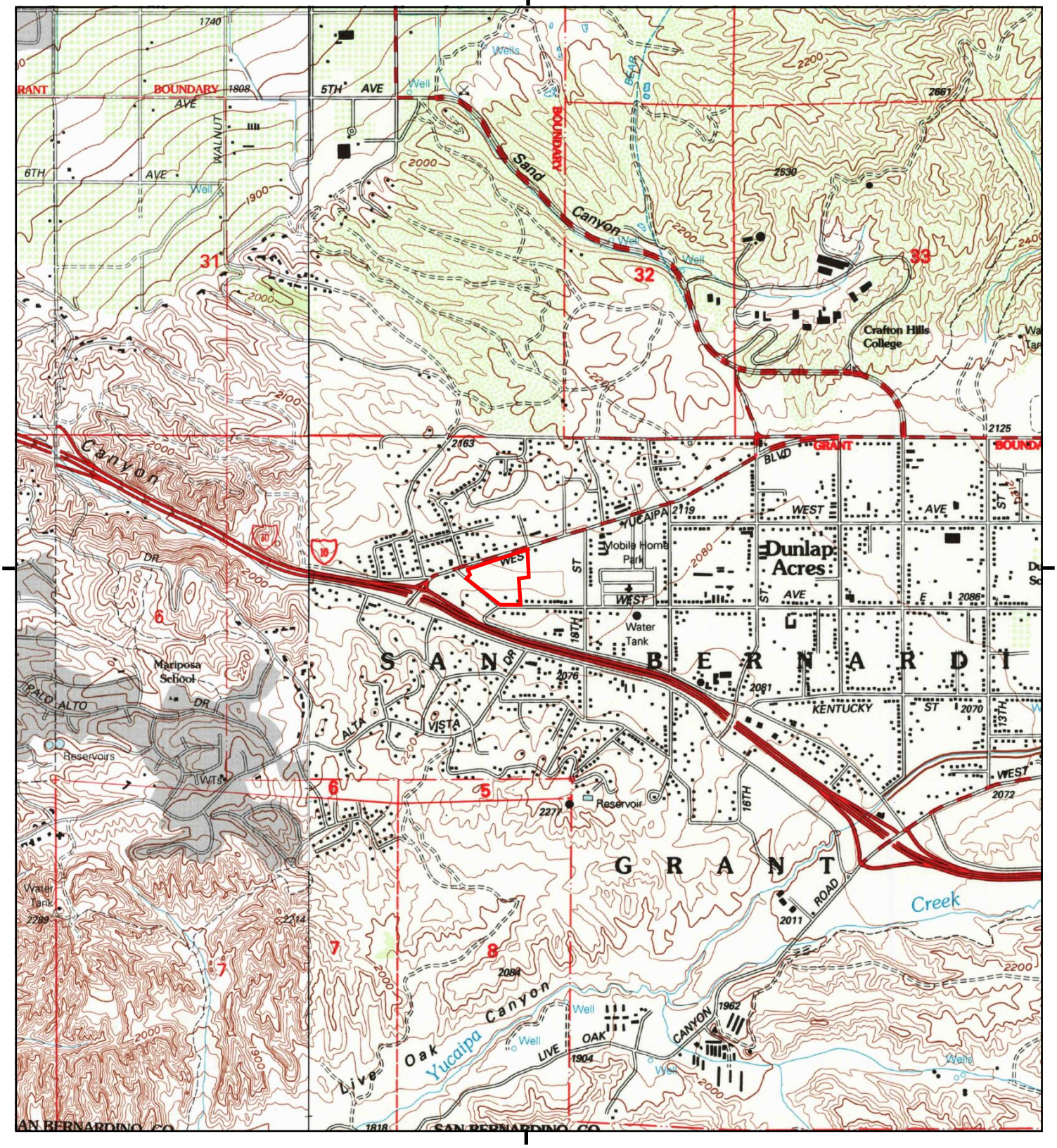
TP, Yucaipa, 2012, 7.5-minute
NW, Redlands, 2012, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1996



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

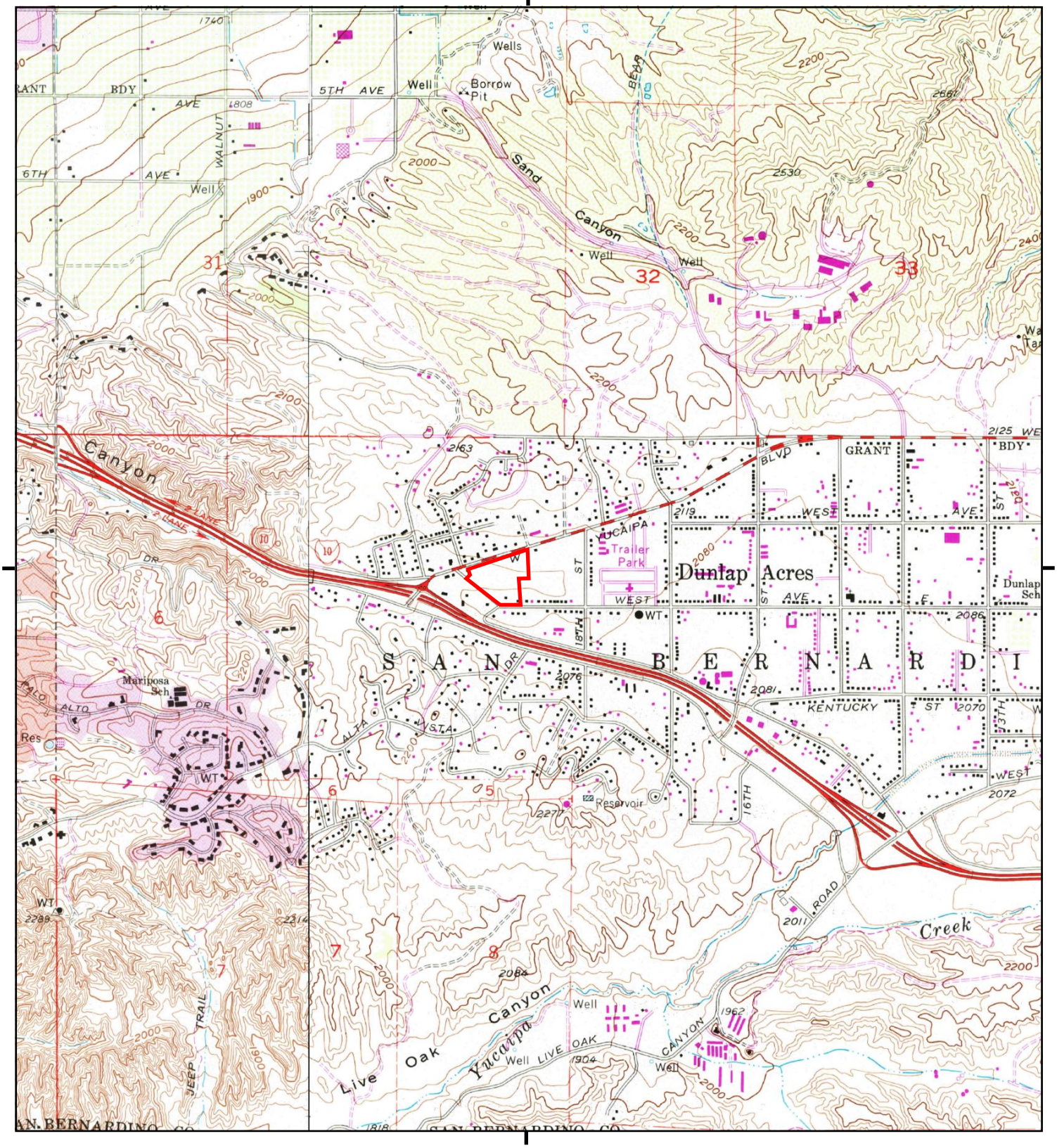
TP, Yucaipa, 1996, 7.5-minute
NW, Redlands, 1996, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1988



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

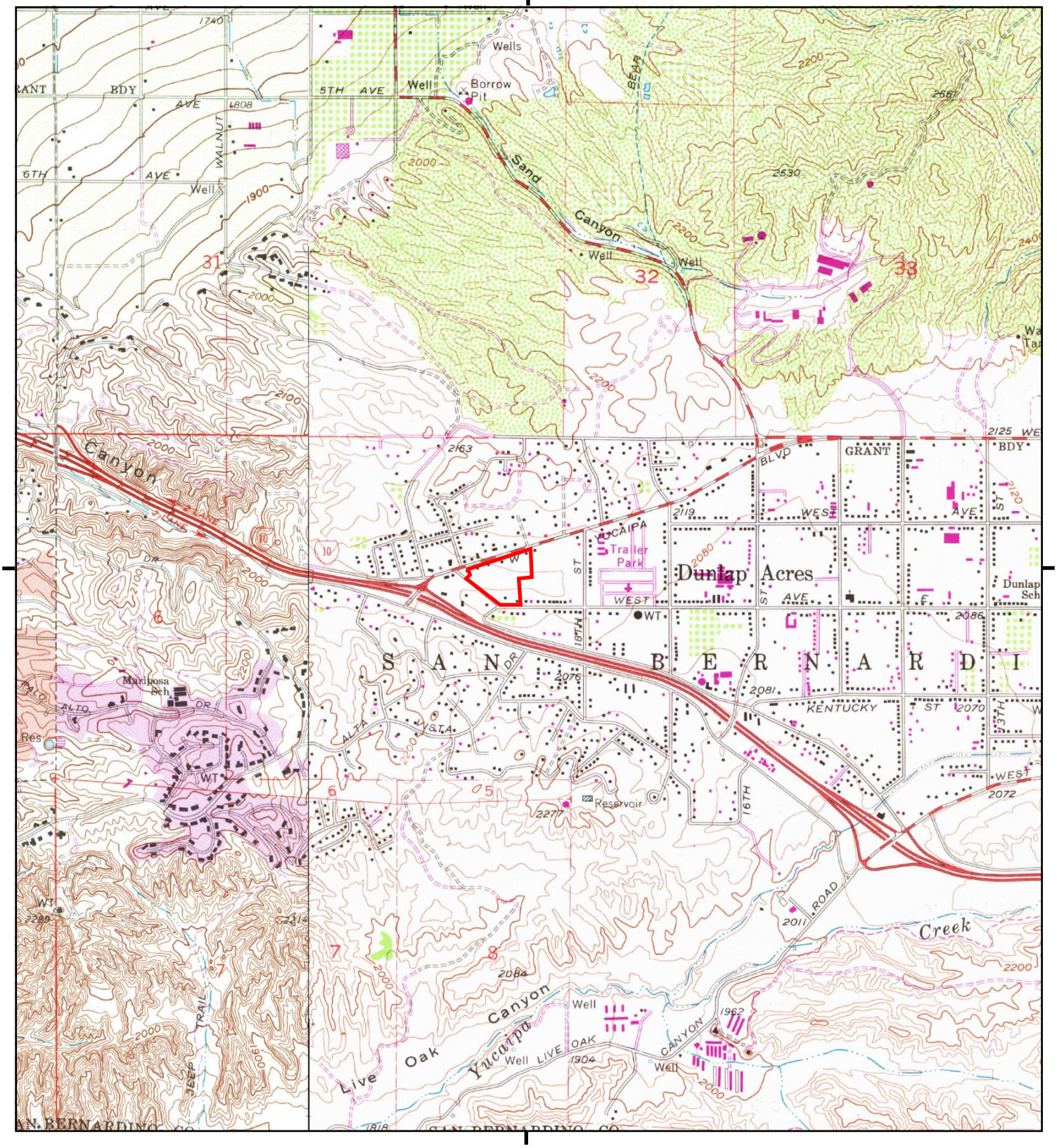
TP, Yucaipa, 1988, 7.5-minute
NW, Redlands, 1988, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1980



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

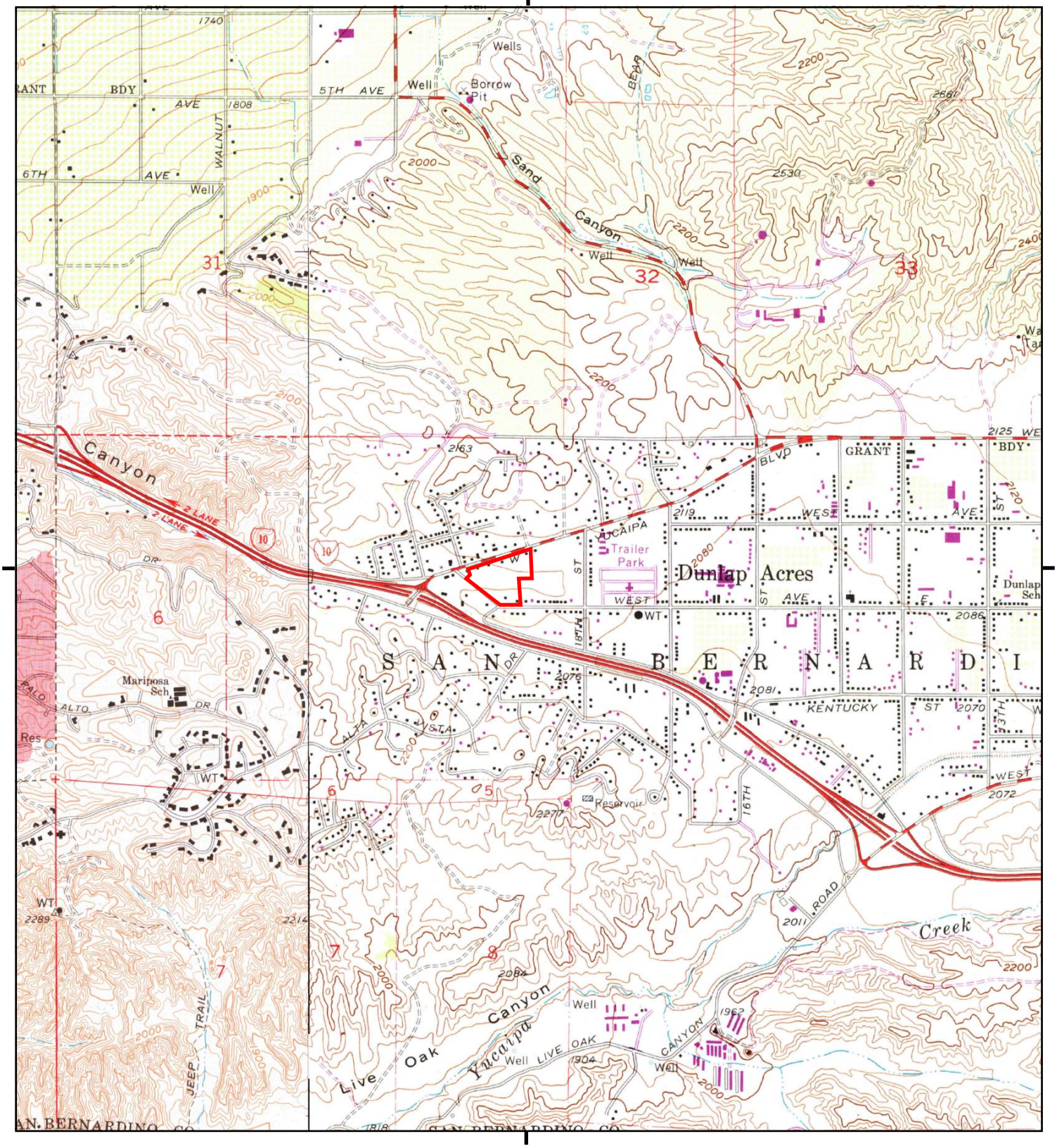
TP, Yucaipa, 1980, 7.5-minute
NW, Redlands, 1980, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1973



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

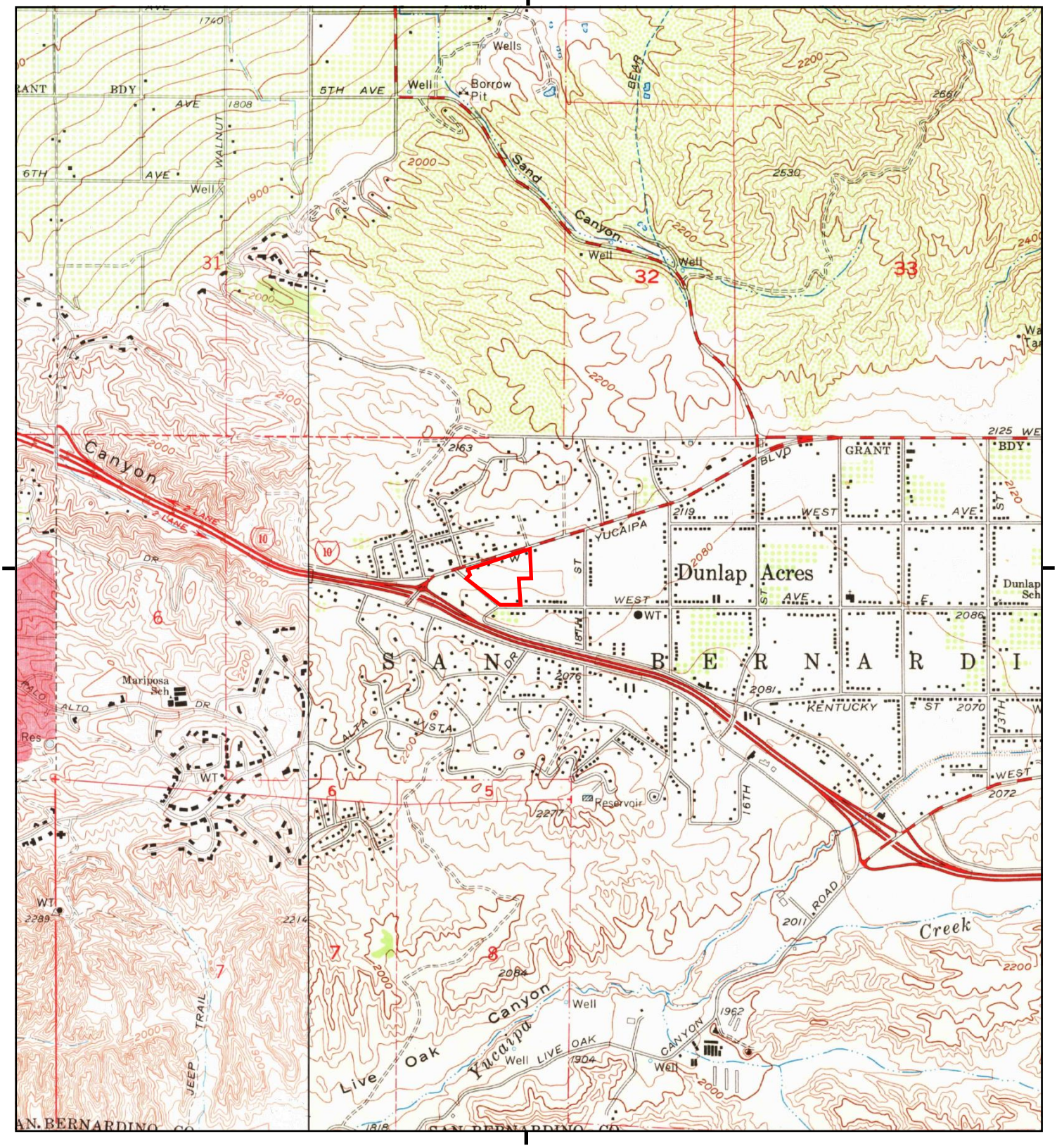
TP, Yucaipa, 1973, 7.5-minute
NW, Redlands, 1973, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1967



This report includes information from the following map sheet(s).

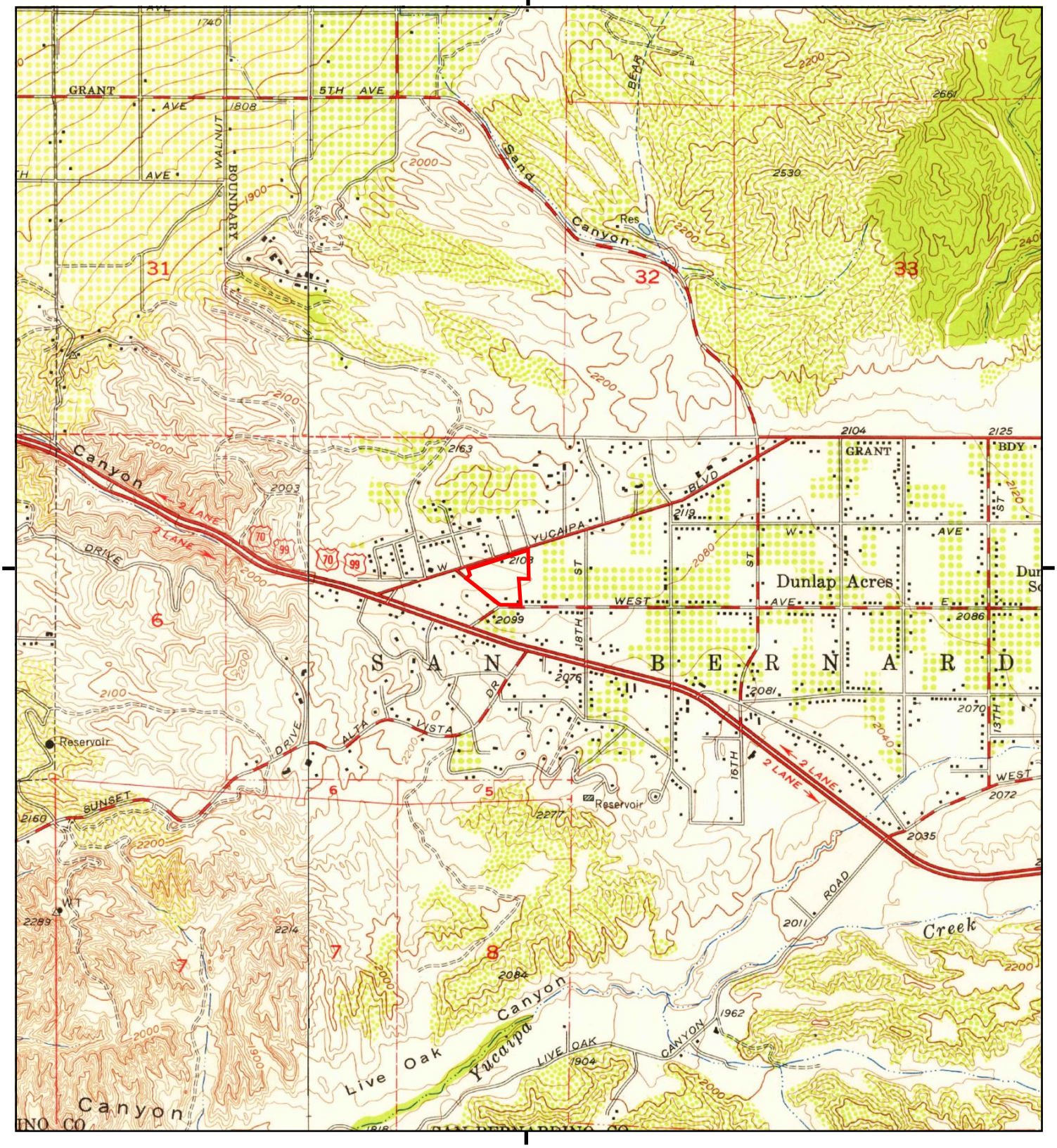
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 1967, 7.5-minute
NW, Redlands, 1967, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

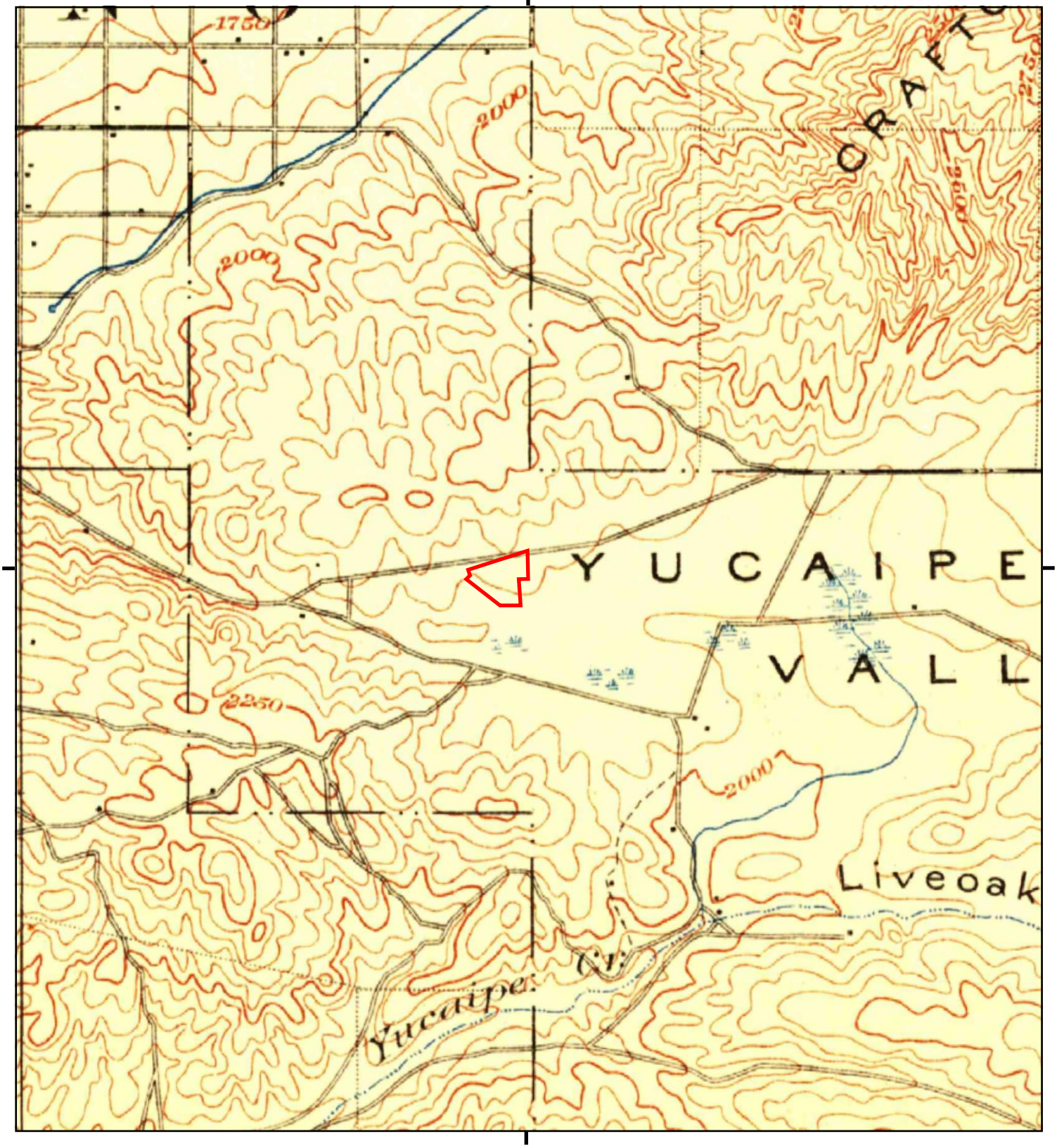
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 1954, 7.5-minute
NW, Redlands, 1954, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

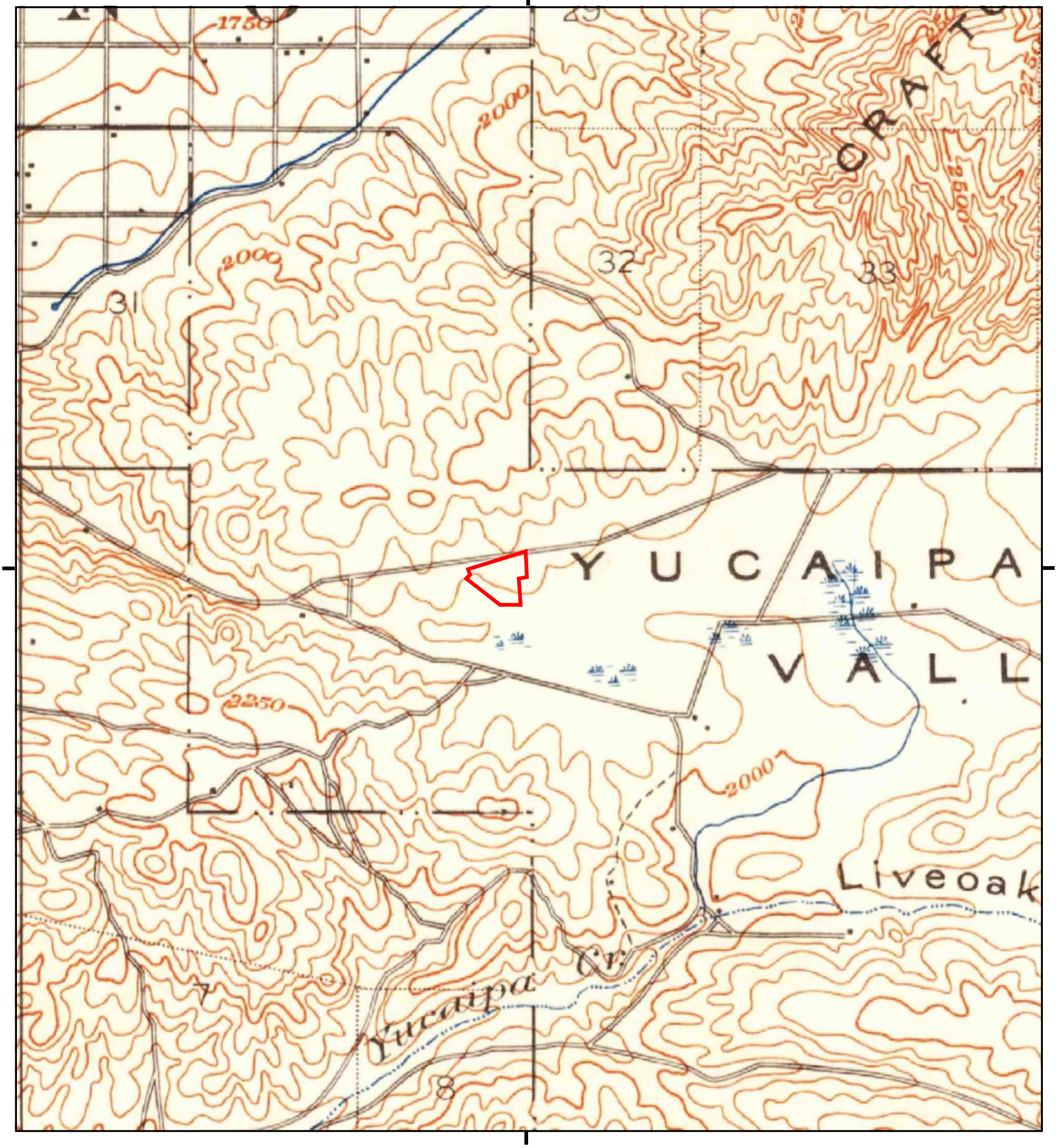
TP, Redlands, 1901, 15-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1899



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Redlands, 1899, 15-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

23.84 Acres

SEC of Yucaipa Blvd. and Avenue E

Yucaipa, CA 92399

Inquiry Number: 5260584.12

April 17, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FIGURE 4

EDR Aerial Photo Decade Package

04/17/18

Site Name:

23.84 Acres
SEC of Yucaipa Blvd. and Aver
Yucaipa, CA 92399
EDR Inquiry # 5260584.12

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: October 02, 1995	USGS/DOQQ
1989	1"=500'	Flight Date: August 14, 1989	USDA
1985	1"=500'	Flight Date: September 02, 1985	USDA
1978	1"=500'	Flight Date: September 20, 1978	USDA
1975	1"=500'	Flight Date: August 01, 1975	USGS
1968	1"=500'	Flight Date: August 11, 1968	USDA
1961	1"=500'	Flight Date: June 14, 1961	USDA
1959	1"=500'	Flight Date: October 16, 1959	USDA
1953	1"=500'	Flight Date: February 22, 1953	USDA
1949	1"=500'	Flight Date: May 23, 1949	USDA
1938	1"=500'	Flight Date: July 04, 1938	USDA

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INQUIRY #: 5260584.12
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 5260584.12
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 5260584.12
YEAR: 2006
= 500'
N
EDR



INQUIRY #: 5260584.12

YEAR: 1995

= 500'

N

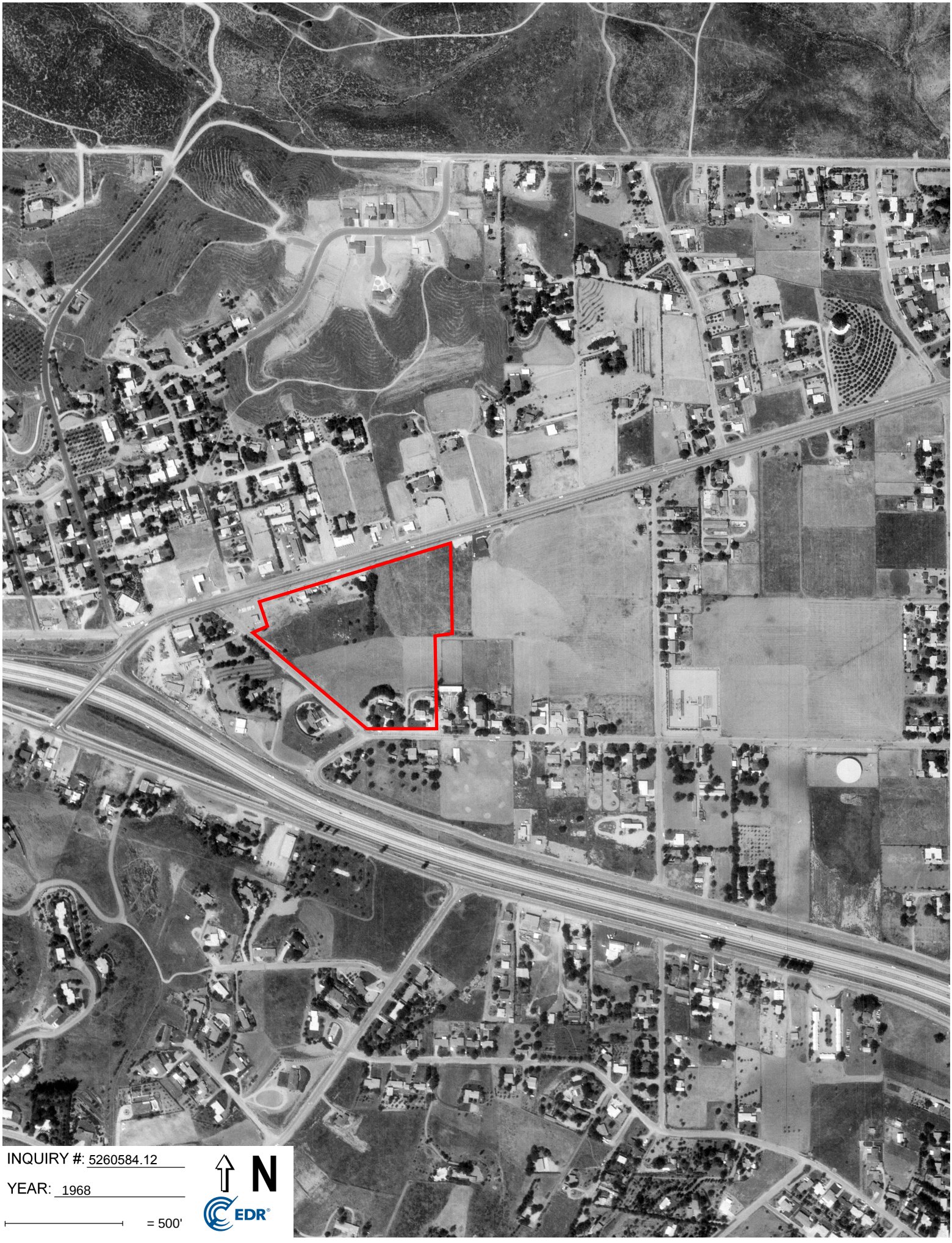
EDR


INQUIRY #: 5260584.12
YEAR: 1989
= 500'
N
EDR


INQUIRY #: 5260584.12
YEAR: 1985
= 500'
N
EDR


INQUIRY #: 5260584.12
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 5260584.12
YEAR: 1975
= 500'
N
EDR



INQUIRY #: 5260584.12

YEAR: 1968

= 500'

N

EDR



INQUIRY #: 5260584.12

YEAR: 1961

= 500'

N

EDR



INQUIRY #: 5260584.12

YEAR: 1959

= 500'

N

EDR



INQUIRY #: 5260584.12

YEAR: 1953

= 500'

N

EDR


INQUIRY #: 5260584.12
YEAR: 1949
= 500'
N
EDR



INQUIRY #: 5260584.12

YEAR: 1938

= 500'

N

EDR

APPENDIX A

PHOTOGRAPHS OF PROPERTY AND VICINITY



1. VIEW OF WEST SIDE PROPERTY BOUNDARY LOOKING NORTH ALONG AVENUE E.



2. NORTHWEST CORNER OF PROPERTY ADJACENT TO GAS STATION.



3. VIEW FROM WEST SIDE OF PROPERTY LOOKING EAST.



4. VIEW FROM SOUTHWEST CORNER OF PROPERTY LOOKING NORTH.



5. VIEW OF PROPERTY FROM SOUTHWEST CORNER LOOKING NORTHEAST.



6. VIEW OF RESIDENTIAL HOME AT SOUTHWEST CORNER OF PROPERTY.



7. VIEW OF SECOND RESIDENTIAL HOME AT SOUTHWEST AREA OF PROPERTY.



8. NORTH BOUNDARY OF PROPERTY NEXT TO YUCAIPA BLVD. SEWER CONSTRUCTION.



9. VIEW FROM NORTHEAST CORNER OF PROPERTY LOOKING SOUTH.



10. VIEW FROM NORTHEAST CORNER OF PROPERTY LOOKING WEST.



11. AUTO REPAIR NORTH OF PROPERTY, NORTH OF YUCAIPA BLVD.



12. ADJACENT NORTH REAL ESTATE OFFICE, NORTH OF YUCAIPA BLVD.



13. ADJACENT NORTH POOL/SPA CONTRACTOR, NORTH OF YUCAIPA BOULEVARD.



14. ADJACENT NORTH PARTY SUPPLY SHOP, NORTH OF YUCAIPA BLVD.



15. ADJACENT NORTH EDISON SUBSTATION, NORTH OF YUCAIPA BLVD.



16. CHEVRON STATION ADJACENT NORTHWEST OF PROPERTY, NORTH OF YUCAIPA BLVD.



17. TYPICAL SINGLE FAMILY RESIDENCE ADJACENT SOUTH OF PROPERTY, SOUTH OF AVENUE E.



18. MOBIL GAS STATION ADJOINING NORTHWEST CORNER OF PROPERTY.



19. RESTAURANTS ADJACENT WEST OF PROPERTY, WEST OF AVENUE E.



20. SINGLE FAMILY HOME ADJACENT WEST-NORTHWEST OF PROPERTY, WEST OF AVENUE E.

APPENDIX B

RESPONSES TO INTERVIEW QUESTIONS

STATER BROS. CURRENT OWNER INTERVIEW QUESTIONS

THE
REYNOLDS GROUP
A California Corporation

SITE ADDRESS: 12.85 Undeveloped Acres, Yucaipa
APNs: 0300-191-17, -28, -29, -30, -31

DATE OF RESPONSE: 5-17-18

RESPONDENT NAME & TITLE: Tom Robinson, Managing Member
VantageOne Real Estate Investments LLC

RESPONDENT SIGNATURE:

~~CURRENT~~ POTENTIAL OWNER PHASE I QUESTIONS (USE ADDITIONAL SHEETS IF NECESSARY TO COMPLETELY ANSWER THE FOLLOWING QUESTIONS:

1. WHO IS THE LEGAL OWNER/ENTITY OF THE PROPERTY? STATER BROS. MARKETS

2. HOW LONG HAVE YOU OWNED THE PROPERTY? IF LESS THAN 5 YEARS, PLEASE PROVIDE PREVIOUS OWNER CONTACT INFORMATION? UNDER CONTRACT TO PURCHASE

3. PLEASE PROVIDE HISTORICAL USES AT THE PROPERTY?
AS FAR AS I'M AWARE VACANT LAND

4. ARE YOU AWARE OF ANY PREVIOUS ENVIRONMENTAL INVESTIGATIONS PERFORMED AT THE PROPERTY? IF SO, PLEASE PROVIDE A COPY OF THE REPORT(S). UNAWARE

5. DO ANY WELLS, UNDERGROUND STORAGE TANKS, CLARIFIERS, OR HYDRAULIC LIFTS EXIST AT THE PROPERTY? ANY CHEMICAL USE? ANY HAZARDOUS DUMPING? UNAWARE OF ANYTHING

6. ARE YOU AWARE OF ANY EXISTING OR HISTORICAL ENVIRONMENTAL HAZARDS AT THE PROPERTY? UNAWARE

7. DO ANY ENVIRONMENTAL LIENS, ENGINEERING CONTROLS OR LAND USE RESTRICTIONS EXIST FOR THE PROPERTY? UNAWARE

8. WHAT IS THE PURPOSE OF HAVING THIS PHASE I PERFORMED? (EX: POTENTIAL SALE, REFINANCE, INTERNAL DUE DILIGENCE ONLY) POTENTIAL PURCHASE

9. IF APPLICABLE, DO YOU BELIEVE THE LISTED SALE PRICE OF THE PROPERTY IS "REASONABLE" AND NOT NOTABLY DISCOUNTED DUE TO POTENTIAL ENVIRONMENTAL ISSUES? YES, REASONABLE

Please e-mail or fax your response to me just as soon as possible and no later than **May 14, 2018**. You may send it to fischer@reynolds-group.com or by fax to (714)730-6476. If you have questions, please feel free in calling me in our offices at (714)730-5397 Ext. 123. Thanks very much!

THE REYNOLDS GROUP
a California corporation by:
Rosanne Fischer, REPA #419564

APPENDIX C

EDR ENVIRONMENTAL RADIUS MAP REPORT

23.84 Acres
SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Inquiry Number: 5260584.2s
April 16, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	107
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-10
Physical Setting Source Map Findings	A-12
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

COORDINATES

Latitude (North):	34.0284030 - 34° 1' 42.25''
Longitude (West):	117.1145560 - 117° 6' 52.40''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	489424.3
UTM Y (Meters):	3765116.8
Elevation:	2092 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5630639 YUCAIPA, CA
Version Date:	2012
Northwest Map:	5630631 REDLANDS, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603, 20140530
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	CIRCLE SERVICE	31491 YUCAIPA VLVD	HIST UST	Higher	31, 0.006, West
A2	CIRCLE SERVICE	31491 YUCAIPA BLVD	UST, SWEEPS UST, HIST UST	Higher	31, 0.006, West
B3	CIRCLE MOBIL	31429 YUCAIPA BLVD	San Bern. Co. Permit	Higher	61, 0.012, West
B4	CIRCLE MOBIL	31429 YUCAIPA BLVD	UST	Higher	61, 0.012, West
A5	GATEWAY TIRE & AUTO	31504 YUCAIPA BLVD	San Bern. Co. Permit	Higher	99, 0.019, WNW
C6	JOES AUTOMATIC TRANS	31710 YUCAIPA BLVD	EDR Hist Auto	Higher	108, 0.020, NE
C7	JOE'S AUTOMATIC TRAN	31710 YUCAIPA	HAZNET, San Bern. Co. Permit	Higher	108, 0.020, NE
C8	EXCLUSIVE AUTO	31710 YUCAIPA BLVD	San Bern. Co. Permit	Higher	108, 0.020, NE
C9	FURNITURE SERVICE	31640 YUCAIPA BLVD	San Bern. Co. Permit	Higher	109, 0.021, NE
10	E & E ORNAMENTAL IRO	31614 YUCAIPA BLVD	San Bern. Co. Permit	Higher	111, 0.021, NNE
A11	YUCAIPA 66 SERVICE	31516 YUCAIPA BLVD	EDR Hist Auto	Higher	114, 0.022, WNW
A12	JOHN LAMASTERS SERVI	31516 YUCAIPA BLVD	HIST UST	Higher	114, 0.022, WNW
A13	EUROPEAN AUTOMOTIVE	31516 YUCAIPA	LUST, SWEEPS UST, HIST CORTESE, San Bern. Co....	Higher	114, 0.022, WNW
A14	JC'S HAWG SHOP	31510 YUCAIPA BLVD	San Bern. Co. Permit	Higher	115, 0.022, WNW
B15	FRONTIER CALIFORNIA,	31432 YUCAIPA BLVD	San Bern. Co. Permit	Higher	116, 0.022, West
B16	BAKER'S DRIVE THRU #	31453 YUCAIPA BLVD	San Bern. Co. Permit	Lower	217, 0.041, WSW
D17	YUCAPIA CLEANERS	31776 YUCAIPA BLVD S	DRYCLEANERS	Higher	251, 0.048, NE
D18	YUCAIPA CLEANERS	31776 YUCAIPA BLVD	San Bern. Co. Permit	Higher	251, 0.048, NE
B19	HERMAN KEITH	31396 YUCAIPA BLVD	EDR Hist Auto	Lower	266, 0.050, West
D20	NASHS CLEANERS	31776 YUCAIPA BLVD S	EDR Hist Cleaner	Higher	268, 0.051, NE
B21	HUGHES CONCRETE PROD	31361 YUCAIPA	SWEEPS UST, HIST UST, EMI	Lower	296, 0.056, West
E22	YUCAIPA CHEVRON	31412 YUCAIPA BLVD	EDR Hist Auto	Higher	300, 0.057, West
E23	99280	31412 YUCAIPA BLVD	HIST UST	Higher	300, 0.057, West
E24	CHEVRON STATION NO 9	31412 YUCAIPA BLVD	RCRA-SQG, FINDS, ECHO	Higher	300, 0.057, West
E25	CHEVRON STATION #992	31412 YUCAIPA BLVD	UST, SWEEPS UST	Higher	300, 0.057, West
E26	CHEVRON STATION #992	31412 YUCAIPA BLVD	HAZNET, San Bern. Co. Permit	Higher	300, 0.057, West
E27	ARCO AM PM	31340 YUCAIPA BLVD	EDR Hist Auto	Lower	317, 0.060, West
E28	ARCO AM/PM	31340 YUCAIPA BLVD	UST	Lower	317, 0.060, West
F29	SCE TENNESSEE SUBSTA	18TH ST & E AVE	San Bern. Co. Permit	Lower	434, 0.082, SE
E30	STEAMERS DRY CLEANER	31364 HAMPTON RD APT	EDR Hist Cleaner	Lower	455, 0.086, West
F31	SCE-TENNESSEE SUBSTA	18TH ST & "E" AVE	AST	Lower	510, 0.097, SE
G32	YUCAIPA GAS MART	31340 HAMPTON RD	San Bern. Co. Permit	Lower	548, 0.104, West
G33	YUCAIPA GAS MART	31340 HAMPTON RD	UST	Lower	548, 0.104, West
H34	VERIZON WIRELESS: YU	31650 DUNLAP BLVD	San Bern. Co. Permit	Lower	602, 0.114, South
35	GK MARKET	31583 OUTER HWY 10	UST	Lower	612, 0.116, SW
H36	AT&T MOBILITY - YUCA	31682 DUNLAP BLVD	HAZNET, San Bern. Co. Permit	Lower	741, 0.140, SSE
37	ROCKY PLAZA MARKET &	31583 OUTER HWY 10 U	San Bern. Co. Permit	Lower	772, 0.146, South
I38	INLAND POWER SWEEPIN	31710 DUNLAP BLVD	RCRA NonGen / NLR, FINDS, ECHO	Lower	951, 0.180, SSE
I39	COLLISION CONCEPT	31710 DUNLAP BLVD	SWEEPS UST, HIST UST, San Bern. Co. Permit	Lower	951, 0.180, SSE

MAPPED SITES SUMMARY

Target Property Address:
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
40	CHAMPIONSHIP AUTOMOT	31763 OUTER HWY 10 S	San Bern. Co. Permit	Lower	959, 0.182, South
41	WESTERN HEIGHTS WATE	31895 AVENUE E	AST, San Bern. Co. Permit	Lower	1106, 0.209, ESE
42	ALAN GRUBEL'S AUTOMO	31285 S OUTER HWY 10	San Bern. Co. Permit	Lower	1182, 0.224, WSW
43	CIRCLE K #0324	31933 HIGHWAY I-10,	LUST, HIST CORTESE	Higher	2419, 0.458, SE
J44	SORENSON ENGINEERING	32032 DUNLAP BLVD	ENVIROSTOR, LUST, SLIC, AST, SWEEPS UST, HIST UST,...	Higher	2494, 0.472, ESE
J45	SORENSON ENGINEERING	32032 DUNLAP BOULEVA	RCRA-LQG, LUST, SLIC, ICIS, US AIRS, FINDS, ECHO,...	Higher	2494, 0.472, ESE
J46	GW INVESTIGATION	32032 DUNLOP BOULEVA	ENF, HIST CORTESE	Higher	2599, 0.492, SE
47	JORCO CHEMICAL COMPA	32185 EAST OUTER HIG	ENVIROSTOR, VCP	Lower	3702, 0.701, SE

EXECUTIVE SUMMARY

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 FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---------- Waste Management Unit Database
SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs
Toxic Pits ---------- Toxic Pits Cleanup Act Sites

US CDL ..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST ..... Facility Inventory Database

Local Land Records

LIENS ..... Environmental Liens Listing
LIENS 2 ..... CERCLA Lien Information
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
ABANDONED MINES ..... Abandoned Mines
FINDS ..... Facility Index System/Facility Registry System

UXO ---------- Unexploded Ordnance Sites
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
ECHO ---------- Enforcement & Compliance History Information
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing
CA BOND EXP. PLAN ---------- Bond Expenditure Plan
CUPA Listings ---------- CUPA Resources List
EMI ---------- Emissions Inventory Data
ENF ---------- Enforcement Action Listing
Financial Assurance ---------- Financial Assurance Information Listing
HAZNET ---------- Facility and Manifest Data
ICE ---------- ICE
HWP ---------- EnviroStor Permitted Facilities Listing
HWT ---------- Registered Hazardous Waste Transporter Database
MINES ---------- Mines Site Location Listing
MWMP ---------- Medical Waste Management Program Listing
NPDES ---------- NPDES Permits Listing
PEST LIC ---------- Pesticide Regulation Licenses Listing
PROC ---------- Certified Processors Database
Notify 65 ---------- Proposition 65 Records
UIC ---------- UIC Listing
WASTEWATER PITS ---------- Oil Wastewater Pits Listing
WDS ---------- Waste Discharge System
WIP ---------- Well Investigation Program Case List

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

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.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/11/2017 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
CHEVRON STATION NO 9	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E24***	***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 identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/30/2018 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SORENSON ENGINEERING	***32032 DUNLAP BLVD***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J44***	***46***
Facility Id: 71002160				
Status: Inactive - Needs Evaluation				

Lower Elevation	Address	Direction / Distance	Map ID	Page
JORCO CHEMICAL COMPA	***32185 EAST OUTER HIG***	***SE 1/2 - 1 (0.701 mi.)***	***47***	***102***
Facility Id: 60000998				
Status: No Further Action				

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 4 LUST sites within

approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EUROPEAN AUTOMOTIVE	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Database: LUST, Date of Government Version: 03/12/2018 Status: Completed - Case Closed Facility Status: Case Closed Global Id: T0607100415 Global ID: T0607100415				
CIRCLE K #0324	***31933 HIGHWAY I-10,***	***SE 1/4 - 1/2 (0.458 mi.)***	***43***	***44***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Database: LUST, Date of Government Version: 03/12/2018 Status: Completed - Case Closed Facility Status: Case Closed Global Id: T0607100147 Global ID: T0607100147				
SORENSON ENGINEERING	***32032 DUNLAP BLVD***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J44***	***46***
Database: LUST, Date of Government Version: 03/12/2018 Status: Completed - Case Closed Global Id: T0607199171				
SORENSON ENGINEERING	***32032 DUNLAP BOULEVA***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J45***	***65***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Facility Status: Case Closed Global ID: T0607199171				

SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the SLIC list, as provided by EDR, has revealed that there are 2 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SORENSON ENGINEERING	***32032 DUNLAP BLVD***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J44***	***46***
Database: SLIC, Date of Government Version: 03/12/2018 Facility Status: Open - Assessment & Interim Remedial Action Global Id: SL0607135888				
SORENSON ENGINEERING	***32032 DUNLAP BOULEVA***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J45***	***65***
Database: SLIC REG 8, Date of Government Version: 04/03/2008 Facility Status: Additional Characterization Underway				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 6 UST sites within

approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE SERVICE	***31491 YUCAIPA BLVD***	***W 0 - 1/8 (0.006 mi.)***	***A2***	***8***
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 87012775				
CIRCLE MOBIL	31429 YUCAIPA BLVD	W 0 - 1/8 (0.012 mi.)	B4	11
Database: UST, Date of Government Version: 03/12/2018 Facility Id: FA0006989				
CHEVRON STATION #992	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E25***	***29***
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 86009247 Facility Id: FA0001907				

Lower Elevation	Address	Direction / Distance	Map ID	Page
ARCO AM/PM	31340 YUCAIPA BLVD	W 0 - 1/8 (0.060 mi.)	E28	33
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 88016863				
YUCAIPA GAS MART	31340 HAMPTON RD	W 0 - 1/8 (0.104 mi.)	G33	35
Database: UST, Date of Government Version: 03/12/2018 Facility Id: FA0001039				
GK MARKET	31583 OUTER HWY 10	SW 0 - 1/8 (0.116 mi.)	35	36
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 89017447				

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, and dated 07/06/2016 has revealed that there are 2 AST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SCE-TENNESSEE SUBSTA	18TH ST & "E" AVE	SE 0 - 1/8 (0.097 mi.)	F31	34
WESTERN HEIGHTS WATE	***31895 AVENUE E***	***ESE 1/8 - 1/4 (0.209 mi.)***	***41***	***42***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE SERVICE	***31491 YUCAIPA BLVD***	***W 0 - 1/8 (0.006 mi.)***	***A2***	***8***

Status: A
Comp Number: 57285

EUROPEAN AUTOMOTIVE Status: A Tank Status: A Comp Number: 28083	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
CHEVRON STATION #992 Status: A Tank Status: A Comp Number: 63200	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E25***	***29***

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUGHES CONCRETE PROD Status: A Tank Status: A Comp Number: 2777	***31361 YUCAIPA***	***W 0 - 1/8 (0.056 mi.)***	***B21***	***24***
COLLISION CONCEPT Status: A Comp Number: 10718	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I39***	***40***

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 6 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE SERVICE	31491 YUCAIPA VLVD	W 0 - 1/8 (0.006 mi.)	A1	8
CIRCLE SERVICE Facility Id: 00000057285	***31491 YUCAIPA BLVD***	***W 0 - 1/8 (0.006 mi.)***	***A2***	***8***
JOHN LAMASTERS SERVI Facility Id: 00000028083	31516 YUCAIPA BLVD	WNW 0 - 1/8 (0.022 mi.)	A12	17
99280 Facility Id: 00000063200	31412 YUCAIPA BLVD	W 0 - 1/8 (0.057 mi.)	E23	27

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUGHES CONCRETE PROD Facility Id: 00000002777	***31361 YUCAIPA***	***W 0 - 1/8 (0.056 mi.)***	***B21***	***24***
COLLISION CONCEPT Facility Id: 00000010718	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I39***	***40***

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 12/11/2017 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
INLAND POWER SWEEPIN	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I38***	***38***

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 (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 02/08/2018 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SORENSON ENGINEERING	***32032 DUNLAP BOULEVA***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J45***	***65***

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 12/01/2017 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
YUCAPIA CLEANERS EPA Id: CAL000272457	31776 YUCAIPA BLVD S	NE 0 - 1/8 (0.048 mi.)	D17	23

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 3 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EUROPEAN AUTOMOTIVE Reg Id: 083602839T	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
CIRCLE K #0324 Reg Id: 083601278T	***31933 HIGHWAY I-10,***	***SE 1/4 - 1/2 (0.458 mi.)***	***43***	***44***
GW INVESTIGATION Reg Id: 8 362307N01	***32032 DUNLOP BOULEVA***	***SE 1/4 - 1/2 (0.492 mi.)***	***J46***	***100***

EXECUTIVE SUMMARY

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 11/30/2017 has revealed that there are 21 San Bern. Co. Permit sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE MOBIL Facility Status: ACTIVE Facility Id: FA0006989	31429 YUCAIPA BLVD	W 0 - 1/8 (0.012 mi.)	B3	11
GATEWAY TIRE & AUTO Facility Status: ACTIVE Facility Id: FA0003430	31504 YUCAIPA BLVD	WNW 0 - 1/8 (0.019 mi.)	A5	12
JOE'S AUTOMATIC TRAN Facility Status: ACTIVE Facility Id: FA0015626	***31710 YUCAIPA***	***NE 0 - 1/8 (0.020 mi.)***	***C7***	***13***
EXCLUSIVE AUTO Facility Status: INACTIVE Facility Id: FA0004148	31710 YUCAIPA BLVD	NE 0 - 1/8 (0.020 mi.)	C8	15
FURNITURE SERVICE Facility Status: INACTIVE Facility Id: FA0003359	31640 YUCAIPA BLVD	NE 0 - 1/8 (0.021 mi.)	C9	15
E & E ORNAMENTAL IRO Facility Status: INACTIVE Facility Id: FA0002817	31614 YUCAIPA BLVD	NNE 0 - 1/8 (0.021 mi.)	10	16
EUROPEAN AUTOMOTIVE Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Id: FA0002951	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
JC'S HAWG SHOP Facility Status: INACTIVE Facility Id: FA0004105	31510 YUCAIPA BLVD	WNW 0 - 1/8 (0.022 mi.)	A14	22
FRONTIER CALIFORNIA, Facility Status: ACTIVE Facility Id: FA0007098	31432 YUCAIPA BLVD	W 0 - 1/8 (0.022 mi.)	B15	22
YUCAIPA CLEANERS Facility Status: INACTIVE Facility Id: FA0007883	31776 YUCAIPA BLVD	NE 0 - 1/8 (0.048 mi.)	D18	23
CHEVRON STATION #992 Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0001907	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E26***	***31***

Lower Elevation	Address	Direction / Distance	Map ID	Page
BAKER'S DRIVE THRU # Facility Status: INACTIVE Facility Id: FA0012313	31453 YUCAIPA BLVD	WSW 0 - 1/8 (0.041 mi.)	B16	23
SCE TENNESSEE SUBSTA Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0000279	18TH ST & E AVE	SE 0 - 1/8 (0.082 mi.)	F29	33
YUCAIPA GAS MART	31340 HAMPTON RD	W 0 - 1/8 (0.104 mi.)	G32	35

Facility Status: ACTIVE Facility Id: FA0001039				
VERIZON WIRELESS: YU Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0000749 Facility Id: FA0013929	31650 DUNLAP BLVD	S 0 - 1/8 (0.114 mi.)	H34	36
AT&T MOBILITY - YUCA Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0004342 Facility Id: FA0001677	***31682 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.140 mi.)***	***H36***	***36***
ROCKY PLAZA MARKET & Facility Status: INACTIVE Facility Id: FA0003472	31583 OUTER HWY 10 U	S 1/8 - 1/4 (0.146 mi.)	37	38
COLLISION CONCEPT Facility Status: INACTIVE Facility Id: FA0002422	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I39***	***40***
CHAMPIONSHIP AUTOMOT Facility Status: INACTIVE Facility Id: FA0001852	31763 OUTER HWY 10 S	S 1/8 - 1/4 (0.182 mi.)	40	41
WESTERN HEIGHTS WATE Facility Status: ACTIVE Facility Id: FA0007908	***31895 AVENUE E***	***ESE 1/8 - 1/4 (0.209 mi.)***	***41***	***42***
ALAN GRUBEL'S AUTOMO Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Id: FA0000797	31285 S OUTER HWY 10	WSW 1/8 - 1/4 (0.224 mi.)	42	43

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 5 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JOES AUTOMATIC TRANS	31710 YUCAIPA BLVD	NE 0 - 1/8 (0.020 mi.)	C6	12
YUCAIPA 66 SERVICE	31516 YUCAIPA BLVD	WNW 0 - 1/8 (0.022 mi.)	A11	16
YUCAIPA CHEVRON	31412 YUCAIPA BLVD	W 0 - 1/8 (0.057 mi.)	E22	26

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
HERMAN KEITH	31396 YUCAIPA BLVD	W 0 - 1/8 (0.050 mi.)	B19	24
ARCO AM PM	31340 YUCAIPA BLVD	W 0 - 1/8 (0.060 mi.)	E27	32

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 2 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NASHS CLEANERS	31776 YUCAIPA BLVD S	NE 0 - 1/8 (0.051 mi.)	D20	24

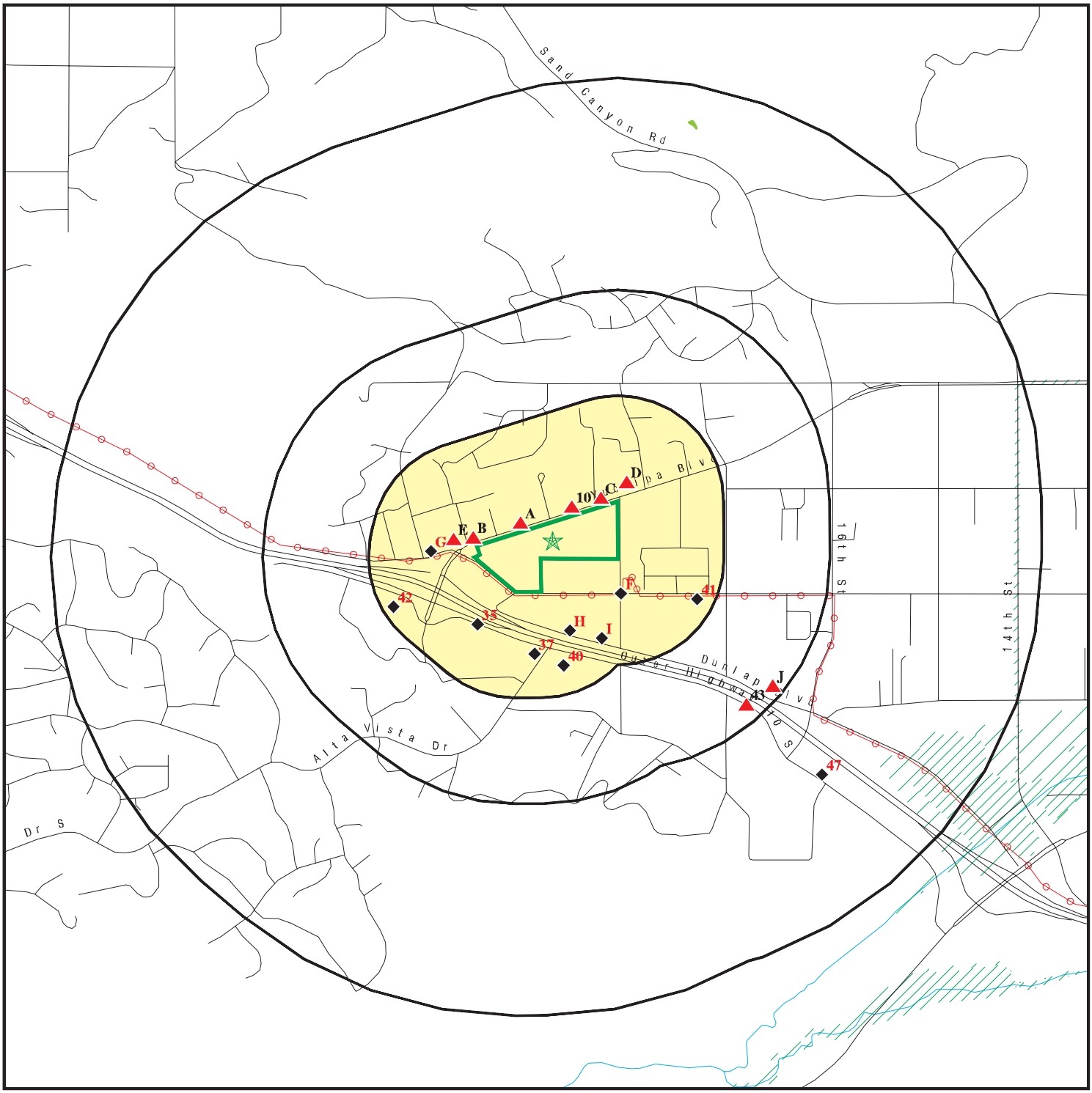
Lower Elevation	Address	Direction / Distance	Map ID	Page
STEAMERS DRY CLEANER	31364 HAMPTON RD APT	W 0 - 1/8 (0.086 mi.)	E30	34

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
METH-LAB YUCAIPA	SEMS-ARCHIVE
EDISON/REDLANDS MGP	EDR MGP

OVERVIEW MAP - 5260584.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 23.84 Acres	CLIENT: The Reynolds Group
ADDRESS: SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT: Rosanne Fischer INQUIRY #: 5260584.2s
LAT/LONG: 34.028403 / 117.114556	DATE: April 16, 2018 4:12 pm

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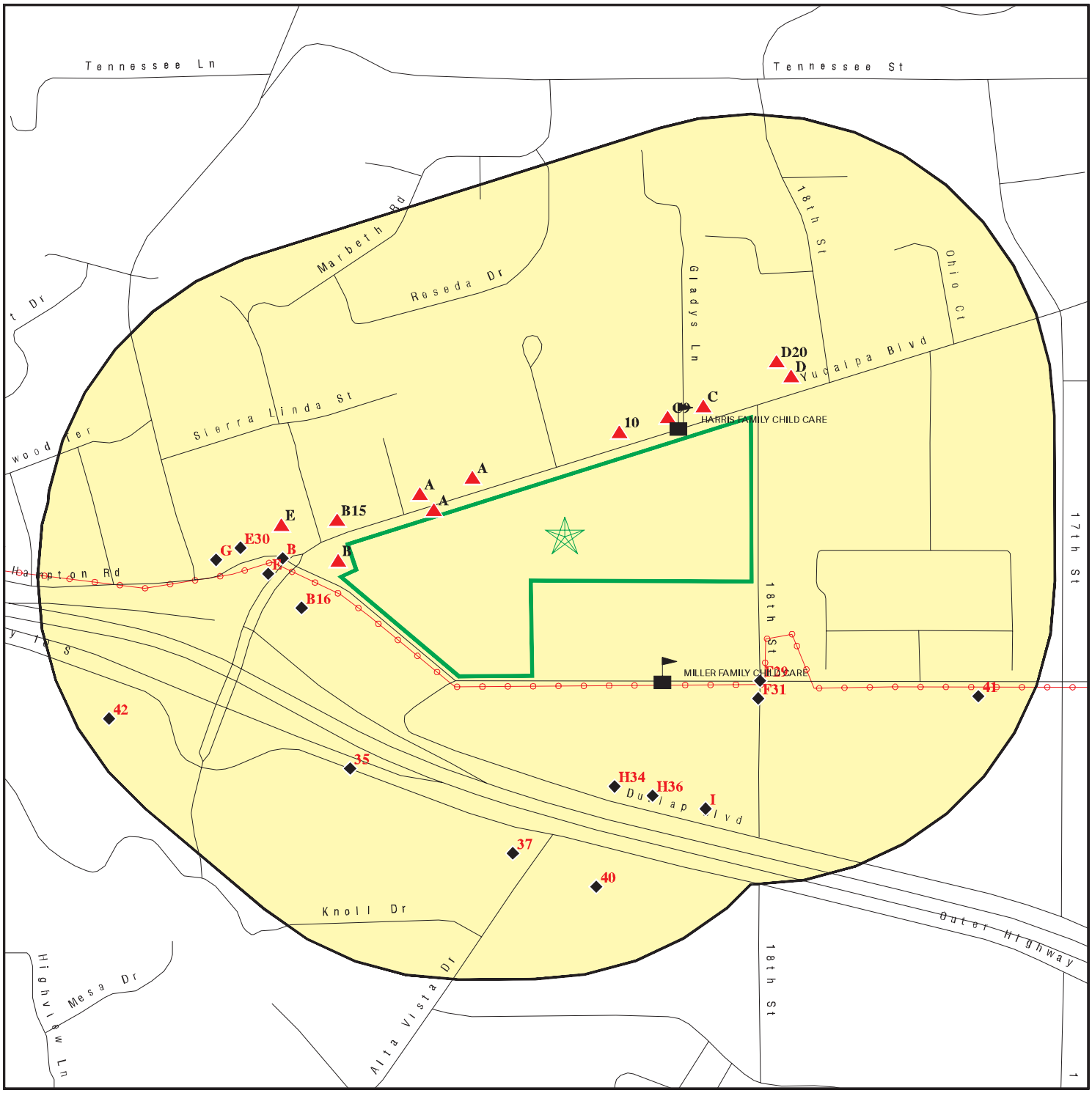
DETAIL MAP - 5260584.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 23.84 Acres	CLIENT: The Reynolds Group
ADDRESS: SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT: Rosanne Fischer
LAT/LONG: 34.028403 / 117.114556	INQUIRY #: 5260584.2s DATE: April 16, 2018 4:12 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		1	0	NR	NR	NR	1
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	1	1	NR	2
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	0	3	NR	NR	4

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		0	0	2	NR	NR	2
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		6	0	NR	NR	NR	6
AST	0.250		1	1	NR	NR	NR	2
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		4	1	NR	NR	NR	5
HIST UST	0.250		5	1	NR	NR	NR	6
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	1	NR	NR	1
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		1	0	NR	NR	NR	1
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	0	2	NR	NR	3
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
San Bern. Co. Permit	0.250		15	6	NR	NR	NR	21
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		5	NR	NR	NR	NR	5
EDR Hist Cleaner	0.125		2	NR	NR	NR	NR	2
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	42	10	9	1	0	62

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **CIRCLE SERVICE** **HIST UST** **S118408681**
West **31491 YUCAIPA VLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.006 mi.
31 ft. **Site 1 of 7 in cluster A**

Relative:
Higher

Actual:
2107 ft.

HIST UST:

File Number:	00029C23
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029C23.pdf
Region:	Not reported
Facility ID:	Not reported
Facility Type:	Not reported
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

A2 **CIRCLE SERVICE** **UST** **U001575866**
West **31491 YUCAIPA BLVD** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **HIST UST**
0.006 mi.
31 ft. **Site 2 of 7 in cluster A**

Relative:
Higher

Actual:
2107 ft.

UST:

Facility ID:	87012775
Permitting Agency:	SAN BERNARDINO COUNTY
Latitude:	34.02874
Longitude:	-117.11643

SWEEPS UST:

Status:	Active
Comp Number:	57285
Number:	9
Board Of Equalization:	44-021251
Referral Date:	07-28-92
Action Date:	06-29-94
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported

CIRCLE SERVICE (Continued) **U001575866**

Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000001
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 4

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000002
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000003
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251

CIRCLE SERVICE (Continued) **U001575866**

Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	36-000-057285-000004
Tank Status:	Not reported
Capacity:	500
Active Date:	Not reported
Tank Use:	OIL
STG:	WASTE
Content:	WASTE OIL
Number Of Tanks:	Not reported

HIST UST:

File Number:	Not reported
URL:	Not reported
Region:	STATE
Facility ID:	00000057285
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	8184427956
Owner Name:	CIRCLE "B" INDUSTRIES INC.
Owner Address:	P.O. BOX 519
Owner City,St,Zip:	TEMPLE CITY, CA 91780
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	004
Container Num:	4
Year Installed:	Not reported

CIRCLE SERVICE (Continued) **U001575866**

Tank Capacity:	00000500
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test

B3 **CIRCLE MOBIL** **San Bern. Co. Permit** **S105974516**
West **31429 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.012 mi.
61 ft. **Site 1 of 6 in cluster B**

Relative: **Higher**

Actual: **2093 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0011371
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0011372
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0029702
Permit Category:	WASTE INCIDENTAL UST OPERATION ONLY
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0003195
Permit Category:	HAZMAT HANDLER - UST ONLY
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

B4 **CIRCLE MOBIL** **UST** **U004263973**
West **31429 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.012 mi.
61 ft. **Site 2 of 6 in cluster B**

Relative: **Higher**

Actual: **2093 ft.**

UST:

Facility ID:	FA0006989
Permitting Agency:	San Bernardino County Fire Department
Latitude:	34.028099
Longitude:	-117.117821

A5 **GATEWAY TIRE & AUTO SVC** **San Bern. Co. Permit** **S104766482**
WNW **31504 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.019 mi.
99 ft. **Site 3 of 7 in cluster A**

Relative:
Higher

Actual:
2108 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0003430
Owner:	CARDENAS, ARNULFO
Permit Number:	PT0006411
Permit Category:	SMALL QUANTITY GENERATOR
Facility Status:	ACTIVE
Expiration Date:	11/30/2018

Region:	SAN BERNARDINO
Facility ID:	FA0003430
Owner:	CARDENAS, ARNULFO
Permit Number:	PT0006412
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status:	ACTIVE
Expiration Date:	11/30/2018

C6 **JOES AUTOMATIC TRANSM SVC** **EDR Hist Auto** **1020592944**
NE **31710 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.020 mi.
108 ft. **Site 1 of 4 in cluster C**

Relative:
Higher

Actual:
2126 ft.

EDR Hist Auto

Year:	Name:	Type:
1982	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1983	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1985	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1986	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1987	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1988	JOES AUTOMATIC TRANSM SVC	Automotive Repair Shops, NEC
1989	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1990	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1991	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1992	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1993	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1994	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1995	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1996	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1997	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1998	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1999	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2000	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2001	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2002	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2003	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2004	EXCLUSIVE AUTO	General Automotive Repair Shops
2005	EXCLUSIVE AUTO	General Automotive Repair Shops
2006	EXCLUSIVE AUTO	General Automotive Repair Shops
2007	EXCLUSIVE AUTO	General Automotive Repair Shops
2008	EXCLUSIVE AUTO	General Automotive Repair Shops
2009	EXCLUSIVE AUTO	General Automotive Repair Shops
2010	EXCLUSIVE AUTO	General Automotive Repair Shops

JOES AUTOMATIC TRANSM SVC (Continued) **1020592944**

2011	EXCLUSIVE AUTO	General Automotive Repair Shops
2012	EXCLUSIVE AUTO	General Automotive Repair Shops
2013	EXCLUSIVE AUTO	General Automotive Repair Shops
2014	EXCLUSIVE AUTO	General Automotive Repair Shops

C7 **JOE'S AUTOMATIC TRANSMISSION SVC INC** **HAZNET** **S113074496**
NE **31710 YUCAIPA** **San Bern. Co. Permit** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.020 mi.
108 ft. **Site 2 of 4 in cluster C**

Relative:
Higher

Actual:
2126 ft.

HAZNET:

envid:	S113074496
Year:	2002
GEPAID:	CAL000135486
Contact:	JOSEPH MAGENHEIM
Telephone:	9097941916
Mailing Name:	Not reported
Mailing Address:	34428 YUCAIPA BLVD STE E-173
Mailing City,St,Zip:	YUCAIPA, CA 923992474
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	0.54
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	San Bernardino

envid:	S113074496
Year:	2001
GEPAID:	CAL000135486
Contact:	JOSEPH MAGENHEIM
Telephone:	9097941916
Mailing Name:	Not reported
Mailing Address:	34428 YUCAIPA BLVD STE E-173
Mailing City,St,Zip:	YUCAIPA, CA 923992474
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	0.5
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	San Bernardino

envid:	S113074496
Year:	2000
GEPAID:	CAL000135486
Contact:	JOSEPH MAGENHEIM
Telephone:	9097941916
Mailing Name:	Not reported
Mailing Address:	34428 YUCAIPA BLVD STE E-173
Mailing City,St,Zip:	YUCAIPA, CA 923992474
Gen County:	Not reported
TSD EPA ID:	CAT080013352

JOE'S AUTOMATIC TRANSMISSION SVC INC (Continued) **S113074496**

TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 0.45
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

envid: S113074496
Year: 1999
GEPAID: CAL000135486
Contact: JOE'S AUTOMATIC TRANS. SVC,INC
Telephone: 9097941916
Mailing Name: Not reported
Mailing Address: 31710 YUCAIPA BLVD
Mailing City,St,Zip: YUCAIPA, CA 923990000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 1.4386
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

envid: S113074496
Year: 1998
GEPAID: CAL000135486
Contact: JOE'S AUTOMATIC TRANS. SVC,INC
Telephone: 9097941916
Mailing Name: Not reported
Mailing Address: 31710 YUCAIPA BLVD
Mailing City,St,Zip: YUCAIPA, CA 923990000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: .9591
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0015626
Owner: Singh Car Care Services
Permit Number: PT0034183
Permit Category: SMALL QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 11/30/2018

Region: SAN BERNARDINO

JOE'S AUTOMATIC TRANSMISSION SVC INC (Continued) **S113074496**

Facility ID: FA0015626
Owner: Singh Car Care Services
Permit Number: PT0034182
Permit Category: HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 11/30/2018

C8 **EXCLUSIVE AUTO** **San Bern. Co. Permit** **S103652283**
NE **31710 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.020 mi.
108 ft. **Site 3 of 4 in cluster C**

Relative: **Higher**
Actual: **2126 ft.**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004148
Owner: EXA INC
Permit Number: PT0003884
Permit Category: SMALL QUANTITY GENERATOR
Facility Status: INACTIVE
Expiration Date: 08/31/2014

Region: SAN BERNARDINO
Facility ID: FA0004148
Owner: EXA INC
Permit Number: PT0003883
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status: INACTIVE
Expiration Date: 08/31/2014

C9 **FURNITURE SERVICE** **San Bern. Co. Permit** **S106910869**
NE **31640 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.021 mi.
109 ft. **Site 4 of 4 in cluster C**

Relative: **Higher**
Actual: **2126 ft.**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003359
Owner: MADRID, LOUIS, W
Permit Number: PT0004066
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 11/30/2002

10
NNE
< 1/8
0.021 mi.
111 ft.

E & E ORNAMENTAL IRON
31614 YUCAIPA BLVD
YUCAIPA, CA 92399

San Bern. Co. Permit **S104765918**
N/A

Relative:
Higher

Actual:
2126 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002817
Owner: ESTRADA, ELPIDIO
Permit Number: PT0006347
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 11/30/2013

A11
WNW
< 1/8
0.022 mi.
114 ft.

YUCAIPA 66 SERVICE
31516 YUCAIPA BLVD
YUCAIPA, CA 92399

EDR Hist Auto **1021671999**
N/A

Site 4 of 7 in cluster A

Relative:
Higher

Actual:
2113 ft.

EDR Hist Auto

Year:	Name:	Type:
1969	CRILLY CHESTER L & ORA P	Gasoline Service Stations
1970	CRILLY CHESTER L & ORA P	Gasoline Service Stations
1973	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1974	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1975	YUCAIPA 66 SERVICE	Gasoline Service Stations
1975	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1976	YUCAIPA 66 SERVICE	Gasoline Service Stations
1976	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1977	YUCAIPA 66 SERVICE	Gasoline Service Stations
1977	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1978	YUCAIPA 66 SERVICE	Gasoline Service Stations
1978	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1979	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1979	YUCAIPA 66 SERVICE	Gasoline Service Stations
1980	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1980	YUCAIPA 66 SERVICE	Gasoline Service Stations
1980	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1982	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1982	YUCAIPA 66 SERVICE	Gasoline Service Stations
1982	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1983	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1983	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1983	YUCAIPA 66 SERVICE	Gasoline Service Stations
1985	YUCAIPA 66 SERVICE	Gasoline Service Stations
1985	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1986	YUCAIPA 66 SERVICE	Gasoline Service Stations
1986	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1987	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1987	YUCAIPA 66 SERVICE	Gasoline Service Stations
1988	YUCAIPA 66 SERVICE	Gasoline Service Stations
1988	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1989	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1990	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1994	BISH FULL SERVICE	Gasoline Service Stations
1995	BISH FULL SERVICE	Gasoline Service Stations

A12
WNW
< 1/8
0.022 mi.
114 ft.

JOHN LAMASTERS SERVICE
31516 YUCAIPA BLVD
YUCAIPA, CA 92399

Site 5 of 7 in cluster A

HIST UST **U001575874**
N/A

Relative:
Higher

Actual:
2113 ft.

HIST UST:

File Number:	00029B7C
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029B7C.pdf
Region:	STATE
Facility ID:	00000028083
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	JOHN LAMASTER
Telephone:	7147943332
Owner Name:	CHET CRILLY
Owner Address:	31520 YUCAIPA BLVD.
Owner City,St,Zip:	YUCAIPA, CA 92399
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

A13 **EUROPEAN AUTOMOTIVE** **LUST** **S102037889**
WNW **31516 YUCAIPA** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **HIST CORTESE**
0.022 mi. **San Bern. Co. Permit**
114 ft. **Site 6 of 7 in cluster A**

Relative:
Higher

Actual:
2113 ft.

LUST:

Lead Agency:	SAN BERNARDINO COUNTY
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607100415
Global Id:	T0607100415
Latitude:	34.029189
Longitude:	-117.115917
Status:	Completed - Case Closed
Status Date:	10/31/1996
Case Worker:	JC
RB Case Number:	083602839T
Local Agency:	SAN BERNARDINO COUNTY
File Location:	Local Agency
Local Case Number:	96027
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0607100415
Contact Type:	Local Agency Caseworker
Contact Name:	JACKSON CRUTSINGER
Organization Name:	SAN BERNARDINO COUNTY
Address:	620 SOUTH E STREET
City:	SAN BERNARDINO
Email:	jcrutsinger@sbcfire.org
Phone Number:	Not reported

Global Id:	T0607100415
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	valerie.jahn-bull@waterboards.ca.gov
Phone Number:	9517824903

LUST:

Global Id:	T0607100415
Action Type:	REMEDIATION
Date:	05/22/1996
Action:	Not reported

Global Id:	T0607100415
Action Type:	Other
Date:	05/22/1996
Action:	Leak Discovery

Global Id:	T0607100415
Action Type:	Other
Date:	05/22/1996
Action:	Leak Stopped

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Global Id: T0607100415
Action Type: Other
Date: 06/05/1996
Action: Leak Reported

Global Id: T0607100415
Action Type: ENFORCEMENT
Date: 09/04/1996
Action: LOP Case Closure Summary to RB

Global Id: T0607100415
Action Type: ENFORCEMENT
Date: 10/31/1996
Action: Closure/No Further Action Letter

LUST:
Global Id: T0607100415
Status: Open - Case Begin Date
Status Date: 05/22/1996

Global Id: T0607100415
Status: Open - Site Assessment
Status Date: 05/22/1996

Global Id: T0607100415
Status: Open - Site Assessment
Status Date: 06/05/1996

Global Id: T0607100415
Status: Completed - Case Closed
Status Date: 10/31/1996

LUST REG 8:
Region: 8
County: San Bernardino
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083602839T
Local Case Num: 96027
Case Type: Aquifer affected
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Cross Street: RIDGECREST
Enf Type: CLOS
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Not reported
Leak Cause: UNK
Leak Source: UNK
Global ID: T0607100415
How Stopped Date: 5/22/1996
Enter Date: 6/20/1996
Date Confirmation of Leak Began: 5/22/1996
Date Preliminary Assessment Began: 5/22/1996

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Discover Date:	5/22/1996
Enforcement Date:	Not reported
Close Date:	10/31/1996
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	6/5/1996
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	6/20/1996
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.0283624
Longitude:	-117.1180938
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	VJJ
Staff Initials:	JC3
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

SWEEPS UST:

Status:	Active
Comp Number:	28083
Number:	9
Board Of Equalization:	44-020831
Referral Date:	07-28-92
Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	1
SWRCB Tank Id:	36-000-028083-000001
Tank Status:	A
Capacity:	7500
Active Date:	07-01-85
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	Active
Comp Number:	28083
Number:	9
Board Of Equalization:	44-020831

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 2
SWRCB Tank Id: 36-000-028083-000002
Tank Status: A
Capacity: 7500
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-028083-000003
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 4
SWRCB Tank Id: 36-000-028083-000004
Tank Status: A
Capacity: Not reported
Active Date: 07-01-85
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 36
Reg By: LTNKA
Reg Id: 083602839T

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002951

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Owner: ARYAFAR, BEHROUZ
Permit Number: PT0002763
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status: ACTIVE
Expiration Date: 12/31/2018

Region: SAN BERNARDINO
Facility ID: FA0002951
Owner: ARYAFAR, BEHROUZ
Permit Number: PT0002764
Permit Category: HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status: FEE EXEMPT
Expiration Date: 12/31/2003

A14
WNW
< 1/8
0.022 mi.
115 ft.

JC'S HAWG SHOP **San Bern. Co. Permit** **S104905437**
31510 YUCAIPA BLVD **N/A**
YUCAIPA, CA 92399

Site 7 of 7 in cluster A

Relative: Higher

Actual: 2109 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004105
Owner: SLAGEL, BRUCE
Permit Number: PT0009873
Permit Category: CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR
Facility Status: INACTIVE
Expiration Date: 12/31/2005

Region: SAN BERNARDINO
Facility ID: FA0004105
Owner: SLAGEL, BRUCE
Permit Number: PT0014134
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 12/31/2004

B15
West
< 1/8
0.022 mi.
116 ft.

FRONTIER CALIFORNIA, INC.: MENTONE RSU0 **San Bern. Co. Permit** **S104771965**
31432 YUCAIPA BLVD **N/A**
YUCAIPA, CA 92399

Site 3 of 6 in cluster B

Relative: Higher

Actual: 2101 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007098
Owner: Frontier California Inc.
Permit Number: PT0003922
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 05/31/2018

B16 **BAKER'S DRIVE THRU #137** **San Bern. Co. Permit** **S109598418**
WSW **31453 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.041 mi.
217 ft. **Site 4 of 6 in cluster B**

Relative: **Lower**
Actual: **2086 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0012313
Owner:	BAKER'S BURGERS INC
Permit Number:	PT0021841
Permit Category:	BULK CO2 AT RETAIL FOOD FACILITIES
Facility Status:	INACTIVE
Expiration Date:	05/31/2010

D17 **YUCAPIA CLEANERS** **DRYCLEANERS** **S106077108**
NE **31776 YUCAIPA BLVD STE 9** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.048 mi.
251 ft. **Site 1 of 3 in cluster D**

Relative: **Higher**
Actual: **2133 ft.**

DRYCLEANERS:

EPA Id:	CAL000272457
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	06/26/2003
Facility Active:	No
Inactive Date:	06/30/2008
Facility Addr2:	Not reported
Owner Name:	JERRY KANG
Owner Address:	31710 YUCAIPA BLVD
Owner Address 2:	Not reported
Owner Telephone:	9097945690
Contact Name:	JERRY KANG
Contact Address:	31776 YUCAIPA BLVD STE 9
Contact Address 2:	Not reported
Contact Telephone:	9097945690
Mailing Name:	Not reported
Mailing Address 1:	31776 YUCAIPA BLVD STE 9
Mailing Address 2:	Not reported
Mailing City:	YUCAIPA
Mailing State:	CA
Mailing Zip:	92399
Owner Fax:	Not reported
Region Code:	4

D18 **YUCAIPA CLEANERS** **San Bern. Co. Permit** **S105974522**
NE **31776 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.048 mi.
251 ft. **Site 2 of 3 in cluster D**

Relative: **Higher**
Actual: **2133 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0007883
Owner:	KANG, JERRY

YUCAIPA CLEANERS (Continued) **S105974522**

Permit Number: PT0013788
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 08/31/2009

Region: SAN BERNARDINO
Facility ID: FA0007883
Owner: KANG, JERRY
Permit Number: PT0013787
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 08/31/2009

B19 **HERMAN KEITH** **EDR Hist Auto** **1020390481**
West **31396 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.050 mi.
266 ft. **Site 5 of 6 in cluster B**

Relative: EDR Hist Auto
Lower

Actual:
2090 ft.

Year:	Name:	Type:
1969	HERMAN KEITH	Gasoline Service Stations
1970	HERMAN KEITH	Gasoline Service Stations

D20 **NASHS CLEANERS** **EDR Hist Cleaner** **1020047029**
NE **31776 YUCAIPA BLVD STE 9** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.051 mi.
268 ft. **Site 3 of 3 in cluster D**

Relative: EDR Hist Cleaner
Higher

Actual:
2138 ft.

Year:	Name:	Type:
2008	NASHS CLEANERS	Drycleaning Plants, Except Rugs

B21 **HUGHES CONCRETE PROD.** **SWEEPS UST** **U001575871**
West **31361 YUCAIPA** **HIST UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **EMI**
0.056 mi.
296 ft. **Site 6 of 6 in cluster B**

Relative: SWEEPS UST:
Lower

Actual:
2086 ft.

Status: Active
Comp Number: 2777
Number: 9
Board Of Equalization: 44-019856
Referral Date: 03-23-92
Action Date: 03-23-92
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 36-000-002777-000003
Tank Status: A
Capacity: 6000
Active Date: 06-28-88

HUGHES CONCRETE PROD. (Continued) **U001575871**

Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 2

Status: Active
Comp Number: 2777
Number: 9
Board Of Equalization: 44-019856
Referral Date: 03-23-92
Action Date: 03-23-92
Created Date: 02-29-88
Owner Tank Id: 2
SWRCB Tank Id: 36-000-002777-000004
Tank Status: A
Capacity: 550
Active Date: 06-28-88
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

HIST UST:
File Number: 00029FDE
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029FDE.pdf
Region: STATE
Facility ID: 00000002777
Facility Type: Other
Other Type: MANUFACTURER
Contact Name: W.H.HUGHES
Telephone: 7147947676
Owner Name: HUGHES CONCRETE PRODUCTS, INC
Owner Address: 31361 YUCAIPA BLVD
Owner City,St,Zip: YUCAIPA, CA 92399
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000300
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 003
Container Num: 1
Year Installed: Not reported

HUGHES CONCRETE PROD. (Continued) **U001575871**

Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	None

Tank Num:	004
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	None

Click here for Geo Tracker PDF:

EMI:

Year:	1987
County Code:	36
Air Basin:	SC
Facility ID:	21152
Air District Name:	SC
SIC Code:	1442
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

E22 **YUCAIPA CHEVRON** **EDR Hist Auto** **1022116982**
West **31412 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 1 of 8 in cluster E**

Relative: EDR Hist Auto
Higher

Actual: **2095 ft.**

Year:	Name:	Type:
1992	YUCAIPA CHEVRON	Gasoline Service Stations
1993	YUCAIPA CHEVRON	Gasoline Service Stations
1994	YUCAIPA CHEVRON	Gasoline Service Stations
1995	YUCAIPA CHEVRON	Gasoline Service Stations
1996	YUCAIPA CHEVRON	Gasoline Service Stations
1997	YUCAIPA CHEVRON	Gasoline Service Stations
1998	YUCAIPA CHEVRON	Gasoline Service Stations
2002	YUCAIPA CHEVRON	Gasoline Service Stations
2003	YUCAIPA CHEVRON	Gasoline Service Stations
2004	YUCAIPA CHEVRON	Gasoline Service Stations
2005	YUCAIPA CHEVRON	Gasoline Service Stations, NEC
2006	YUCAIPA CHEVRON	Gasoline Service Stations, NEC
2007	YUCAIPA CHEVRON	Gasoline Service Stations, NEC

YUCAIPA CHEVRON (Continued) **1022116982**

2009 YUCAIPA CHEVRON Gasoline Service Stations, NEC

E23 **99280** **HIST UST** **U001575864**
West **31412 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 2 of 8 in cluster E**

Relative: **Higher**
Actual: **2095 ft.**

HIST UST:

File Number:	00029BE6
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029BE6.pdf
Region:	STATE
Facility ID:	00000063200
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	LOPEZ,JAMES
Telephone:	7147943816
Owner Name:	CHEVRON U.S.A. INC.
Owner Address:	575 MARKET
Owner City,St,Zip:	SAN FRANCISCO, CA 94105
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	1965
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	1965
Tank Capacity:	00007000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	1965
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000170
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	1965
Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	0000100
Leak Detection:	Stock Inventor

99280 (Continued) **U001575864**

Click here for Geo Tracker PDF:

E24 **CHEVRON STATION NO 99280** **RCRA-SQG** **1000819732**
West **31412 YUCAIPA BLVD** **FINDS** **CAD983657305**
< 1/8 **YUCAIPA, CA 92399** **ECHO**
0.057 mi.
300 ft. **Site 3 of 8 in cluster E**

Relative:
Higher

Actual:
2095 ft.

RCRA-SQG:

Date form received by agency:	06/17/2002
Facility name:	CHEVRON STATION NO 99280
Facility address:	31412 YUCAIPA BLVD YUCAIPA, CA 92399-1631
EPA ID:	CAD983657305
Mailing address:	P O BOX 6004 SAN RAMON, CA 94583
Contact:	KATHY NORRIS
Contact address:	P O BOX 6004 SAN RAMON, CA 94583
Contact country:	US
Contact telephone:	925-842-5931
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHEVRON PRODUCTS CO
Owner/operator address:	P O BOX 6004 SAN RAMON, CA 94583
Owner/operator country:	Not reported
Owner/operator telephone:	925-842-5931
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No

CHEVRON STATION NO 99280 (Continued) **1000819732**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110002891041

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000819732
Registry ID: 110002891041
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002891041

E25 **CHEVRON STATION #99280/1476** **UST** **U003939026**
West **31412 YUCAIPA BLVD** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 4 of 8 in cluster E**

Relative:
Higher

Actual:
2095 ft.

UST:
Facility ID: 86009247
Permitting Agency: SAN BERNARDINO COUNTY
Latitude: 34.029868
Longitude: -117.117274

Facility ID: FA0001907
Permitting Agency: San Bernardino County Fire Department
Latitude: 34.028288
Longitude: -117.118415

SWEEPS UST:
Status: Active

CHEVRON STATION #99280/1476 (Continued) **U003939026**

Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 36-000-063200-000001
Tank Status: A
Capacity: 1000
Active Date: 04-28-89
Tank Use: OIL
STG: W
Content: WASTE OIL
Number Of Tanks: 4

Status: Active
Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 2
SWRCB Tank Id: 36-000-063200-000002
Tank Status: A
Capacity: 10000
Active Date: 04-28-89
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-063200-000003
Tank Status: A
Capacity: 10000
Active Date: 04-28-89
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88

CHEVRON STATION #99280/1476 (Continued) **U003939026**

Owner Tank Id: 4
SWRCB Tank Id: 36-000-063200-000004
Tank Status: A
Capacity: 10000
Active Date: 04-28-89
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

E26 **CHEVRON STATION #99280/1476** **HAZNET** **S113102410**
West **31412 YUCAIPA BLVD** **San Bern. Co. Permit** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 5 of 8 in cluster E**

Relative:
Higher

Actual:
2095 ft.

HAZNET:
envid: S113102410
Year: 2001
GEPAID: CAL000196507
Contact: MATTHEW FOSTER/MANAGER
Telephone: 9093891153
Mailing Name: Not reported
Mailing Address: 31412 YUCAIPA BLVD
Mailing City,St,Zip: YUCAIPA, CA 923990000
Gen County: Not reported
TSD EPA ID: KYD053348108
TSD County: Not reported
Waste Category: Solids or sludges with halogenated organic compounds >= 1,000 Mg./L
Disposal Method: Invalid Code
Tons: 0.46
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0011638
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0011639
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0011640
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)

CHEVRON STATION #99280/1476 (Continued) **S113102410**

Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0020288
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0002453
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0003341
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 10/31/2003

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0003340
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 10/31/2003

E27 **ARCO AM PM** **EDR Hist Auto** **1021059509**
West **31340 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.060 mi.
317 ft. **Site 6 of 8 in cluster E**

Relative: EDR Hist Auto
Lower

Actual:
2083 ft.

Year:	Name:	Type:
1994	PETROMART INC	Convenience Stores
1995	PETROMART INC	Convenience Stores
1996	PETROMART INC	Convenience Stores
1997	PETROMART INC	Convenience Stores
1998	PETROMART INC	Convenience Stores
2001	PETROMART INC	Convenience Stores
2002	ARCO AM/PM	Convenience Stores
2003	ARCO AM/PM	Convenience Stores
2004	ARCO AM/PM	Convenience Stores
2005	ARCO AM/PM	Convenience Stores
2006	ARCO AM/PM	Convenience Stores
2007	ARCO AM PM	Convenience Stores
2008	ARCO AM PM	Convenience Stores
2009	ARCO AM PM	Convenience Stores

ARCO AM PM (Continued) **1021059509**

2010	BP NORTH AMERICA	Gasoline Service Stations, NEC
2010	ARCO AM PM	Convenience Stores
2011	ARCO AM PM	Convenience Stores
2011	BP NORTH AMERICA	Gasoline Service Stations, NEC
2012	ARCO AM PM	Convenience Stores
2013	ARCO AM PM	Convenience Stores
2014	ARCO AM PM	Convenience Stores

E28 **ARCO AM/PM** **UST** **U003785099**
West **31340 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.060 mi.
317 ft. **Site 7 of 8 in cluster E**

Relative: UST:
Lower Facility ID: 88016863
Actual: Permitting Agency: SAN BERNARDINO COUNTY
2083 ft. Latitude: 34.02761
Longitude: -117.11899

F29 **SCE TENNESSEE SUBSTATION** **San Bern. Co. Permit** **S121309523**
SE **18TH ST & E AVE** **N/A**
< 1/8 **YUCAIPA, CA 92374**
0.082 mi.
434 ft. **Site 1 of 2 in cluster F**

Relative: San Bern. Co. Permit:
Lower Region: SAN BERNARDINO
Actual: Facility ID: FA0000279
2089 ft. Owner: Southern California Edison
Permit Number: PT0000382
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 02/28/2018

Region: SAN BERNARDINO
Facility ID: FA0000279
Owner: Southern California Edison
Permit Number: PT0020835
Permit Category: APSA EXEMPT
Facility Status: ACTIVE
Expiration Date: 02/28/2018

Region: SAN BERNARDINO
Facility ID: FA0000279
Owner: Southern California Edison
Permit Number: PT0022738
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 02/28/2014

E30 **STEAMERS DRY CLEANERS** **EDR Hist Cleaner** **1020094956**
West **31364 HAMPTON RD APT D** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.086 mi.
455 ft. **Site 8 of 8 in cluster E**

Relative: EDR Hist Cleaner
Lower

Actual:
2087 ft.

Year:	Name:	Type:
2006	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2007	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2008	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2009	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2010	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC

F31 **SCE-TENNESSEE SUBSTATION** **AST** **S105047563**
SE **18TH ST & "E" AVE** **N/A**
< 1/8 **REDLANDS, CA**
0.097 mi.
510 ft. **Site 2 of 2 in cluster F**

Relative: AST:
Lower

Actual:
2087 ft.

Certified Unified Program Agencies:	San Bernardino
Owner:	SOUTHERN CALIFORNIA EDISON
Total Gallons:	15,665
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

G32 **YUCAIPA GAS MART** **San Bern. Co. Permit** **S109521083**
West **31340 HAMPTON RD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.104 mi.
548 ft. **Site 1 of 2 in cluster G**

Relative: San Bern. Co. Permit:
Lower

Actual:
2075 ft.

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0004050
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0023925
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010973
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010974
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010975
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

G33 **YUCAIPA GAS MART** **UST** **U004263529**
West **31340 HAMPTON RD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.104 mi.
548 ft. **Site 2 of 2 in cluster G**

Relative: UST:
Lower

Actual:
2075 ft.

Facility ID: FA0001039
Permitting Agency: San Bernardino County Fire Department
Latitude: 34.028301
Longitude: -117.119667

H34 **VERIZON WIRELESS: YUCAIPA** **San Bern. Co. Permit** **S104763380**
South **31650 DUNLAP BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.114 mi.
602 ft. **Site 1 of 2 in cluster H**

Relative:
Lower

Actual:
2081 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0000749
Owner: Verizon Wireless
Permit Number: PT0008177
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0013929
Owner: AMERICAN TOWERS - EH&S Dept.
Permit Number: PT0024606
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: INACTIVE
Expiration Date: 09/30/2014

Region: SAN BERNARDINO
Facility ID: FA0000749
Owner: Verizon Wireless
Permit Number: PT0018578
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 09/30/2013

---

35 **GK MARKET** **UST** **U003976924**
SW **31583 OUTER HWY 10** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.116 mi.
612 ft.

Relative:
Lower

Actual:
2080 ft.

UST:
Facility ID: 89017447
Permitting Agency: SAN BERNARDINO COUNTY
Latitude: 34.0258476
Longitude: -117.1140138

H36 **AT&T MOBILITY - YUCAIPA VALLEY (USID12323)** **HAZNET** **S104764527**
SSE **31682 DUNLAP BLVD** **San Bern. Co. Permit** **N/A**
1/8-1/4 **YUCAIPA, CA 92399**
0.140 mi.
741 ft. **Site 2 of 2 in cluster H**

Relative:
Lower

Actual:
2080 ft.

HAZNET:
envid: S104764527
Year: 2013
GEPAID: CAC002733059
Contact: RANDY LAZZARD
Telephone: 9097947774
Mailing Name: Not reported
Mailing Address: 31682 DUNLAP BLVD.
Mailing City,St,Zip: YUCAIPA, CA 92399

AT&T MOBILITY - YUCAIPA VALLEY (USID12323) (Continued) **S104764527**

Gen County: San Bernardino
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.76
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

envid: S104764527
Year: 2013
GEPAID: CAC002733059
Contact: RANDY LAZZARD
Telephone: 9097947774
Mailing Name: Not reported
Mailing Address: 31682 DUNLAP BLVD.
Mailing City,St,Zip: YUCAIPA, CA 92399
Gen County: San Bernardino
TSD EPA ID: CAD097030993
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.035
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004342
Owner: New Cingular Wireless PCS, LLC dba AT&T Mobility
Permit Number: PT0008338
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 11/30/2018

Region: SAN BERNARDINO
Facility ID: FA0001677
Owner: Onelda Snyder
Permit Number: PT0014180
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR
Facility Status: ACTIVE
Expiration Date: 05/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001677
Owner: Onelda Snyder
Permit Number: PT0007948
Permit Category: HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 05/31/2018

Region: SAN BERNARDINO
Facility ID: FA0004342

AT&T MOBILITY - YUCAIPA VALLEY (USID12323) (Continued) **S104764527**

Owner: New Cingular Wireless PCS, LLC dba AT&T Mobility
Permit Number: PT0020797
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 11/30/2013

37
South
1/8-1/4
0.146 mi.
772 ft.

ROCKY PLAZA MARKET & LIQUOR
31583 OUTER HWY 10 UNIT 4
YUCAIPA, CA 92399

San Bern. Co. Permit **S110374351**
N/A

Relative:
Lower

Actual:
2078 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0004155
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0010998
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0010999
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0011000
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

I38
SSE
1/8-1/4
0.180 mi.
951 ft.

INLAND POWER SWEEPING
31710 DUNLAP BLVD
YUCAIPA, CA 92399

RCRA NonGen / NLR **1000151894**
FINDS **CAD073571648**
ECHO

Site 1 of 2 in cluster I

Relative:
Lower

Actual:
2079 ft.

RCRA NonGen / NLR:
Date form received by agency: 07/10/1980
Facility name: INLAND POWER SWEEPING
Facility address: 31710 DUNLAP BLVD
YUCAIPA, CA 92399

INLAND POWER SWEEPING (Continued) **1000151894**

EPA ID: CAD073571648
Mailing address: PO BOX 322
YUCAIPA, CA 92399
Contact: ENVIRONMENTAL MANAGER
Contact address: 31710 DUNLAP BLVD
YUCAIPA, CA 92399
Contact country: US
Contact telephone: 714-825-3314
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: KERRY A RIEGER & DENNIS C RIEGER
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
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
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
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 waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

INLAND POWER SWEEPING (Continued) **1000151894**

Violation Status: No violations found

FINDS:

Registry ID: 110002657296

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000151894
Registry ID: 110002657296
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002657296

I39 **COLLISION CONCEPT** **SWEEPS UST** **U001575872**
SSE **31710 DUNLAP BLVD** **HIST UST** **N/A**
1/8-1/4 **YUCAIPA, CA 92399** **San Bern. Co. Permit**
0.180 mi.
951 ft. **Site 2 of 2 in cluster I**

Relative: **Lower**
Actual: **2079 ft.**

SWEEPS UST:
Status: Active
Comp Number: 10718
Number: 9
Board Of Equalization: Not reported
Referral Date: 03-24-92
Action Date: 03-24-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 10718
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-010718-000001
Tank Status: Not reported
Capacity: 12000

COLLISION CONCEPT (Continued) **U001575872**

Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: 1

HIST UST:
File Number: 00029D83
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029D83.pdf
Region: STATE
Facility ID: 00000010718
Facility Type: Other
Other Type: CONTRACTOR
Contact Name: DENNIS C. RIEGER
Telephone: 7149859303
Owner Name: DENNIS C. RIEGER
Owner Address: 31046 E. SUNSET DR. SO
Owner City,St,Zip: REDLANDS, CA 92373
Total Tanks: 0001

Tank Num: 001
Container Num: 1
Year Installed: 1980
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002422
Owner: COLLISION CONCEPT
Permit Number: PT0004865
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 05/31/1999

40
South
1/8-1/4
0.182 mi.
959 ft.

CHAMPIONSHIP AUTOMOTIVE **San Bern. Co. Permit** **S105047617**
31763 OUTER HWY 10 S **N/A**
REDLANDS, CA 92373

Relative:
Lower

Actual:
2076 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001852
Owner: CHAMPIONSHIP AUTOMOTIVE
Permit Number: PT0000440
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 03/31/2005

Region: SAN BERNARDINO
Facility ID: FA0001852

CHAMPIONSHIP AUTOMOTIVE (Continued) **S105047617**

Owner: CHAMPIONSHIP AUTOMOTIVE
Permit Number: PT0000441
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 03/31/2005

41
ESE
1/8-1/4
0.209 mi.
1106 ft.

WESTERN HEIGHTS WATER-WELL SITE 10
31895 AVENUE E
YUCAIPA, CA 92399

AST **S105974513**
San Bern. Co. Permit **N/A**

Relative:
Lower

Actual:
2084 ft.

AST:

Certified Unified Program Agencies:	Not reported
Owner:	WESTERN HEIGHTS WATER COMPANY
Total Gallons:	Not reported
CERSID:	10047700
Facility ID:	FA0007908
Business Name:	WESTERN HEIGHTS WATER CO.
Phone:	909-790-1901
Fax:	909-797-2619
Mailing Address:	32352 AVENUE D
Mailing Address City:	YUCAIPA
Mailing Address State:	CA
Mailing Address Zip Code:	92399
Operator Name:	WESTERN HEIGHTS WATER CO
Operator Phone:	909-790-1901
Owner Phone:	909-790-1901
Owner Mail Address:	32352 AVENUE D
Owner State:	CA
Owner Zip Code:	92399
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

Certified Unified Program Agencies:	San Bernardino
Owner:	WESTERN HEIGHTS WATER COMPANY
Total Gallons:	3,000
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported

WESTERN HEIGHTS WATER-WELL SITE 10 (Continued) **S105974513**

Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0007908
Owner:	WESTERN HEIGHTS WATER COMPANY
Permit Number:	PT0013951
Permit Category:	APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status:	ACTIVE
Expiration Date:	08/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0007908
Owner:	WESTERN HEIGHTS WATER COMPANY
Permit Number:	PT0013817
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status:	ACTIVE
Expiration Date:	08/31/2018

42
WSW
1/8-1/4
0.224 mi.
1182 ft.

ALAN GRUBEL'S AUTOMOTIVE
31285 S OUTER HWY 10
REDLANDS, CA 92373

San Bern. Co. Permit **S105158993**
N/A

Relative:
Lower

Actual:
2046 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0000797
Owner:	James Dodd
Permit Number:	PT0009944
Permit Category:	CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0000797
Owner:	James Dodd
Permit Number:	PT0009945
Permit Category:	HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status:	FEE EXEMPT
Expiration Date:	10/31/2002

43
SE
1/4-1/2
0.458 mi.
2419 ft.

CIRCLE K #0324
31933 HIGHWAY I-10, OUTER
YUCAIPA, CA 92399

LUST **S104025225**
HIST CORTESE **N/A**

Relative:
Higher

Actual:
2101 ft.

LUST:

Lead Agency:	SAN BERNARDINO COUNTY
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607100147
Global Id:	T0607100147
Latitude:	34.0228553
Longitude:	-117.106589
Status:	Completed - Case Closed
Status Date:	08/15/1990
Case Worker:	CR2
RB Case Number:	083601278T
Local Agency:	SAN BERNARDINO COUNTY
File Location:	Local Agency
Local Case Number:	90043
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0607100147
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495

Global Id:	T0607100147
Contact Type:	Local Agency Caseworker
Contact Name:	CATHERINE RICHARDS
Organization Name:	SAN BERNARDINO COUNTY
Address:	620 SOUTH E STREET
City:	SAN BERNARDINO
Email:	crichards@sbcfire.org
Phone Number:	9093868419

LUST:

Global Id:	T0607100147
Action Type:	ENFORCEMENT
Date:	08/15/1990
Action:	Closure/No Further Action Letter

Global Id:	T0607100147
Action Type:	Other
Date:	11/16/1988
Action:	Leak Discovery

Global Id:	T0607100147
Action Type:	Other
Date:	11/16/1988
Action:	Leak Stopped

CIRCLE K #0324 (Continued) **S104025225**

Global Id: T0607100147
Action Type: Other
Date: 05/25/1989
Action: Leak Reported

LUST:
Global Id: T0607100147
Status: Open - Case Begin Date
Status Date: 11/16/1988

Global Id: T0607100147
Status: Open - Site Assessment
Status Date: 08/01/1989

Global Id: T0607100147
Status: Completed - Case Closed
Status Date: 08/15/1990

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083601278T
Local Case Num:	90043
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	16TH STREET
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0607100147
How Stopped Date:	11/16/1988
Enter Date:	9/7/1989
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	8/1/1989
Discover Date:	11/16/1988
Enforcement Date:	1/1/1965
Close Date:	8/15/1990
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	9/7/1989
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Yes

CIRCLE K #0324 (Continued) **S104025225**

Oversite Program:	LUST
Latitude:	34.0218096
Longitude:	-117.104169
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	CR2
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	RWQCB DOCUMENTATION LIMITED TO URR.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	36
Reg By:	LTNKA
Reg Id:	083601278T

J44 **SORENSON ENGINEERING INC, FRANK SORENSON** **ENVIROSTOR** **U001575886**
ESE **32032 DUNLAP BLVD** **LUST** **N/A**
1/4-1/2 **YUCAIPA, CA 92399** **SLIC**
0.472 mi. **AST**
2494 ft. **Site 1 of 3 in cluster J** **SWEEPS UST**
HIST UST
Relative: Higher **EMI**
NPDES
Actual: 2092 ft. **San Bern. Co. Permit**

ENVIROSTOR:

Facility ID:	71002160
Status:	Inactive - Needs Evaluation
Status Date:	Not reported
Site Code:	Not reported
Site Type:	Tiered Permit
Site Type Detailed:	Tiered Permit
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Not reported
Division Branch:	Cleanup Cypress
Assembly:	42
Senate:	23
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Latitude: 34.02339
Longitude: -117.1059
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD008261737
Alias Type: EPA Identification Number
Alias Name: 110000497971
Alias Type: EPA (FRS #)
Alias Name: 71002160
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LUST:
Lead Agency: SAN BERNARDINO COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607199171
Global Id: T0607199171
Latitude: 34.023141
Longitude: -117.105568
Status: Completed - Case Closed
Status Date: 05/04/2004
Case Worker: CR2
RB Case Number: 083603657T
Local Agency: SAN BERNARDINO COUNTY
File Location: Local Agency
Local Case Number: 2000001
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline, MTBE / TBA / Other Fuel Oxygenates
Site History: Not reported

LUST:
Global Id: T0607199171
Contact Type: Local Agency Caseworker
Contact Name: CATHERINE RICHARDS
Organization Name: SAN BERNARDINO COUNTY
Address: 620 SOUTH E STREET
City: SAN BERNARDINO
Email: crichards@sbcfire.org
Phone Number: 9093868419

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Global Id: T0607199171
Contact Type: Regional Board Caseworker
Contact Name: ROSE SCOTT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: rose.scott@waterboards.ca.gov
Phone Number: 9513206375

LUST:
Global Id: T0607199171
Action Type: REMEDIATION
Date: 06/01/2000
Action: Excavation

Global Id: T0607199171
Action Type: Other
Date: 03/02/2000
Action: Leak Discovery

Global Id: T0607199171
Action Type: ENFORCEMENT
Date: 12/11/2003
Action: * No Action

Global Id: T0607199171
Action Type: ENFORCEMENT
Date: 05/04/2004
Action: Closure/No Further Action Letter - #2000001

Global Id: T0607199171
Action Type: Other
Date: 03/02/2000
Action: Leak Stopped

Global Id: T0607199171
Action Type: Other
Date: 03/15/2000
Action: Leak Reported

LUST:
Global Id: T0607199171
Status: Open - Case Begin Date
Status Date: 03/02/2000

Global Id: T0607199171
Status: Open - Site Assessment
Status Date: 05/03/2000

Global Id: T0607199171
Status: Open - Remediation
Status Date: 06/16/2000

Global Id: T0607199171
Status: Completed - Case Closed
Status Date: 05/04/2004

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

SLIC:

Region:	STATE
Facility Status:	**Open - Assessment & Interim Remedial Action**
Status Date:	02/08/2013
Global Id:	SL0607135888
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	34.023391
Longitude:	-117.105932
Case Type:	Cleanup Program Site
Case Worker:	AK
Local Agency:	Not reported
RB Case Number:	2080038
File Location:	Regional Board
Potential Media Affected:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Other Chlorinated Hydrocarbons, Tetrachloroethylene (PCE), Trichloroethylene (TCE)
Site History:	The Site is located approximately 0.75 miles north of Interstate 10 and the Live Oak Canyon exit, within the southern portion of San Bernardino County. The Site occupies approximately 10 acres of land within a mixed industrial and residential area. The Site is relatively flat with an average elevation of 2,085 feet above mean sea level. At the Site, first groundwater is generally present within lenses of silty sand that are interbedded in a slightly to moderately plastic clay-rich soil mixture. The general groundwater flow direction at the Site is toward the northeast, with an average groundwater gradient of 0.021 feet per foot. The depth to the groundwater in the existing monitoring wells ranges from 29 to 46 feet at the northern area of the Site. Groundwater was not encountered in the monitoring wells installed to a depth of 100 feet, in the southern area of the Site. There are currently seventeen monitoring wells at on- and off-Site locations: JMW-1 through JMW-4, JMW-6, JMW-8 through JMW-11, and JMW-17 and JMW-18 at on-Site locations. JMW-7 at Dafna Village (private property) JMW-13, JMW-14, and JMW-15(S/D) on public streets in the downgradient area. Previous investigations at the Site included evaluations of soil vapor, soil matrix and groundwater (using Hydropunch technology and installation of groundwater monitoring wells) to define the extent of VOCs in the soil and groundwater. Soil and soil vapor impacts were detected in the southern portion of the Site. Soil vapor impacts were not detected in the northern portion of the Site. During the most recent investigation, tetrachloroethylene (PCE) was detected in soil vapor samples with a concentration range of 0.137 to 381 micrograms per liter (a%g/L). PCE concentrations in soil ranged from 5 to 319 micrograms per kilogram (a%g/kg). The maximum PCE concentration detected in groundwater was 34,200 a%g/L, in a sample from well JMW-9

Click here to access the California GeoTracker records for this facility:

AST:

Certified Unified Program Agencies:	Not reported
Owner:	David Sorenson
Total Gallons:	Not reported
CERSID:	10044940
Facility ID:	FA0006292
Business Name:	SORENSON ENGINEERING INC

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Phone:	909.795.2434
Fax:	909.795.7190
Mailing Address:	32032 Dunlap Boulevard
Mailing Address City:	Yucaipa
Mailing Address State:	CA
Mailing Address Zip Code:	92399
Operator Name:	Sorenson Engineering, Inc.
Operator Phone:	909.795.2434
Owner Phone:	909.795.2434
Owner Mail Address:	32032 Dunlap Blvd
Owner State:	CA
Owner Zip Code:	92399
Owner Country:	United States
Property Owner Name:	Sorenson Engineering, Inc.
Property Owner Phone:	909.795.2434
Property Owner Mailing Address:	32032 Dunlap Blvd
Property Owner City:	Yucaipa
Property Owner Stat :	CA
Property Owner Zip Code:	92399
Property Owner Country:	United States
EPAID:	CAD008261737

SWEEPS UST:

Status:	Active
Comp Number:	63321
Number:	9
Board Of Equalization:	44-021366
Referral Date:	09-12-91
Action Date:	09-12-91
Created Date:	02-29-88
Owner Tank Id:	1
SWRCB Tank Id:	36-000-063321-000001
Tank Status:	A
Capacity:	500
Active Date:	07-01-85
Tank Use:	OIL
STG:	W
Content:	WASTE OIL
Number Of Tanks:	4

Status:	Active
Comp Number:	63321
Number:	9
Board Of Equalization:	44-021366
Referral Date:	09-12-91
Action Date:	09-12-91
Created Date:	02-29-88
Owner Tank Id:	2
SWRCB Tank Id:	36-000-063321-000002
Tank Status:	A
Capacity:	2000
Active Date:	07-01-85
Tank Use:	UNKNOWN
STG:	P
Content:	Not reported
Number Of Tanks:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Status: Active
Comp Number: 63321
Number: 9
Board Of Equalization: 44-021366
Referral Date: 09-12-91
Action Date: 09-12-91
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-063321-000003
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 63321
Number: 9
Board Of Equalization: 44-021366
Referral Date: 09-12-91
Action Date: 09-12-91
Created Date: 02-29-88
Owner Tank Id: 4
SWRCB Tank Id: 36-000-063321-000004
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

HIST UST:
File Number: 0002A67A
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002A67A.pdf
Region: STATE
Facility ID: 00000063321
Facility Type: Other
Other Type: MANUFACTURER
Contact Name: ALLEN FEARY
Telephone: 7147952434
Owner Name: SORENSON ENG. INC.
Owner Address: 32032 DUNLAP BLVD.
Owner City,St,Zip: YUCAIPA, CA 92399
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

EMI:

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	0
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1996
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	24

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Reactive Organic Gases Tons/Yr:	17
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1997
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1998
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1999
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Year:	2000
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2001
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	10
Reactive Organic Gases Tons/Yr:	10
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2002
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2003
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2004
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5.1459
Reactive Organic Gases Tons/Yr:	2.5
Carbon Monoxide Emissions Tons/Yr:	0.00927
NOX - Oxides of Nitrogen Tons/Yr:	0.4345
SOX - Oxides of Sulphur Tons/Yr:	0.00022
Particulate Matter Tons/Yr:	0.00199
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2005
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4.88653
Reactive Organic Gases Tons/Yr:	2.52918861
Carbon Monoxide Emissions Tons/Yr:	.00875
NOX - Oxides of Nitrogen Tons/Yr:	.9345
SOX - Oxides of Sulphur Tons/Yr:	.00015
Particulate Matter Tons/Yr:	.05807
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.0124545

Year:	2006
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.025349745305051464
Reactive Organic Gases Tons/Yr:	4.208
Carbon Monoxide Emissions Tons/Yr:	.009

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

NOX - Oxides of Nitrogen Tons/Yr:	.962
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.058
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01254

Year:	2007
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.025349745305051464
Reactive Organic Gases Tons/Yr:	4.208
Carbon Monoxide Emissions Tons/Yr:	.009
NOX - Oxides of Nitrogen Tons/Yr:	.962
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.058
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01254

Year:	2008
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.602823133751223530
Reactive Organic Gases Tons/Yr:	4.20134359088
Carbon Monoxide Emissions Tons/Yr:	.00637
NOX - Oxides of Nitrogen Tons/Yr:	1.74
SOX - Oxides of Sulphur Tons/Yr:	.0001092
Particulate Matter Tons/Yr:	.071365
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01459675

Year:	2009
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11.2214092358771
Reactive Organic Gases Tons/Yr:	5.4418199999999999
Carbon Monoxide Emissions Tons/Yr:	9.1000000000000004E-3
NOX - Oxides of Nitrogen Tons/Yr:	1.3899999999999999
SOX - Oxides of Sulphur Tons/Yr:	0.000156
Particulate Matter Tons/Yr:	0.10195
Part. Matter 10 Micrometers and Smllr Tons/Yr:	9.7852499999999995E-2

Year:	2010

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	27.611583339232499
Reactive Organic Gases Tons/Yr:	11.264900000000001
Carbon Monoxide Emissions Tons/Yr:	7.5900000000000004E-3
NOX - Oxides of Nitrogen Tons/Yr:	1.8230500000000001
SOX - Oxides of Sulphur Tons/Yr:	1.2999999999999999E-4
Particulate Matter Tons/Yr:	0.15622
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.030913

Year:	2011
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	19.046371404
Reactive Organic Gases Tons/Yr:	7.78235
Carbon Monoxide Emissions Tons/Yr:	0.01015
NOX - Oxides of Nitrogen Tons/Yr:	2.36562
SOX - Oxides of Sulphur Tons/Yr:	0.00017
Particulate Matter Tons/Yr:	0.05143
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0114209

Year:	2012
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	19.823754428
Reactive Organic Gases Tons/Yr:	8.00662
Carbon Monoxide Emissions Tons/Yr:	0.02642
NOX - Oxides of Nitrogen Tons/Yr:	1.47851
SOX - Oxides of Sulphur Tons/Yr:	0.00045
Particulate Matter Tons/Yr:	0.01686
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.007505

Year:	2013
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11.814530938
Reactive Organic Gases Tons/Yr:	4.74873393
Carbon Monoxide Emissions Tons/Yr:	0.02677
NOX - Oxides of Nitrogen Tons/Yr:	0.21771
SOX - Oxides of Sulphur Tons/Yr:	0.00045
Particulate Matter Tons/Yr:	0.00786
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0058482

Year:	2014
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12.614347308
Reactive Organic Gases Tons/Yr:	6.35768
Carbon Monoxide Emissions Tons/Yr:	0.0217
NOX - Oxides of Nitrogen Tons/Yr:	0.17872
SOX - Oxides of Sulphur Tons/Yr:	0.00037
Particulate Matter Tons/Yr:	0.00478
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0047748

Year:	2015
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	14.331192857
Reactive Organic Gases Tons/Yr:	7.223505934
Carbon Monoxide Emissions Tons/Yr:	0.0273
NOX - Oxides of Nitrogen Tons/Yr:	0.311866155
SOX - Oxides of Sulphur Tons/Yr:	0.000468
Particulate Matter Tons/Yr:	0.012266073
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.01200943008

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	213412
Order No:	Not reported
Regulatory Measure Type:	Industrial
Place Id:	Not reported
WDID:	8 36I013373
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	05/09/2008
PROCESSED DATE:	09/03/1997
STATUS CODE NAME:	Active
STATUS DATE:	09/03/1997
PLACE SIZE:	14359
PLACE SIZE UNIT:	SqFt
FACILITY CONTACT NAME:	Paul Sewell
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	909-795-2434
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR NAME:	Sorenson Engineering Inc
OPERATOR ADDRESS:	32032 Dunlap Blvd
OPERATOR CITY:	Yucaipa
OPERATOR STATE:	California
OPERATOR ZIP:	92399
OPERATOR CONTACT NAME:	Paul Sewell
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	909-795-2434
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	California
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	909-795-2434
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Yucaipa Creek

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

CERTIFIER NAME:	Jeromy Roush
CERTIFIER TITLE:	Facility Maintenance Manager
CERTIFICATION DATE:	27-FEB-17
PRIMARY SIC:	3451-Screw Machine Products
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	415492
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36C361525
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/26/2011
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	12/13/2016
Discharge Name:	Sorenson Engineering
Discharge Address:	32032 DUNLAP BOULEVARD
Discharge City:	Yucaipa
Discharge State:	California
Discharge Zip:	92399
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

Npdes Number:	CAS000001
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	213412
Order No:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36I013373
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/03/1997
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Sorenson Engineering Inc
Discharge Address:	32032 Dunlap Blvd
Discharge City:	Yucaipa
Discharge State:	California
Discharge Zip:	92399
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	415492
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	8 36C361525
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	12/13/2016
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	07/08/2011
PROCESSED DATE:	07/26/2011
STATUS CODE NAME:	Terminated
STATUS DATE:	01/11/2017
PLACE SIZE:	16.21
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Paul Sewell
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	909-795-7600
FACILITY CONTACT PHONE EXT:	204
FACILITY CONTACT EMAIL:	bmayer@sitetechinc.com
OPERATOR NAME:	Sorenson Engineering
OPERATOR ADDRESS:	32032 DUNLAP BOULEVARD
OPERATOR CITY:	Yucaipa
OPERATOR STATE:	California
OPERATOR ZIP:	92399
OPERATOR CONTACT NAME:	Paul Sewell
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	909-795-2434
OPERATOR CONTACT PHONE EXT:	204
OPERATOR CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	Sorenson Engineering
DEVELOPER ADDRESS:	32032 DUNLAP BOULEVARD
DEVELOPER CITY:	Yucaipa
DEVELOPER STATE:	California
DEVELOPER ZIP:	92399
DEVELOPER CONTACT NAME:	Paul Sewell
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Y
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

CERTIFIER NAME: Joe Watanabe
CERTIFIER TITLE: Not reported
CERTIFICATION DATE: 06-OCT-14
PRIMARY SIC: Not reported
SECONDARY SIC: Not reported
TERTIARY SIC: Not reported

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0028871
Permit Category: CA ANNUAL FEE
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0000852
Permit Category: LARGE QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0000851
Permit Category: HAZARDOUS MATERIALS 51-70 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0028867
Permit Category: APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0001598
Permit Category: PBR ANNUAL FEE
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0015161
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0024069
Permit Category: HAZARDOUS WASTE GENERATOR RCRA LQG
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0015162
Permit Category: RISK MANAGEMENT PLAN - LEVEL II
Facility Status: INACTIVE
Expiration Date: 09/30/2011

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0001601
Permit Category: CALARP FACILITY PERMIT
Facility Status: INACTIVE
Expiration Date: 09/30/2011

J45 **SORENSON ENGINEERING, INC.** **RCRA-LQG** **1000208532**
ESE **32032 DUNLAP BOULEVARD** **LUST** **CAD008261737**
1/4-1/2 **YUCAIPA, CA 92399** **SLIC**
0.472 mi. **ICIS**
2494 ft. **Site 2 of 3 in cluster J** **US AIRS**
FINDS
Relative: Higher **ECHO**
Cortese
Actual: 2092 ft. **WDS**

RCRA-LQG:
Date form received by agency: 03/01/2016
Facility name: SORENSON ENGINEERING, INC.
Facility address: 32032 DUNLAP BOULEVARD
YUCAIPA, CA 92399
EPA ID: CAD008261737
Mailing address: DUNLAP BOULEVARD
YUCAIPA, CA 92399
Contact: JOE WATANABE
Contact address: DUNLAP BOULEVARD
YUCAIPA, CA 92399
Contact country: US
Contact telephone: 909-795-2434
Telephone ext.: 297
Contact email: JWATANABE@SORENSONENG.COM
EPA Region: 09
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less

SORENSON ENGINEERING, INC. (Continued) **1000208532**

of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	DAVID SORESON
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

Owner/operator name:	DAVID SORENSON
Owner/operator address:	32032 DUNLAP BOULEVARD
	YUCAIPA, CA 92399
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

Owner/operator name:	DAVID SORESON
Owner/operator address:	DUNLAP BOULEVARD
	YUCAIPA, CA 92399
Owner/operator country:	US
Owner/operator telephone:	909-795-2434
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

Owner/operator name:	DAVID SORENSON
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 134
. Waste name: Aqueous solution with <10% total organic residues

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 171
. Waste name: Metal sludge (see 121)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 212
. Waste name: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 724
. Waste name: Liquids with lead > 500 mg/l

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: 751

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste name: Solids or sludge with halogenated organic comp. > 1000 mg/kg

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: 792
. Waste name: Liquids with pH < 2 with metals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D029
. Waste name: 1,1-DICHLOROETHYLENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM;

SORENSON ENGINEERING, INC. (Continued) **1000208532**

(2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

. Waste code: F007
. Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS.

. Waste code: F008
. Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

Historical Generators:
Date form received by agency: 03/01/2014
Site name: SORENSON ENGINEERING INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: D029
. Waste name: 1,1-DICHLOROETHYLENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

. Waste code: F007
. Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS.

Date form received by agency: 06/12/2012
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 171
. Waste name: Metal sludge (see 121)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 212
. Waste name: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 343
. Waste name: Unspecified organic liquid mixture

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 731
. Waste name: Liquids with polychlorinated biphenyls > 50 mg/l

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: 751
. Waste name: Solids or sludge with halogenated organic comp. > 1000 mg/kg

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: 792
. Waste name: Liquids with pH < 2 with metals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D029
. Waste name: 1,1-DICHLOROETHYLENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT

SORENSON ENGINEERING, INC. (Continued) **1000208532**

FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 01/21/2010
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 171
. Waste name: Metal sludge (see 121)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 212
. Waste name: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: 751
. Waste name: Solids or sludge with halogenated organic comp. > 1000 mg/kg

. Waste code: 792
. Waste name: Liquids with pH < 2 with metals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D006

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 01/29/2008
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 02/16/2006
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D040

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

. Waste code: U159
. Waste name: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Date form received by agency: 02/17/2004
Site name: SORENSEN ENGINEERING, INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE

SORENSON ENGINEERING, INC. (Continued) **1000208532**

SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 03/01/2002
Site name: SORENSON ENGINEERING INC
Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Site name: SORENSON ENGINEERING INC
Classification: Large Quantity Generator

Date form received by agency: 06/24/1986
Site name: SORENSON ENGINEERING INC
Classification: Conditionally Exempt Small Quantity Generator

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:

Waste code: D001
Waste name: 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.
Amount (Lbs): 2885

Waste code: D002
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.
Amount (Lbs): 125466

Waste code: D008
Waste name: LEAD
Amount (Lbs): 2169

Waste code: D029
Waste name: 1,1-DICHLOROETHYLENE

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Amount (Lbs): 4671

Waste code: D039
Waste name: TETRACHLOROETHYLENE
Amount (Lbs): 4671

Waste code: D040
Waste name: TRICHLOROETHYLENE
Amount (Lbs): 7573

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 7423

Waste code: F003
Waste 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 F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 2870

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.
Amount (Lbs): 10385

Waste code: F007
Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS
Amount (Lbs): 18098

Waste code: F008
Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.
Amount (Lbs): 80

Violation Status: No violations found

LUST REG 8:
Region: 8

SORENSON ENGINEERING, INC. (Continued) **1000208532**

County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083603657T
Local Case Num:	2000001
Case Type:	Aquifer affected
Substance:	8006619, MTB
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	16TH ST
Enf Type:	NONE
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	Tank
Global ID:	T0607199171
How Stopped Date:	3/2/2000
Enter Date:	5/3/2000
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	3/2/2000
Enforcement Date:	Not reported
Close Date:	5/4/2004
Date Prelim Assessment Workplan Submitted:	5/3/2000
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	6/16/2000
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	5/3/2000
GW Qualifies:	Not reported
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.023141
Longitude:	-117.105568
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	1
Max MTBE Soil:	19
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	RS
Staff Initials:	CR2
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	MUN
Priority:	A2
Cleanup Fund Id:	Not reported
Work Suspended:	No
Summary:	UNDER INVESTIGATION

SORENSON ENGINEERING, INC. (Continued) **1000208532**

SLIC REG 8:
Type: Groundwater
Facility Status: Additional Characterization Underway
Staff: MGC
Substance: SOLVENTS
Lead Agency: Regional Board
Location Code: Not reported
Thomas Bros Code: Not reported

ICIS:
Enforcement Action ID: CASCAA000006071CA21000048
FRS ID: 110000497971
Action Name: SORENSON ENGINEERING 06071CA21000048
Facility Name: SORENSON ENGINEERING
Facility Address: 32032 DUNLAP BLVD
YUCAIPA, CA 92399
Enforcement Action Type: Administrative Order
Facility County: SAN BERNARDINO
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Formal
EA Type Code: SCAAAO
Facility SIC Code: Not reported
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 34.023026
Longitude in Decimal Degrees: -117.105351
Permit Type Desc: Not reported
Program System Acronym: CASCA00006071CA210
Facility NAICS Code: 332721
Tribal Land Code: Not reported

Enforcement Action ID: CASCAA000006071CA21000047
FRS ID: 110000497971
Action Name: SORENSON ENGINEERING 06071CA21000047
Facility Name: SORENSON ENGINEERING
Facility Address: 32032 DUNLAP BLVD
YUCAIPA, CA 92399
Enforcement Action Type: Notice of Violation
Facility County: SAN BERNARDINO
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Informal
EA Type Code: NOV
Facility SIC Code: Not reported
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 34.023026
Longitude in Decimal Degrees: -117.105351
Permit Type Desc: Not reported
Program System Acronym: CASCA00006071CA210
Facility NAICS Code: 332721
Tribal Land Code: Not reported

Enforcement Action ID: 09-1998-0179
FRS ID: 110000497971
Action Name: SORENSON INC.
Facility Name: SORENSON ENGINEERING INCORPORATED
Facility Address: 32032 DUNLAP BLVD.
YUCAIPA, CA 923991706

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Enforcement Action Type: Civil Judicial Action
Facility County: SAN BERNARDINO
Program System Acronym: ICIS
Enforcement Action Forum Desc: Judicial
EA Type Code: CIV
Facility SIC Code: 3545
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 34.023334
Longitude in Decimal Degrees: -117.106305
Permit Type Desc: Not reported
Program System Acronym: 16807
Facility NAICS Code: Not reported
Tribal Land Code: Not reported

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

US AIRS (AFS):
Envid: 1000208532
Region Code: 09
County Code: CA071
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
D and B Number: Not reported
Facility Site Name: SORENSON ENGINEERING
Primary SIC Code: Not reported
NAICS Code: 332721
Default Air Classification Code: MAJ
Facility Type of Ownership Code: POF
Air CMS Category Code: TVM
HPV Status: Not reported

US AIRS (AFS):
Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: Not reported
Activity Status Date: 2014-05-09 00:00:00
Activity Group: Case File
Activity Type: Case File
Activity Status: Resolved

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:18:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:20:45
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:33:41
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:34:23
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2004-09-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2005-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2006-02-20 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2007-02-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2007-08-06 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2007-09-05 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-02-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-09-18 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-09-26 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-07-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-07-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-09-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-02-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-06-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-07-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-08-12 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-02-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-07-07 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-07-08 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-02-16 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-08-30 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-10-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-02-28 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-09-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-09-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-08-15 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-08-21 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-08-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-10-13 00:00:00
Activity Status Date: 2010-10-13 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Formal
Activity Status: Final Order Issued

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-08-12 00:00:00
Activity Status Date: 2010-08-12 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal
Activity Status: Achieved

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: Not reported
Activity Status Date: 2014-05-09 00:00:00
Activity Group: Case File
Activity Type: Case File
Activity Status: Resolved

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2015-02-24 00:00:00
Activity Status Date: 2015-07-21 14:19:53
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:18:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:20:45
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2016-02-29 00:00:00
Activity Status Date: 2016-04-29 19:32:39
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:33:41
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:34:23
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2004-03-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2004-09-14 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2005-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2005-03-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2006-02-20 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2007-02-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2007-08-06 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2007-09-05 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-02-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-03-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-09-18 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-09-26 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-07-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-07-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-09-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-02-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-06-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-07-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-08-12 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-02-23 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-07-07 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-07-08 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2012-02-16 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2012-08-30 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2012-10-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2013-02-28 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2013-09-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2013-09-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-08-15 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-08-21 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-08-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-10-13 00:00:00
Activity Status Date: 2010-10-13 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Formal
Activity Status: Final Order Issued

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-08-12 00:00:00
Activity Status Date: 2010-08-12 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Achieved

FINDS:

Registry ID: 110000497971

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

AIR EMISSIONS CLASSIFICATION UNKNOWN

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

HAZARDOUS WASTE BIENNIAL REPORTER

STATE MASTER

AIR MAJOR

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance

SORENSON ENGINEERING, INC. (Continued) **1000208532**

information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000208532
Registry ID:	110000497971
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110000497971

CORTESE:

Region:	CORTESE
Envirostor Id:	Not reported
Site/Facility Type:	Not reported
Cleanup Status:	Not reported
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	CORTESE
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	8
WID Id:	8 362307N01
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Cease Desist Orders & Cleanup Abatement Orders

WDS:

Facility ID:	Santa Ana River 36I013373
Facility Type:	Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	8
Facility Telephone:	Not reported
Facility Contact:	Not reported
Agency Name:	SORENSON J FRANK
Agency Address:	Not reported

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Agency City,St,Zip:	0
Agency Contact:	Not reported
Agency Telephone:	Not reported
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
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.
Complexity:	Category C - Facilities having no waste treatment systems, such as 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.

J46 **GW INVESTIGATION** **ENF** **S105024263**
SE **32032 DUNLOP BOULEVARD** **HIST CORTESE** **N/A**
1/4-1/2 **YUCAIPA, CA 92399**
0.492 mi.
2599 ft. **Site 3 of 3 in cluster J**

Relative:
Higher

Actual:
2093 ft.

ENF:

Region:	8
Facility Id:	228568
Agency Name:	Sorenson Engineering
Place Type:	Manufacturing
Place Subtype:	Manufacturing NEC
Facility Type:	Industrial
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4959
SIC Desc 1:	Sanitary Services, NEC
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

GW INVESTIGATION (Continued) **S105024263**

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:	UNREGS
Program Category1:	UNREGS
Program Category2:	UNREGS
# Of Programs:	1
WDID:	8 362307N01
Reg Measure Id:	158764
Reg Measure Type:	Unregulated
Region:	8
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes 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:	02/21/2013
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):	223918
Region:	8
Order / Resolution Number:	87-090
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	06/04/1987
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Active
Title:	Enforcement - 8 362307N01
Description:	GW INVESTIGATION
Program:	UNREGS
Latest Milestone Completion Date:	Not reported

GW INVESTIGATION (Continued) **S105024263**

# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

HIST CORTESE:

Region:	CORTESE
Facility County Code:	36
Reg By:	WBC&D
Reg Id:	8 362307N01

47
SE
1/2-1
0.701 mi.
3702 ft.

JORCO CHEMICAL COMPANY
32185 EAST OUTER HIGHWAY 10
REDLANDS, CA 92373

ENVIROSTOR **S109348600**
VCP **N/A**

Relative:
Lower

Actual:
2045 ft.

ENVIROSTOR:

Facility ID:	60000998
Status:	No Further Action
Status Date:	06/14/2012
Site Code:	401268
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	2
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Johnson Abraham
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	42
Senate:	23
Special Program:	Voluntary Cleanup Program
Restricted Use:	YES
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	34.02075
Longitude:	-117.1034
APN:	0301-15-47, 0301-16-09
Past Use:	ABOVE GROUND STORAGE TANKS, MANUFACTURING - CHEMICALS, UNDERGROUND STORAGE TANKS
Potential COC:	Freon 113 Ethyl acrylate Ethylbenzene n-Hexane Methanol Methyl acrylate Methyl methacrylate Styrene
Confirmed COC:	Ethyl acrylate Ethylbenzene n-Hexane Methyl methacrylate Methanol Styrene Methyl acrylate Freon 113
Potential Description:	SOIL
Alias Name:	0301-15-47
Alias Type:	APN
Alias Name:	0301-16-09
Alias Type:	APN
Alias Name:	T0607100271
Alias Type:	GeoTracker Global ID

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Alias Name: 401268
Alias Type: Project Code (Site Code)
Alias Name: 60000998
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/15/2010
Comments: DTSC signed the VCA Amendment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/25/2010
Comments: DTSC sent the letter to the Project Proponent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/16/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 09/18/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/18/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/05/2008
Comments: Voluntary Cleanup Agreement fully executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 09/19/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 03/07/2011

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 03/07/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 09/26/2011
Comments: DTSC conditionally approved the Workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 06/14/2012
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

VCP:
Facility ID: 60000998
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 2
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Johnson Abraham
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 401268
Assembly: 42
Senate: 23
Special Programs Code: Voluntary Cleanup Program
Status: No Further Action
Status Date: 06/14/2012
Restricted Use: YES
Funding: Responsible Party
Lat/Long: 34.02075 / -117.1034
APN: 0301-15-47, 0301-16-09
Past Use: ABOVE GROUND STORAGE TANKS, MANUFACTURING - CHEMICALS, UNDERGROUND STORAGE TANKS
Potential COC: 30012, 30271, 30272, 30322, 30364, 30372, 30389, 30525
Confirmed COC: 30271,30272,30322,30389,30364,30525,30372,30012

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Potential Description: SOIL
Alias Name: 0301-15-47
Alias Type: APN
Alias Name: 0301-16-09
Alias Type: APN
Alias Name: T0607100271
Alias Type: GeoTracker Global ID
Alias Name: 401268
Alias Type: Project Code (Site Code)
Alias Name: 60000998
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/15/2010
Comments: DTSC signed the VCA Amendment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/25/2010
Comments: DTSC sent the letter to the Project Proponent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/16/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 09/18/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/18/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/05/2008
Comments: Voluntary Cleanup Agreement fully executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Completed Date:	09/19/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Notice
Completed Date:	03/07/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	03/07/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	09/26/2011
Comments:	DTSC conditionally approved the Workplan.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	06/14/2012
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
REDLANDS	1008407740	EDISON/REDLANDS MGP	501-525 W REDLANDS AT KENDALL	92373	EDR MGP
YUCAIPA	1003878992	METH-LAB YUCAIPA	YUCAIPA	92399	SEMS-ARCHIVE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
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 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 04/30/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/22/2017
Date Data Arrived at EDR: 06/13/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 94

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/09/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/13/2017
Date Data Arrived at EDR: 11/27/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
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: 11/13/2017
Date Data Arrived at EDR: 11/27/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
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: 01/16/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/12/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 48

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/06/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 15
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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).

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 134

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

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: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
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.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/22/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 36
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 21
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30
Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 36
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 39

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/09/2018
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/30/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

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: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: No Update Planned

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

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 02/02/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 01/19/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 16

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 16

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 02/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 27

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/30/2017
Date Data Arrived at EDR: 12/01/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Semi-Annually

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: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
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: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 02/15/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 02/20/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/16/2018
Next Scheduled EDR Contact: 05/28/2018
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: 01/11/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/08/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 05/21/2018
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: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 01/26/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 01/04/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 99
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 79

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 10/29/2017
Date Data Arrived at EDR: 11/28/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 45

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 92

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

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: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/01/2017
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 42

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
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: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 54

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 55

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/14/2018
Date Data Arrived at EDR: 02/16/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 46

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/08/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
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

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 28
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 31
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/29/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/14/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 29
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 12/04/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 42
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/05/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 35
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/14/2017
Date Data Arrived at EDR: 12/15/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 32
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 36
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/11/2018
Date Made Active in Reports: 02/22/2018
Number of Days to Update: 42

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 63

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 10

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/26/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/26/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 14

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/20/2017
Date Data Arrived at EDR: 11/29/2017
Date Made Active in Reports: 01/19/2018
Number of Days to Update: 51

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/05/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 40

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 12/04/2017
Date Data Arrived at EDR: 12/06/2017
Date Made Active in Reports: 12/27/2017
Number of Days to Update: 21

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
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: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 9

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/02/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 54

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
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: 11/14/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 28

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206
Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 56
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/16/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 29
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 10/09/2017
Number of Days to Update: 171
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 01/17/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 28
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/17/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
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: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/18/2018
Number of Days to Update: 13

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
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: 02/21/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 40

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 12

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/12/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 15

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/11/2018
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 20

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/20/2018
Next Scheduled EDR Contact: 06/04/2018
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: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
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: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 30

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/31/2018
Date Data Arrived at EDR: 02/01/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 41

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/07/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/08/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 50

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/15/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 50

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/18/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 56

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/18/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 64

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
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: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/05/2018
Number of Days to Update: 33

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 42

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017
Date Data Arrived at EDR: 11/03/2017
Date Made Active in Reports: 11/17/2017
Number of Days to Update: 14

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

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: 11/30/2017
Date Data Arrived at EDR: 12/01/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 46

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 05/21/2018
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: 12/04/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 37

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
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: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/07/2017
Date Made Active in Reports: 12/19/2017
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 02/01/2018
Number of Days to Update: 42
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/16/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/18/2017
Number of Days to Update: 31
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
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: 12/12/2017
Date Data Arrived at EDR: 12/14/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 28
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/11/2018
Number of Days to Update: 78
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28
Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 27
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/04/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 42

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
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: 12/14/2017
Date Data Arrived at EDR: 12/15/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 28

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 16

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 41

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
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: 01/04/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 28

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 37

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 29

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List

Cupa facilities

Date of Government Version: 01/26/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 09/28/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 18

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 50

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 48

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
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: 02/08/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 54

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
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: 02/28/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 16
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 01/19/2018
Number of Days to Update: 10
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/01/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/10/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/09/2018
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/08/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

23.84 ACRES
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

TARGET PROPERTY COORDINATES

Latitude (North):	34.028403 - 34° 1' 42.25''
Longitude (West):	117.114556 - 117° 6' 52.40''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	489424.3
UTM Y (Meters):	3765116.8
Elevation:	2092 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5630639 YUCAIPA, CA
Version Date:	2012
Northwest Map:	5630631 REDLANDS, CA
Version Date:	2012

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).

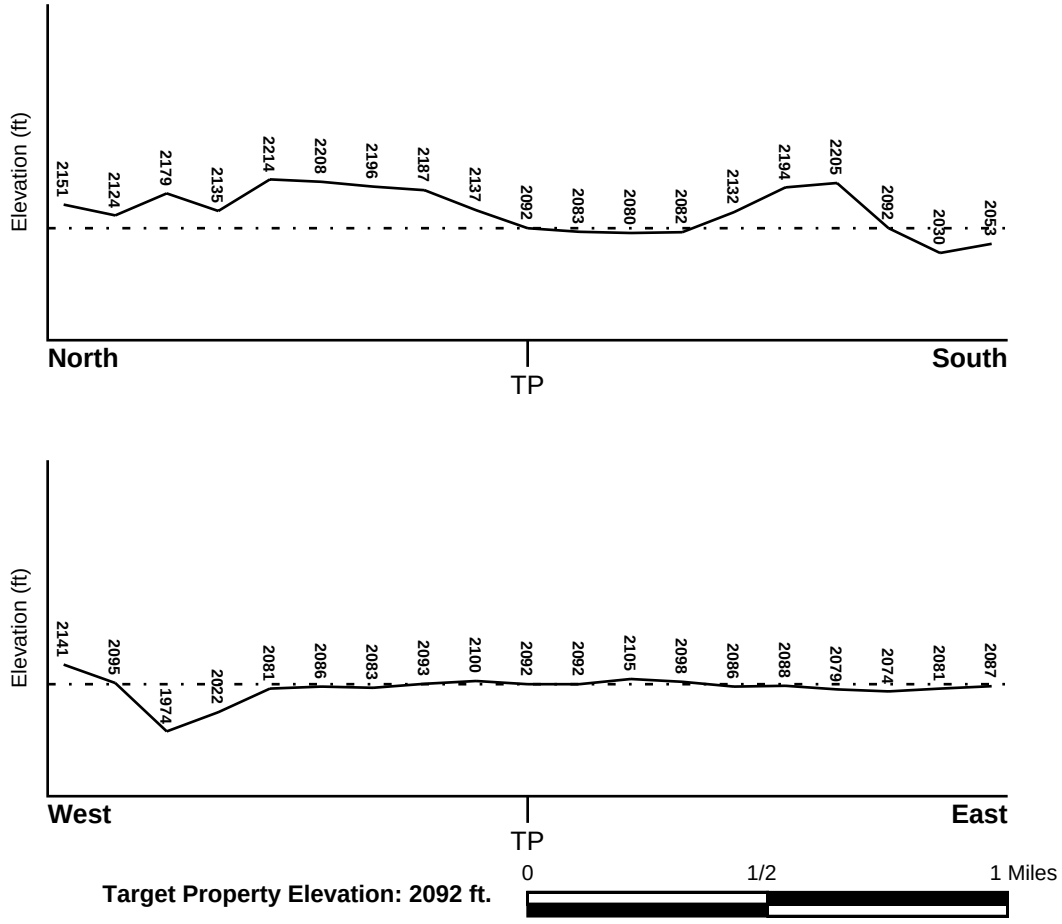
TOPOGRAPHIC INFORMATION

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 South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



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.

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

Flood Plain Panel at Target Property	FEMA Source Type
06071C8740H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06071C8717H	FEMA FIRM Flood data
06071C8719H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	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*:

Search Radius:	1.25 miles
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	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/8 - 1/4 Mile West	WSW
1G	1/8 - 1/4 Mile West	WSW

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

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 quickly 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

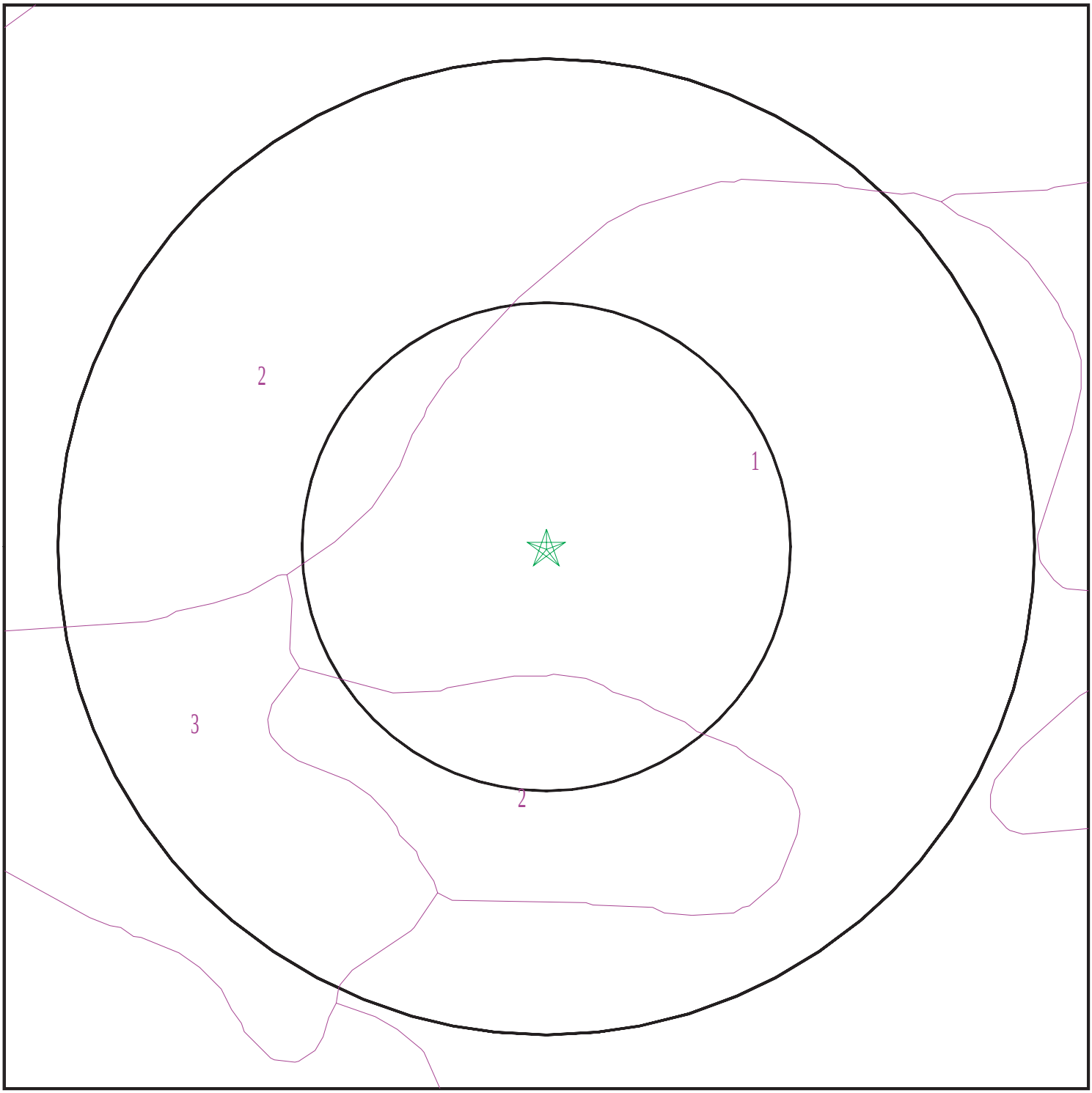
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

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).

SSURGO SOIL MAP - 5260584.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	23.84 Acres	CLIENT:	The Reynolds Group
ADDRESS:	SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT:	Rosanne Fischer
LAT/LONG:	34.028403 / 117.114556	INQUIRY #:	5260584.2s
		DATE:	April 16, 2018 4:13 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6.3 Min: 5.6
2	22 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.8 Min: 6.6
3	31 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	53 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.6

Soil Map ID: 2

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6.5 Min: 5.6
2	22 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	31 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6
4	53 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.6

Soil Map ID: 3

Soil Component Name: Hanford

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	59 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6

LOCAL / REGIONAL WATER AGENCY RECORDS

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.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000139882	1/4 - 1/2 Mile ESE
3	USGS40000139964	1/2 - 1 Mile North
9	USGS40000139971	1/2 - 1 Mile NW
10	USGS40000139908	1/2 - 1 Mile East
11	USGS40000139993	1/2 - 1 Mile NNE
12	USGS40000139875	1/2 - 1 Mile East

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

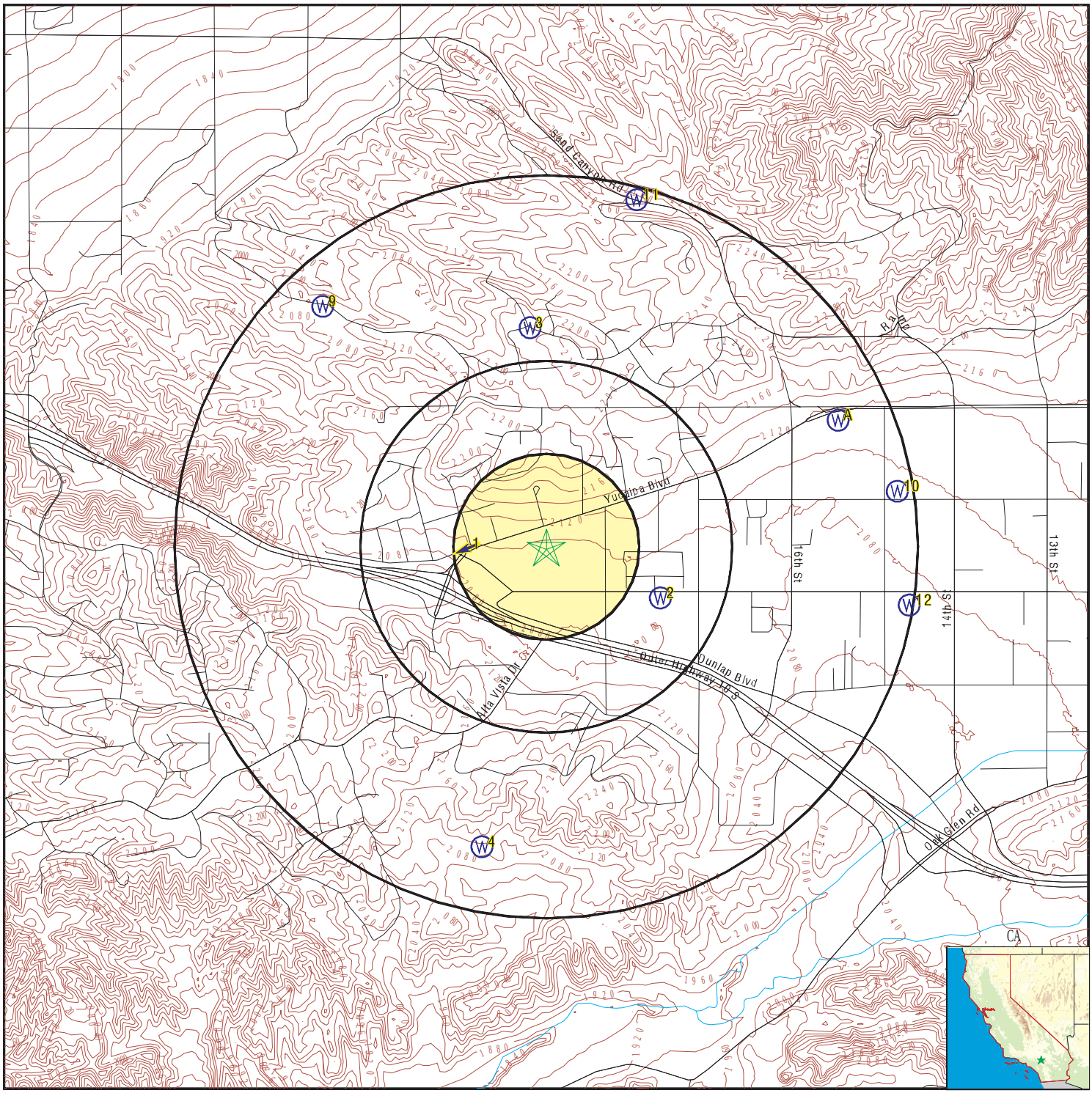
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	2400	1/2 - 1 Mile SSW
A5	2392	1/2 - 1 Mile ENE
A6	2393	1/2 - 1 Mile ENE
A7	2394	1/2 - 1 Mile ENE
A8	168	1/2 - 1 Mile ENE

PHYSICAL SETTING SOURCE MAP - 5260584.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	23.84 Acres	CLIENT:	The Reynolds Group
ADDRESS:	SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT:	Rosanne Fischer
LAT/LONG:	34.028403 / 117.114556	INQUIRY #:	5260584.2s
		DATE:	April 16, 2018 4:13 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

			Database	EDR ID Number
1 **West** **1/8 - 1/4 Mile** **Higher**	Site ID:	083602839T	**AQUIFLOW**	**50239**
	Groundwater Flow:	WSW		
	Shallow Water Depth:	150		
	Deep Water Depth:	175		
	Average Water Depth:	Not Reported		
	Date:	09/04/1996		

2
ESE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000139882**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340135117063001		
Monloc name:	002S002W05K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0264034
Longitude:	-117.1092007	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		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	690
Welldepth units:	ft	Wellholedepth:	690
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

3
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000139964**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340213117065201		
Monloc name:	001S002W32P001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0369586
Longitude:	-117.1153123	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2216.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670101	Welldepth:	378
Welldepth units:	ft	Wellholedepth:	513
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

4
SSW **CA WELLS** **2400**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-05K01 S	User ID:	TAN
FRDS Number:	3610053009	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340100.0 1170700.0	Precision:	Undefined
Source Name:	WELL 10		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		
Sample Collected:	07-MAY-12	Findings:	510. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07-MAY-12	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	07-MAY-12	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07-MAY-12	Findings:	190. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07-MAY-12	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07-MAY-12	Findings:	49. MG/L
Chemical:	CALCIUM		
Sample Collected:	07-MAY-12	Findings:	8.3 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	07-MAY-12	Findings:	53. MG/L
Chemical:	SODIUM		

Sample Collected:	07-MAY-12	Findings:	2.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07-MAY-12	Findings:	20. MG/L
Chemical:	CHLORIDE		
Sample Collected:	07-MAY-12	Findings:	41. MG/L
Chemical:	SULFATE		
Sample Collected:	07-MAY-12	Findings:	0.49 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07-MAY-12	Findings:	6.4 UG/L
Chemical:	VANADIUM		
Sample Collected:	07-MAY-12	Findings:	330. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-MAY-12	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAY-12	Findings:	6000. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06-MAY-13	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-MAY-14	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAY-15	Findings:	520. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	26-MAY-15	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	26-MAY-15	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	26-MAY-15	Findings:	200. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	26-MAY-15	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	26-MAY-15	Findings:	48. MG/L
Chemical:	CALCIUM		
Sample Collected:	26-MAY-15	Findings:	7.6 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	26-MAY-15	Findings:	52. MG/L
Chemical:	SODIUM		
Sample Collected:	26-MAY-15	Findings:	2.7 MG/L
Chemical:	POTASSIUM		
Sample Collected:	26-MAY-15	Findings:	18. MG/L
Chemical:	CHLORIDE		
Sample Collected:	26-MAY-15	Findings:	44. MG/L
Chemical:	SULFATE		
Sample Collected:	26-MAY-15	Findings:	0.45 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		

Sample Collected:	26-MAY-15	Findings:	6.1 UG/L
Chemical:	VANADIUM		
Sample Collected:	26-MAY-15	Findings:	360. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	26-MAY-15	Findings:	29. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAY-15	Findings:	6600. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	25-JUL-16	Findings:	7.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	15-MAY-17	Findings:	7.1 MG/L
Chemical:	NITRATE (AS N)		

A5
ENE **CA WELLS 2392**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-04C01 S	User ID:	TAN
FRDS Number:	3610053001	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	Undefined
Source Name:	WELL 01 - INACTIVE		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		

A6
ENE **CA WELLS 2393**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-04G02 S	User ID:	TAN
FRDS Number:	3610053003	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	Undefined
Source Name:	WELL 03		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		

Sample Collected:	22-FEB-06	Findings:	1.4 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

A7
ENE **CA WELLS** **2394**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-04G03 S	User ID:	TAN
FRDS Number:	3610053002	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	Undefined
Source Name:	WELL 02-A		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		
Sample Collected:	29-MAY-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-MAY-13	Findings:	530. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	13-MAY-13	Findings:	7.9
Chemical:	PH, LABORATORY		
Sample Collected:	13-MAY-13	Findings:	190. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	13-MAY-13	Findings:	230. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	13-MAY-13	Findings:	240. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	13-MAY-13	Findings:	71. MG/L
Chemical:	CALCIUM		
Sample Collected:	13-MAY-13	Findings:	15. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	13-MAY-13	Findings:	28. MG/L
Chemical:	SODIUM		
Sample Collected:	13-MAY-13	Findings:	2.2 MG/L
Chemical:	POTASSIUM		
Sample Collected:	13-MAY-13	Findings:	17. MG/L
Chemical:	CHLORIDE		
Sample Collected:	13-MAY-13	Findings:	43. MG/L
Chemical:	SULFATE		
Sample Collected:	13-MAY-13	Findings:	0.58 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		

Sample Collected:	13-MAY-13	Findings:	4.2 UG/L
Chemical:	VANADIUM		
Sample Collected:	13-MAY-13	Findings:	320. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	13-MAY-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-MAY-13	Findings:	4600. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	05-MAY-14	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-JUN-14	Findings:	1.3e-002 UG/L
Chemical:	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected:	22-SEP-14	Findings:	7. UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	26-MAY-15	Findings:	25. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-MAY-16	Findings:	530. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	16-MAY-16	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	16-MAY-16	Findings:	200. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	16-MAY-16	Findings:	240. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	16-MAY-16	Findings:	5.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-MAY-16	Findings:	220. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	16-MAY-16	Findings:	66. MG/L
Chemical:	CALCIUM		
Sample Collected:	16-MAY-16	Findings:	14. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	16-MAY-16	Findings:	25. MG/L
Chemical:	SODIUM		
Sample Collected:	16-MAY-16	Findings:	1.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	16-MAY-16	Findings:	14. MG/L
Chemical:	CHLORIDE		
Sample Collected:	16-MAY-16	Findings:	42. MG/L
Chemical:	SULFATE		
Sample Collected:	16-MAY-16	Findings:	0.62 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	16-MAY-16	Findings:	4.8 UG/L
Chemical:	VANADIUM		

Sample Collected:	16-MAY-16	Findings:	330. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	16-MAY-16	Findings:	5.9 MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	01-MAY-17	Findings:	6.2 MG/L
Chemical:	NITRATE (AS N)		

A8
ENE **CA WELLS** **168**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	01N/05E-36M02 S	User ID:	TAN
FRDS Number:	3610073008	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	100 Feet (one Second)
Source Name:	WELL 12E		
System Number:	3610073		
System Name:	HI DESERT WD		
Organization That Operates System:			
	P O BOX 1210		
	YUCCA VALLEY, CA 92286-1210		
Pop Served:	28000	Connections:	8141
Area Served:	EAST YUCCA VALLEY		
Sample Collected:	03-NOV-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	10-NOV-16	Findings:	2.6 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	17-NOV-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	22-NOV-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	01-DEC-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	08-DEC-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	22-DEC-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	29-DEC-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	12-JAN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	12-JAN-17	Findings:	330. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	19-JAN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	25-JAN-17	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	02-FEB-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	09-FEB-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-FEB-17	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-FEB-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	02-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	09-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-MAR-17	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	06-APR-17	Findings:	5.03 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	06-APR-17	Findings:	1.83 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	06-APR-17	Findings:	3.03 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	06-APR-17	Findings:	1.25 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	06-APR-17	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	06-APR-17	Findings:	0.47 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	13-APR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	20-APR-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	27-APR-17	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-MAY-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	11-MAY-17	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	18-MAY-17	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	25-MAY-17	Findings:	2.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	01-JUN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	15-JUN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	29-JUN-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-JAN-12	Findings:	500. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04-JAN-12	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	04-JAN-12	Findings:	84. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	04-JAN-12	Findings:	100. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04-JAN-12	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	04-JAN-12	Findings:	45. MG/L
Chemical:	CALCIUM		
Sample Collected:	04-JAN-12	Findings:	9.2 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04-JAN-12	Findings:	35. MG/L
Chemical:	SODIUM		
Sample Collected:	04-JAN-12	Findings:	1.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04-JAN-12	Findings:	63. MG/L
Chemical:	CHLORIDE		
Sample Collected:	04-JAN-12	Findings:	35. MG/L
Chemical:	SULFATE		
Sample Collected:	04-JAN-12	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	04-JAN-12	Findings:	300. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04-JAN-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-JAN-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-JAN-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-JAN-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-JAN-12	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	02-FEB-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-FEB-12	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-FEB-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-FEB-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-MAR-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-APR-12	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-APR-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-APR-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-APR-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-MAY-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-MAY-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-MAY-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-MAY-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	31-MAY-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-JUN-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-JUN-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-JUN-12	Findings:	22. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-JUN-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	05-JUL-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-JUL-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-JUL-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-JUL-12	Findings:	250. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	26-JUL-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-AUG-12	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-AUG-12	Findings:	8.9 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-AUG-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-AUG-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-AUG-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-SEP-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-SEP-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-SEP-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-SEP-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-OCT-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-OCT-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-OCT-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-OCT-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-NOV-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-NOV-12	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-NOV-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-NOV-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	29-NOV-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-DEC-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-DEC-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-DEC-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-DEC-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JAN-13	Findings:	300. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	03-JAN-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-JAN-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-JAN-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-JAN-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	31-JAN-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-FEB-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-FEB-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-FEB-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-FEB-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAR-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-MAR-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-MAR-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-MAR-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-APR-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-APR-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-APR-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	25-APR-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-MAY-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-MAY-13	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-MAY-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-MAY-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-MAY-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-JUN-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-JUN-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-JUN-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-JUN-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JUL-13	Findings:	290. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	03-JUL-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-JUL-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-JUL-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-JUL-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-AUG-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-AUG-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-AUG-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-AUG-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-AUG-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-SEP-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-SEP-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	03-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	31-OCT-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-NOV-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-NOV-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-NOV-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-NOV-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-DEC-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-DEC-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-DEC-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-DEC-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-JAN-14	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-JAN-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-FEB-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-FEB-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-FEB-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-FEB-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-MAR-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-MAR-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-MAR-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	27-MAR-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-APR-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-APR-14	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-APR-14	Findings:	1.55 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	10-APR-14	Findings:	1.52 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	17-APR-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-NOV-14	Findings:	300. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	20-NOV-14	Findings:	12. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-NOV-14	Findings:	1.2 UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	26-NOV-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-DEC-14	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-DEC-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-DEC-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-DEC-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-DEC-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-JAN-15	Findings:	480. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07-JAN-15	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	07-JAN-15	Findings:	97. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07-JAN-15	Findings:	120. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07-JAN-15	Findings:	160. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07-JAN-15	Findings:	46. MG/L
Chemical:	CALCIUM		
Sample Collected:	07-JAN-15	Findings:	9.6 MG/L
Chemical:	MAGNESIUM		

Sample Collected:	07-JAN-15	Findings:	37. MG/L
Chemical:	SODIUM		
Sample Collected:	07-JAN-15	Findings:	1.6 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07-JAN-15	Findings:	64. MG/L
Chemical:	CHLORIDE		
Sample Collected:	07-JAN-15	Findings:	36. MG/L
Chemical:	SULFATE		
Sample Collected:	07-JAN-15	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07-JAN-15	Findings:	290. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-JAN-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-JAN-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-JAN-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-JAN-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-FEB-15	Findings:	7.7
Chemical:	PH, LABORATORY		
Sample Collected:	05-FEB-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-FEB-15	Findings:	0.32 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	12-FEB-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-FEB-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-FEB-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-MAR-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-MAR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-MAR-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-APR-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-APR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	22-APR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-APR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAY-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-MAY-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-MAY-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-MAY-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-JUN-15	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-JUN-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-JUN-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-JUN-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-JUL-15	Findings:	250. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-JUL-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-JUL-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-JUL-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-JUL-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-JUL-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-AUG-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-AUG-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-AUG-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-AUG-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-SEP-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-SEP-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	17-SEP-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-SEP-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-OCT-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-OCT-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-OCT-15	Findings:	12. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-OCT-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-OCT-15	Findings:	12. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-NOV-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-NOV-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-NOV-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-DEC-15	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	10-DEC-15	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	17-DEC-15	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-DEC-15	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-DEC-15	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JAN-16	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JAN-16	Findings:	370. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-JAN-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	14-JAN-16	Findings:	2.57 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	14-JAN-16	Findings:	1.07 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	14-JAN-16	Findings:	0.3 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	21-JAN-16	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	28-JAN-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-FEB-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	24-MAR-16	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	31-MAR-16	Findings:	2.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-APR-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	21-APR-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	28-APR-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	05-MAY-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	12-MAY-16	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	19-MAY-16	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	26-MAY-16	Findings:	2.6 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	02-JUN-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	09-JUN-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-JUN-16	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-JUN-16	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-JUN-16	Findings:	3.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JUL-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JUL-16	Findings:	340. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-JUL-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	28-JUL-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-AUG-16	Findings:	3.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	11-AUG-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	18-AUG-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	25-AUG-16	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	01-SEP-16	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	08-SEP-16	Findings:	3.6 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	22-SEP-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	29-SEP-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	06-OCT-16	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	13-OCT-16	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	20-OCT-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	27-OCT-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		

9
NW
1/2 - 1 Mile
Lower

FED USGS **USGS40000139971**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340216117072701		
Monloc name:	001S002W31R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0377919
Longitude:	-117.125035	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2040.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670101	Welldepth:	315
Welldepth units:	ft	Wellholedepth:	327
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

10
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000139908**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340150117055001		
Monloc name:	002S002W04C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0305698
Longitude:	-117.0980891	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:	2082
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	712
Welldepth units:	ft	Wellholedepth:	712
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

11
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000139993**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340231117063401		
Monloc name:	001S002W32G001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0419584
Longitude:	-117.1103122	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2132.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19520101	Welldepth:	212
Welldepth units:	ft	Wellholedepth:	250
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

12
East
1/2 - 1 Mile
Lower

FED USGS **USGS40000139875**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340134117054801		
Monloc name:	002S002W04L001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0261255
Longitude:	-117.0975334	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:	2074
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	530
Welldepth units:	ft	Wellholedepth:	537
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

1G
West
1/8 - 1/4 Mile
Lower

AQUIFLOW **50239**

Site ID:	083602839T
Groundwater Flow:	WSW
Shallow Water Depth:	150
Deep Water Depth:	175
Average Water Depth:	Not Reported
Date:	09/04/1996

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92399	13	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN BERNARDINO COUNTY, CA

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.678 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	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.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} 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. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
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 Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, 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 Public Health
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 Database 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 at 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 elevated 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 D

SANBORN MAP FINDINGS, CITY DIRECTORY SEARCH, AND ENVIRONMENTAL LIEN SEARCH

23.84 Acres

SEC of Yucaipa Blvd. and Avenue E

Yucaipa, CA 92399

Inquiry Number: 5260584.3

April 16, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/16/18

Site Name:

23.84 Acres
SEC of Yucaipa Blvd. and Aver
Yucaipa, CA 92399
EDR Inquiry # 5260584.3

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by The Reynolds Group were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 7F3A-4875-AC7C

PO # 8460

Project 8460 PSG Yucaipa

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.

Sanborn® Library search results

Certification #: 7F3A-4875-AC7C

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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23.84 Acres
SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Inquiry Number: 5260584.5
April 18, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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Executive Summary

Findings

City Directory Images

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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 Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1985	☑	☑	Haines Criss-Cross Directory
1980	☑	☑	Haines Criss-Cross Directory
1975	☑	☑	Haines Criss-Cross Directory
1972	☑	☑	Polk's City Directory
1967	☑	☑	Luskey City Directory
1965	☑	☑	Luskey City Directory

FINDINGS

TARGET PROPERTY STREET

SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Year	*CD Image*	*Source*

YUCAIPA BLVD

2014	pg A2	EDR Digital Archive
2010	pg A4	EDR Digital Archive
2005	pg A6	EDR Digital Archive
2000	pg A9	EDR Digital Archive
1995	pg A11	EDR Digital Archive
1992	pg A13	EDR Digital Archive
1985	pg A15	Haines Criss-Cross Directory
1980	pg A17	Haines Criss-Cross Directory
1975	pg A19	Haines Criss-Cross Directory
1975	pg A20	Haines Criss-Cross Directory
1972	pg A22	Polk's City Directory
1967	pg A24	Luskey City Directory
1965	pg A26	Luskey City Directory
1965	pg A27	Luskey City Directory

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
AVENUE E		
2014	pg. A1	EDR Digital Archive
2010	pg. A3	EDR Digital Archive
2005	pg. A5	EDR Digital Archive
2000	pg. A8	EDR Digital Archive
1985	pg. A14	Haines Criss-Cross Directory
1980	pg. A16	Haines Criss-Cross Directory
1975	pg. A18	Haines Criss-Cross Directory
1972	pg. A21	Polk's City Directory
1967	pg. A23	Luskey City Directory
1965	pg. A25	Luskey City Directory
E AVE		
1995	pg. A10	EDR Digital Archive
1992	pg. A12	EDR Digital Archive

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2014

31453 BAKERS BURGERS INC
31535 DURBINS LAWN & TREE SERVICE
31560 DYNAMIC DIESEL
SUNDEN, DAVID S
WHITE, RENEE B
31624 DOUGHTY, KEVIN D
31635 CORDER, ELIZABETH A
31642 BROOKS, YMELDA G
DAVIES, GERI B
31658 BARRON, KENNETH J
31670 BUENA VISTA CNSTR SOLUTIONS
RUDDY, ANTHONY R
TOTAL MAINT CARE SOLUTIONS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2014

31340	ARCO AM PM
	YUCAIPA MART INC
31416	LOZANO, VALENTINE
31418	L A CUSTOM POOLS AND SPAS INC
31429	BURK JACK D
31440	PARTY SHOPPE
31462	CRAWFORD, CHRIS R
	HARDESTY INVESTMENTS
	HARDESTY, BRANDON
	HARDESTY, STEVE W
	HOAG, JULIA
	PULIDO, DAVID
	REGIMBAL, ROD
	TANGUAY, ELLEN
	WEBSTER, SHARON
31472	BOLINGER, KIMBERLY
	GUERRERO, MARIBEL
	TERAN, RUFINA
31484	HALLAWAY, JACK
31510	QUALITY POWER AUTOMOTIVE INC
31516	EUROPEAN AUTOMOTIVE
31558	RICHARD, A P
31582	CRILLY, RICHARD L
31594	ROGERS, RYAN N
31604	COLOR TRENZ
31608	LOPEZ, CARMEN
31614	FISHER, MOLLIE F
31642	HARDESTY, ANGELA
31710	EXA INC
	EXCLUSIVE AUTO
31724	OCCUPANT UNKNOWN,
31741	EVANS, RACHELLE
	U-STORE-IT MINI WAREHOUSE CO
31776	GIBSON & SON PROVISIONS
	J R M CONSTRUCTION
	NATIONAL FIREARMS ACADEMY
31785	MAMMEL, MARK T
	PRINCE PEACE LUTHERAN CHURCH
31786	QUALITY PIPING SYSTEMS
31810	KIMBERLYS HAIR DESIGN
	SHEAR HEAVEN
31828	MGJ TRANSPORT INC
	ORTIZ, JOHN N
31832	PARSONS, GREGORY K

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2010

31514 IRWIN, ARDIS L
31535 DURBINS LAWN & TREE SERVICE
31548 TOWER FOUNDATIONS INC
31560 DYNAMIC DIESEL
SUNDEN, DAVID S
WHITE, RENEE B
31624 OCCUPANT UNKNOWN,
31635 CORDER, ELIZABETH A
31642 CHAVEZ, GILBERT E
31658 BARRON, KENNETH J
31670 BUENA VISTA CNSTR SOLUTIONS
OCCUPANT UNKNOWN,
TONY RUDDY

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2010

31340	ARCO AM PM
	BP NORTH AMERICA
	YUCAIPA MART INC
31416	LOZANO, VALENTINE
31418	L A CUSTOM POOLS AND SPAS INC
31429	BURK JACK D
31440	PARTY SHOPPE
31462	BRACKEN, TROY S
	CRAWFORD, CHRIS R
	HARDESTY INVESTMENTS
	HARDESTY, STEVE W
	HICKS, PATRICK
	LEWIS, GEORGE E
	LOMBARDI, M
	WALLACE, KONARD
	WELLS, BERVELY
31472	UNDERWOOD, SHERRY D
31484	BIG VALLEY CORP
	HALLAWAY, JACK
31510	QUALITY POWER INC
31516	EUROPEAN AUTOMOTIVE
31558	KNOLL HAVEN ANTIQUES
	RICHARD, A P
31582	CRILLY, MEGAN
31594	ROGERS, RYAN N
31608	YUCAIPA STEREO
31614	E & E ORNAMENTAL IRON
	FISHER, MOLLIE F
31710	EXA INC
	EXCLUSIVE AUTO
31724	OCCUPANT UNKNOWN,
	OLSON CAROL AND ASSOCIATES
31730	ZIMMERMAN, KURT R
31738	QUALITY TRAVEL
31741	HOLMAN, EDWARD A
	SHEAHAN, DARREN
	U-STORE-IT MINI WAREHOUSE CO
31776	GIBSON & SON PROVISIONS
	VAN CAMPS INCORPORATED
31785	PRINCE PEACE LUTHERAN CHURCH
	WASKOW, SANDRA J
31786	QUALITY PIPING SYSTEMS
	SCP INSURANCE SERVICES
31810	BREWSTER HELEN SALON
	KIMBERLYS HAIR DESIGN
	MANE CREATIONS
	SHEAR HEAVEN
31828	OCCUPANT UNKNOWN,
31832	BELLYSIMO PHOTOGRAPHY
	PARSONS, GREGORY K

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2005

31514 IRWIN, ARDIS
31535 DURBINS LAWN & TREE SERVICE
31548 NETWORK SECURITY ALLIANCE INC
TOWER FOUNDATIONS INC
31635 CORDER, DALE E
31642 CHAVEZ, GILBERT E
31658 BARRON, KENNETH J
31670 RUDDY TONY
RUDDY, ANTHONY R

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2005

31340	ARCO AM/PM
	RS PAULENTERPRISES INC
	YUCAIPA MART INC
31412	YUCAIPA CHEVRON
31418	LA CUSTOM POOLS & SPAS
31440	PARTY SHOPPE
31462	ACEVES, EDUARDO
	ALFRED, DOUGLAS
	COPELAND, WALTER
	FISHER, AMY
	FRAINEE, CYNTHIA R
	GLASER, DOLORES A
	HARDESTY, STEVE W
	LOMBARDI, M
	STEWART, EVA M
	UGAPO, MELINA
	ZUNIGA, ROBERT
31472	LOPEZ, RAMONA
	MARISCAL, UBALDO B
31484	GATES TONY
31504	GATEWAY TIRE & SERVICE
31510	TEKNIDYNE INC
	WELLERS DRAPERIES
31516	EUROPEAN AUTOMOTIVE
31520	OCCUPANT UNKNOWN,
31558	KNOLL, HAVEN
31594	CRILLY, FERN L
31604	HILLWIG-GOODROW LLC
31614	E & E ORNAMENTAL IRON
	FISHER, MOLLIE F
31640	FUNITURE SERVICE
31710	EXCLUSIVE AUTO
31724	OLSON CAROL AND ASSOCIATES
	OLSON, LELAND P
31730	ZIMMERMAN, KURT R
31738	INLAND PACIFIC VENTURES LLC
	MOORE PACIFIC VENTURES LLC
	QUALITY TRAVEL
31741	U-STORE-IT MINI WAREHOUSE CO
31776	RAVE BODY GEAR
	VAN CAMPS INCORPORATED
	WOODS, JO A
31785	KOGLER, RICHARD
	PRINCE PEACE LUTHERAN CHURCH
31786	SEP INSURANCE SVCS INC
	STEVE PARKER INSURANCE
31810	KIMBERLYS HAIR DESIGN
	MANE CREATIONS
	SHEAR HEAVEN
31828	BURFORD, WALDO T

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2005 (Cont'd)

31832 PERRENOUD, NICHOLAS A

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2000

31548 HART, C
31560 KOSHAREK, EMILY
31616 SANCHEZ, C G
31635 CORDER, DALE E
31642 OCCUPANT UNKNOWN,
31670 RUDDY, TRACY L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2000

31418 VALLEY TV
31440 PARTY SHOPPE
31462 ATKINSON, CHARLES
BRAY, TOBY
PINEDA, MARIA
SEPULVEDA, FERMINA
STEWART, EVA
VASQUEZ, LISA
31484 CUEVAS, JASMINE
31504 GATEWAY TIRE & SERVICE
31514 RODRIQUEZ JULIAN
TAX OFFICE-SENIOR ASSIST
31558 KNOLL HAVEN ANTIQUES
31582 CRILLY, CARL G
31594 CRILLY, B E
31604 DESHLERS SPECIALTIES INC
31614 E & E ORNAMENTAL IRON
FISHER, MOLLIE F
31640 FUNITURE SERVICE
31680 OCCUPANT UNKNOWN,
31710 COLLECTORS CLASSICS INTL
JOES AUTOMATIC TRANSM SVC
31724 OLSON CAROL AND ASSOCIATES
OLSON, LELAND P
31730 ZIMMERMAN, G C
31738 MOORE CHARLES
QUALITY TRAVEL
REAL SHOPPE INC
31741 OCCUPANT UNKNOWN,
U-STORE-IT MINI WAREHOUSE CO
31776 OCCUPANT UNKNOWN,
31785 PRINCE OF PACE LTHERAN CHURCH
31786 OCCUPANT UNKNOWN,
31810 OCCUPANT UNKNOWN,
SHEAR HEAVEN
31828 OCCUPANT UNKNOWN,
31838 ADAMS, JIM

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

E AVE 1995

31535	ERB, OTTO A
31548	OCCUPANT UNKNOWNN
31608	OCCUPANT UNKNOWNN
31622	OCCUPANT UNKNOWNN
31635	CORDER, DALE E
31658	OCCUPANT UNKNOWNN
31670	ASPRIL, J E

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 1995

31340 PETROMART INC
31412 YUCAIPA CHEVRON
31440 PARTY SHOPPE
31462 ATKINSON, CHARLES JR
MANASUK, GUY
NAVARRO, JOSE M
31472 GLASER, TONI
PALM AUTO DETAIL
31504 OCCUPANT UNKNOWNN
31510 COST GUARD CARPET
TEKNIDYNE
31512 VISIONS BEAUTY SALON
31516 ARYAFAR, BEHROUZ
BISH FULL SERVICE
31558 OCCUPANT UNKNOWNN
31582 CRILLY, CARL G
31594 OCCUPANT UNKNOWNN
31604 DESHLERS SPECIALTIES INC
31608 CONSERVATORY OF DANCE INC
OCCUPANT UNKNOWNN
31614 E & E ORNAMENTAL IRON
FISHER, RON
31629 ALL WESTERN TRMT & PEST CTRL
31640 FUNITURE SERVICE
31710 COLLECTORS CLASSICS INTL
JOES AUTOMATIC TRANSM SVC
31711 PEDAL CARS SOUTHERN CALIFORNIA
31724 OLSON CAROL AND ASSOCIATES
OLSON, LELAND P
31730 ZIMMERMAN, GIL C
31738 LEJA ENGINEERING INC
31741 ASSURED MINI STORAGE
OCCUPANT UNKNOWNN
31776 RICH, WILLIAM
31785 KOGLER, RICHARD
PRINCE PEACE LUTHERAN CHURCH
31810 BEVER, SHARON M
SHEAR HEAVEN
31816 GILMORE, MAXINE
31828 OCCUPANT UNKNOWNN
31838 ADAMS, JIM

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

E AVE 1992

31535 ERB, OTTO A
31548 SPILLMANN, ADOLPH C
31592 STUDLEY, WALTER A
31608 DAWSON, ROBERT
31622 ASPRIL, J E
31635 CORDER, DALE E
31682 DETTINGER, JOHN E

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 1992

31412	YUCAIPA CHEVRON
31440	PARTY SHOPPE
31462	ATKINSON, CHARLES JR
	CROWNOVER, MICHAEL
	GOULD, RAMONA S
31472	LOPEZ, G
31504	GATEWAY TIRE & SERVICE
31510	COST GUARD CARPET
31512	VISIONS BEAUTY SALON
31594	CRILLY, B E
31604	DESHLERS SPECIALTIES
31608	ACTION GRAPHICS AND OFF SUPS
31614	E & E ORNAMENTAL IRON
	FISHER, RON
31640	ZIMMERMAN FURNITURE SERVICE
31710	COLLECTORS CLASSICS INTL
	JOES AUTOMATIC TRANSM SVC
31724	OLSON CAROL AND ASSOCIATES
31730	ZIMMERMAN, G C
31738	LEJA ENGINEERING INC
31741	ASSURED MINI STORAGE
31785	KOGLER, RICHARD
	PRINCE PEACE LUTHERAN CHURCH
31816	GILMORE, MAXINE
31828	BURFORD, WALDO
31838	ADAMS, JIM
31850	HUGHES, LANCE
	JANE, LEIGH
	NEWMAN, RONALD
	TAYLOR, IRENE
31862	STEELE, PAUL

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

AVENUE E 1985

AVENUE E 92399 YUCAIPA

31535	ERB OTTO A	794-2954
31548	SPILLMANN ADOLPH C	794-3386
31592	STUDLEY W A	794-2974
31608	ORENDORFF S	794-4320 +5
31622	ASPRIL J E	794-4156
31635	CORDER DALE E	794-2785
	CORDER E L	794-2785

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

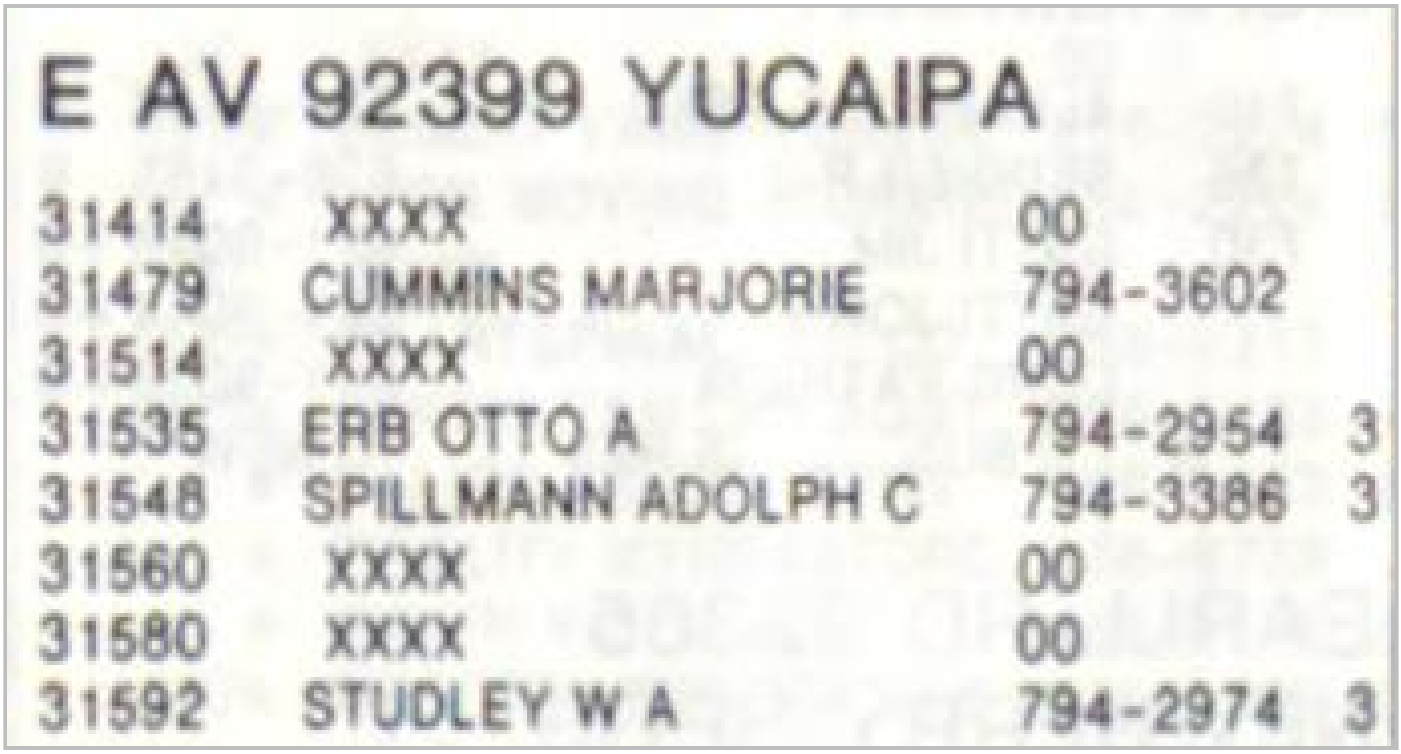
YUCAIPA BLVD 1985

YUCAIPA BLVD 92399
YUCAIPA

31340	CORNER CREATIONS	794-4011	0
31361	HUGHES CONCRTE PROD	794-7676	4
31375	WALKER SIGNS	794-5364	2
31396	XXXX	00	
31420	J J FURNITURE	794-4746	+5
31422	XXXX	00	
31429	XXXX	00	
31440	XXXX	00	
31459	XXXX	00	
31462	ATKINSON CHAS JR	794-5955	4
	WILDWOOD REALTY	794-1147	+5
31471	XXXX	00	
31472	ALVAREZ FERNANDO	794-7225	+5
	BOB EARLEYWINES ATO	794-3876	3
	CABRERA ROSARIO N	794-6554	+5
	RODRIQUEZ ANTONIO	794-2473	4
31484	XXXX	00	
31491	XXXX	00	
31497	XXXX	00	
31504	LOPEZ EMERITA	794-4792	+5
31506	XXXX	00	
31510	COST GUARD CARPETS	794-3014	
31512	ESPECIALLY FOR YOU	794-5725	+5
31514	XXXX	00	
31516	LAMASTER JOHN SERV	794-3332	8
31528	BOARD REC VEHICLE	794-1196	0
	KERRS TRLR&CMPR SPL	794-1196	
31533	XXXX	00	
31558	KNOLL HAVEN ANTQS	794-3810	
31580	XXXX	00	
31581	XXXX	00	
31594	CRILLY B E	794-3003	
31604	DESHLERS SPECIALTS	794-3543	0
31608	ACTION GRAPHICS	794-4426	+5
	ACTION INSTANT	794-4426	+5
	CLASSY CHASSY THE	794-5165	0
	CONSERVTRY OF DANCE	794-6485	1
	HAIR STYLING LARRY	794-2179	3
31614	E&E ORNAMENTAL IRON	794-5170	1
	FISHER VERN	794-3048	+5
31629	J&J MEDICAL SERV	794-6687	4
31640	ZIMMERMANS FURN SV	794-3418	4
31680	XXXX	00	
31689	XXXX	00	
31710	JOES AUTOMTC TRANS	794-1916	8
31724	C&L CUSTOM DESIGNS	794-1641	4
	OLSON LELAND P	794-2685	4
31730	ZIMMERMAN G C	794-3900	9
31738	MINNIEAR BILL INS	794-3595	8
31741	NIEMI WAYNE	794-7456	3
31785	PRINCE PEACE LUTH	794-2554	
	VANNORSTRAND R REV	794-2554	8
31786	XXXX	00	
31800	XXXX	00	
31810	AUSTIN WILMA F	794-6120	+5
31826	XXXX	00	
31828	BURFORD WALDO	794-4841	4

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

AVENUE E 1980



E AV 92399 YUCAIPA

31414	XXXX	00	
31479	CUMMINS MARJORIE	794-3602	
31514	XXXX	00	
31535	ERB OTTO A	794-2954	3
31548	SPILLMANN ADOLPH C	794-3386	3
31560	XXXX	00	
31580	XXXX	00	
31592	STUDLEY W A	794-2974	3

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

YUCAIPA BLVD 1980

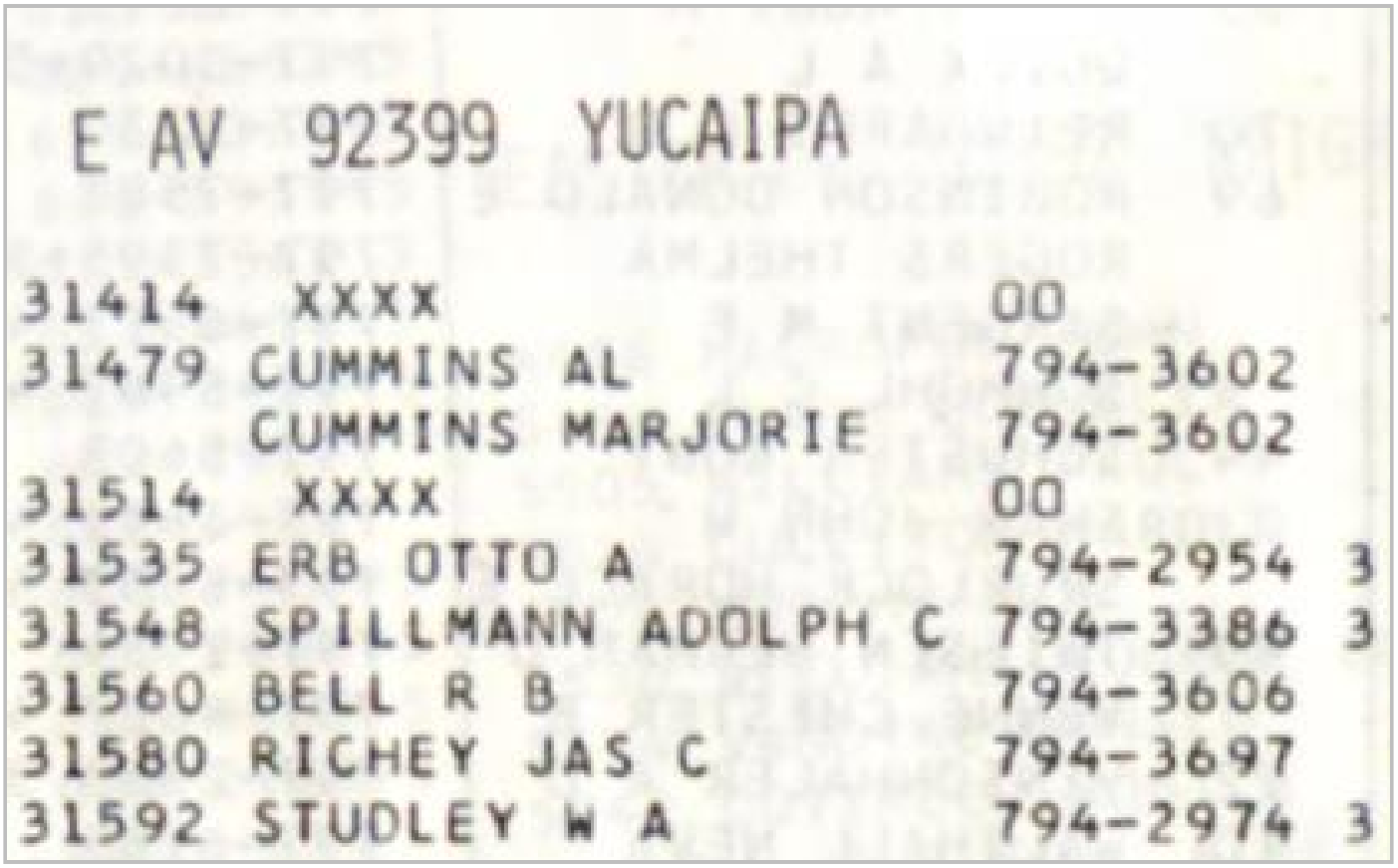


YUCAIPA BLVD 92399
YUCAIPA

31340★	CORNER CREATIONS	794-4011	+0
31361★	HUGHES CONCRETE PRD	794-3718	
31375★	FAILSAFE SOLAR CO	794-5705	+0
31396★	JOE MASON CHVRN SRV	794-3816	
31418½★	VITAL SIGNS	794-2215	8
31420★	ACTION INSTNT PRNTG	794-4426	+0
31429	XXXX	00	
31440★	ESPINOSA D P	794-4944	8
31442★	SUZIES HAIR HUT	794-3659	8
31459★	WOODLAND MINIATURES	794-4314	9
31462	MOUNTAIN VW LDG		
★	CENTURY 21 STONES	794-1147	+0
★	CENTURY 21 YUCAIPA	794-1147	+0
	FIKE KAYLA	794-4095	9
	HAMPTON BECKY	794-5569	+0
	HASTIN B	794-3241	+0
	KNAPPENBERGER R	794-2855	7
	PICCOLO ALBERT P	794-5241	9
	PIERCE PHILIP	794-1761	+0
★	STONES CENTURY 21	794-1147	6
	STONES CHAS	794-1147	8
31462			
31471★	TACO SHACK	794-3812	
31472	RAYMOND DENNIS	794-5609	+0
★	YUCAIPA AUTO SHOP	794-5716	+0
31484	XXXX	00	
31491★	LERNER OIL CO	794-9053	
31497	XXXX	00	
31506★	YUCAIPA DRAPRY STDO	794-4549	8
31510★	COST GUARD CARPETS	794-3014	5
31512★	FINISHING TOUCH BTY	794-5725	+0
31514	XXXX	00	
31516★	LAMASTER JOHN SERV	794-3332	8
31528★	BOARD REALTY	794-4010	9
★	BOARD REC VEHCL CT	794-1196	+0
★	KERRS TRLR&CMPR SPL	794-1196	4
31533★	HANSBERGER TEETERS	794-2118	9
★	HANSSERGER TEETERS	797-3711	+0
31555★	SHIRT SHOP THE	794-4285	9
31558★	KNOLL HAVN ANTIQUES	794-3810	
31580	XXXX	00	
31581★	KIVETT REALTORS INC	794-1191	9
★	KIVETT SCHL RL EST	794-2101	+0
31594	CRILLY B E	794-3003	
31604★	DESHLERS SPECIALTS	794-3543	+0
31608★	CLASSY CHASSY THE	794-5165	+0
★	FIVE STAR MOBILE HM	794-1143	+0
31614★	DEHART PAINTING	794-5250	9
	FISHER VERN	794-3048	
★	THREE D INVESTMENTS	794-5250	+0
31640★	AIRKEM ODOR SERVICE	794-3418	
★	ZIMMERMANS FURN SV	794-3418	
31680	OLSON LELAND P	794-2685	5
31689	XXXX	00	
31710★	JOES AUTOMTC TRANS	794-1916	8
31724	EARLEYWINE ROBERT	794-5326	9
31730	ZIMMERMAN G C	794-3900	9
31738★	MINNIEAR BILL INS	794-3595	8
31741★	NIEMIS CERAMICS	794-3566	
31785★	PRINCE OF PEACH CH	794-2554	
	VANNORSTRAND R REV	794-2554	8
31786	BURFORD WALDO	794-4841	7
31800	XXXX	00	
31810★	ADOBE REALTY	794-2138	5
	BOTH EDW G	794-2535	6
31826	XXXX	00	
31829	XXXX	00	

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

AVENUE E 1975

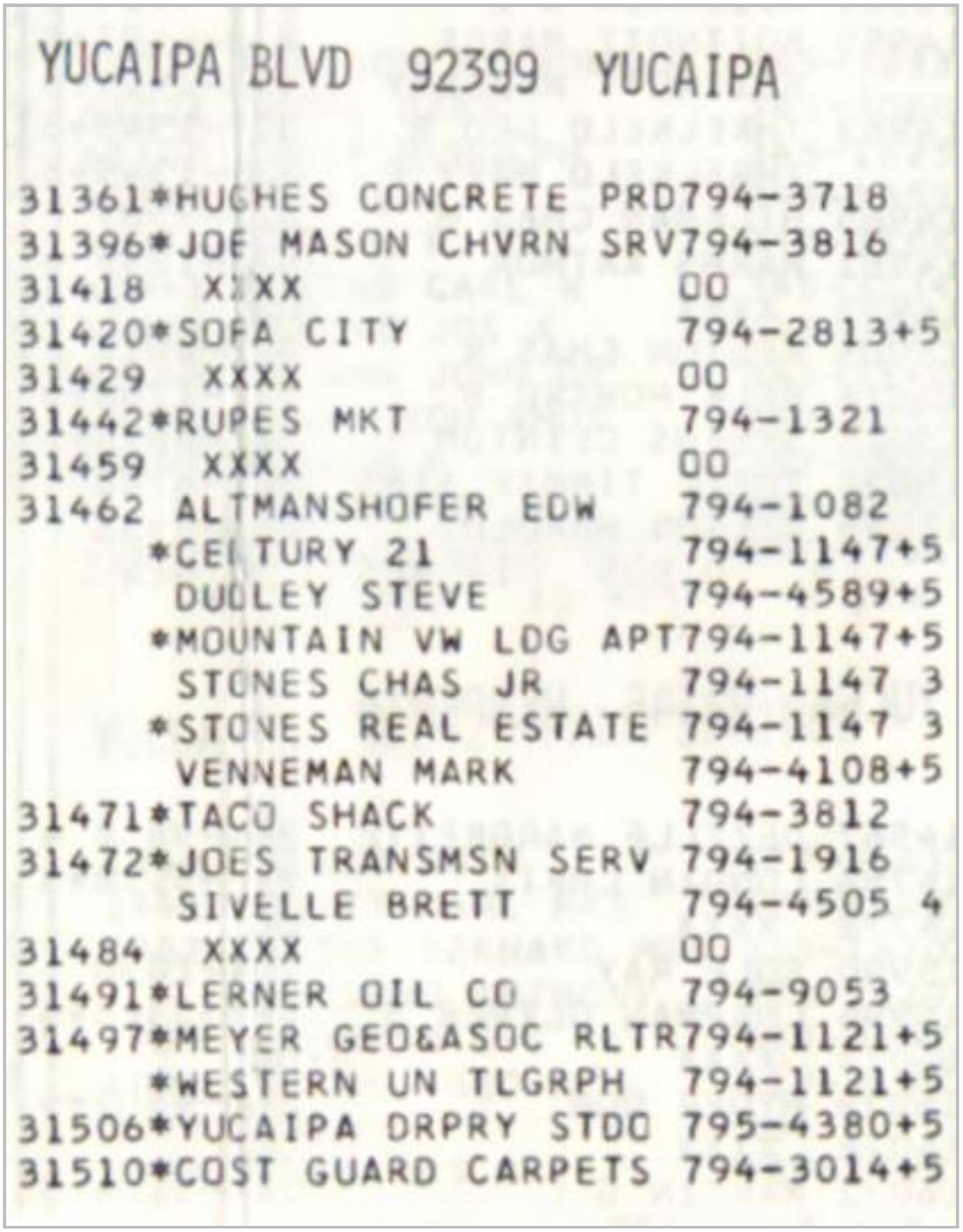


E AV 92399 YUCAIPA

31414	XXXX	00	
31479	CUMMINS AL	794-3602	
	CUMMINS MARJORIE	794-3602	
31514	XXXX	00	
31535	ERB OTTO A	794-2954	3
31548	SPILLMANN ADOLPH C	794-3386	3
31560	BELL R B	794-3606	
31580	RICHEY JAS C	794-3697	
31592	STUDLEY W A	794-2974	3

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

YUCAIPA BLVD 1975

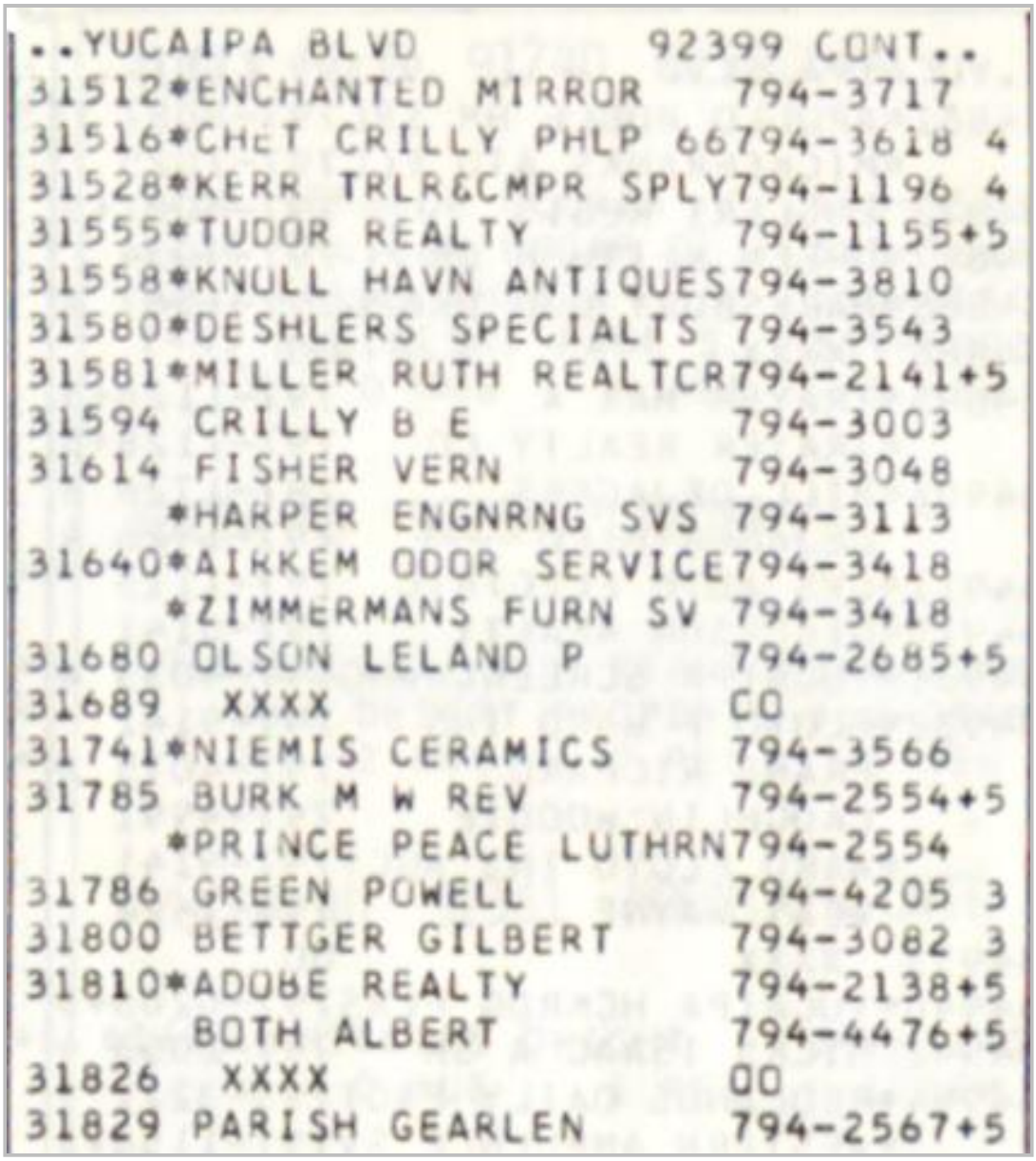


YUCAIPA BLVD 92399 YUCAIPA

31361*HUGHES CONCRETE PRD794-3718
31396*JOE MASON CHVRN SRV794-3816
31418 XXXX 00
31420*SOFA CITY 794-2813+5
31429 XXXX 00
31442*RUPES MKT 794-1321
31459 XXXX 00
31462 ALTMANSHOFER EDW 794-1082
*CENTURY 21 794-1147+5
DUDLEY STEVE 794-4589+5
*MOUNTAIN VW LDG APT794-1147+5
STONES CHAS JR 794-1147 3
*STONES REAL ESTATE 794-1147 3
VENNEMAN MARK 794-4108+5
31471*TACO SHACK 794-3812
31472*JOES TRANSMSN SERV 794-1916
SIVELLE BRETT 794-4505 4
31484 XXXX 00
31491*LERNER OIL CO 794-9053
31497*MEYER GEO&ASOC RLTR794-1121+5
*WESTERN UN TLGRPH 794-1121+5
31506*YUCAIPA DRPRY STDO 795-4380+5
31510*COST GUARD CARPETS 794-3014+5

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

YUCAIPA BLVD 1975



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..YUCAIPA BLVD              92399 CONT..
31512*ENCHANTED MIRROR      794-3717
31516*CHET CRILLY PHLP 66   794-3618 4
31528*KERR TRLR&CMPR SPLY   794-1196 4
31555*TUDOR REALTY          794-1155+5
31558*KNULL HAVN ANTIQUES   794-3810
31580*DESHLERS SPECIALTS    794-3543
31581*MILLER RUTH REALTOR   794-2141+5
31594 CRILLY B E            794-3003
31614 FISHER VERN           794-3048
      *HARPER ENGNRNG SVS   794-3113
31640*AIRKEM ODOR SERVICE    794-3418
      *ZIMMERMANS FURN SV    794-3418
31680 OLSON LELAND P        794-2685+5
31689  XXXX                 CO
31741*NIEMIS CERAMICS        794-3566
31785 BURK M W REV          794-2554+5
      *PRINCE PEACE LUTHRN   794-2554
31786 GREEN POWELL          794-4205 3
31800 BETTGER GILBERT       794-3082 3
31810*ADOBE REALTY           794-2138+5
      BOTH ALBERT           794-4476+5
31826  XXXX                 OO
31829 PARISH GEARLEN        794-2567+5
```

Target Street	Cross Street	Source
-	✓	Polk's City Directory

AVENUE E 1972

AVENUE E 92399

31479	CUMMINS, MARJORIE	794-3602
31514	IRVIN, OR CHARLES E	794-3593
31535	ERB, OTTO A	794-2954
31548	SPILLMANN, ADOLPH C	794-3386
31560	BELL, R B	794-3606
31580	RICHEY, JAMES C	794-3697
31592	STUDLEY, W A	794-2974

Target Street	Cross Street	Source
✓	-	Polk's City Directory

YUCAIPA BLVD 1972

YUCAIPA	8L	92399
31361	◘HUGHES CONCRT PROOS	794-3718
31396	◘JOE MASON CHEVRN SVC	794-3816
31420	◘MAXONS FEED STORE	794-2814
31429	◘TOMS AUTO REPAIR	794-3818
31442	◘RUPES MARKET	794-1321
31462	APARTMENT	
1*	♦ KENNEDY, SUSAN	794-4434
8*	ALTMANSHOFER, EDW.	794-1082
9*	RETTSTATT, WENDELL P	794-3959
10*	♦ BEELER, TANCIE	794-3167
31471	◘TACO SHACK	794-3812
31472	APARTMENT	
31472	♦ BRYAN, GLEN	794-4372
31472	◘JOES TRANSMISSION	794-1916
1*	SMITH, N L	794-3092
2*	MC BRIDE, ALLEN	794-2841
31484	GARONER, DR VAUGHN C	794-3063
31491	◘LERNER OIL CO.	794-9053
31497	◘RANCHO REALTY	794-3112
31510	♦◘COST GUARD CARPETS	794-3013
31510	◘COST GUARD CARPETS	794-3014
31512	◘ENCHANTED MIRROR	794-3717
31516	♦◘C CRILLY PHILLIPS 66	794-3618
31555	♦◘MEYER GEORGE/ASSOCS	794-3715
31555	◘TILDEN REALTY	794-3214
31558	◘KNOLL HAVEN ANTIQUES	794-3810
31580	◘OESHLERS SPECIALTIES	794-3543
31581	◘RUTH MILLER INC RLTR	794-2141
31594	CRILLY, B E	794-3003
31614	FISHER, VERN	794-3048
31614	◘HARPER ENG/ELECTRONC	794-3113
31640	◘ZIMMERMANS FURNITURE	794-3418
31680	♦ OLSON, LELAND P	794-2685
31689	HUNTINGTON, FRANK O	794-3670
31738	HESLEP, LT BILLY	794-3132
31741	◘NIEMIS CERAMICS	794-3566
31785	◘PRINCE/PEACE LUTH CH	794-2554
31786	GREEN, POWELL	794-4205
31800	BETTGER, GILBERT	794-3082
31810	GREEN, DENNIS	794-2254
31826	KROLL JR, JOS.	794-2915
31829	♦ REA, L	794-2497

Target Street	Cross Street	Source
-	✓	Luskey City Directory

AVENUE E 1967

AVENUE E (YUC) – FROM 31400 YUCAIPA BL, EAST (92399)

Dunlap Bl Int's

31514	*Irvin CE 1	793-1693
31548	*Spillmann AC	792-4816
31580	Richey JC 3	792-3977
31592	Owens PS 2	793-5474
31622	Miller GL	792-8852
31640	Dettinger JE carp	792-6373
31640	*Dettinger JE 1	792-6373

Target Street	Cross Street	Source
✓	-	Luskey City Directory

YUCAIPA BLVD 1967

YUCAIPA BL (YUC) – FROM 496 U.S. 99 OUTER HIGHWAY, EAST (92399)

31340 Gateway Nursery 793–4649

Hampton Rd Ints

31361 Hughes Concrete Products ...792–5568
31396 Herman Keith Chevron Service 792–5786

Avenue E Ints

31420 Nonnie's Gateway to Beauty ..792–1598
31442 *Perez RR 2 792–8596
31459 Don's Washer & Dryer Reprs..793–5025
31462 Lash Coralie 792–9322
31462 Newman Clancy 792–4734
31462 Mountain View Lodge 792–2273
31462 *Stones Chas Jr 792–2273
31471 Taco Shack 792–3582
31472 Allred DH..... 792–0650
31472 Ellsworth LK 792–1140
31472 Apartments
3 Smith UM Mrs 792–2751
31484 Gardner VC 792–7043
31497 Strader's Real Estate 792–4145
31512 Enchanted Mirror beauty salon.793–3777
31516 Chet Crilly Service gas stn ..793–5808
31534 Mathews HA. 793–4527
31558 Knoll Haven Antiques 792–4200
31581 Miller Ruth M.....793–2401
31581 Miller Ruth M Real Estate.....793–2401
31614 Bob's Ornamental Iron.....792–8847
31614 *Fisher Vern 5 792–2028
31640 Airkem Odor Serv air cndtng..792–3627
31640 Furniture Service furn repr... 792–3627
31640 Zimmerson Furniture Service .792–3627
31640 Zimmerman GC 792–3627
31680 *Pataki Eugene 792–1057
31689 Huntington FD.....792–9570

18th St Ints

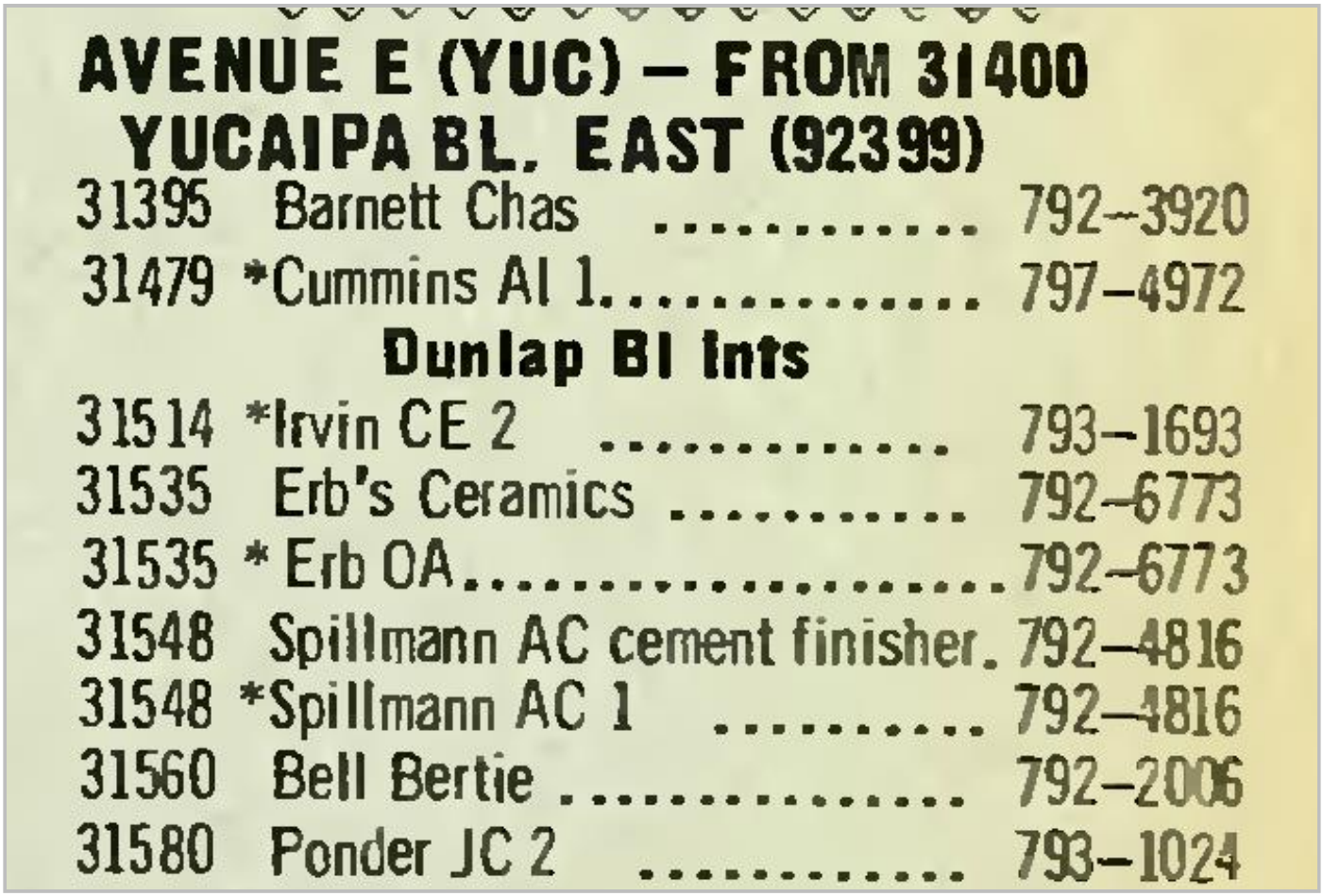
31738 Carrothers RA 792–8539
31741 Apartments
1 Estopinal GH 4 792–1694
31786 LaMay HC 792–1158
31800 *Bettger Gilbt 2.....792–6182
31810 GrazianoJoePntg&DecgContrs 793–4033
31826 *Moody AE 792–1153

17th St Ints

31910 Ewalt RC 797–1697
31924 *Untch FM.....797–8707

Target Street	Cross Street	Source
-	✓	Luskey City Directory

AVENUE E 1965



AVENUE E (YUC) – FROM 31400 YUCAIPA BL. EAST (92399)

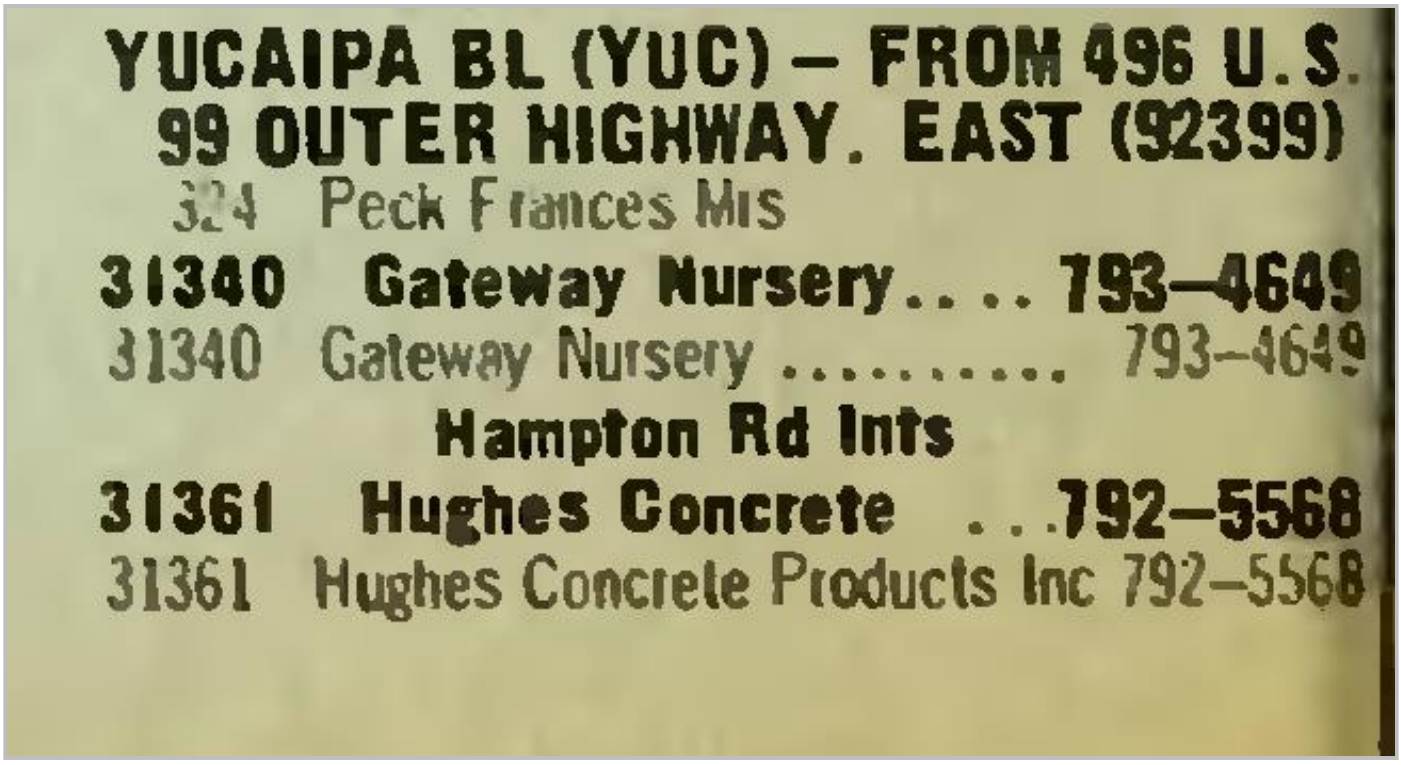
31395 Barnett Chas 792–3920
31479 *Cummins Al 1..... 797–4972

Dunlap Bl Ints

31514 *Irvin CE 2 793–1693
31535 Erb's Ceramics 792–6773
31535 * Erb OA..... 792–6773
31548 Spillmann AC cement finisher. 792–4816
31548 *Spillmann AC 1 792–4816
31560 Bell Bertie 792–2006
31580 Ponder JC 2 793–1024

Target Street	Cross Street	Source
✓	-	Luskey City Directory

YUCAIPA BLVD 1965



Target Street	Cross Street	Source
✓	-	Luskey City Directory

YUCAIPA BLVD 1965



YUCAIPA BL (CONT'D)

31375 Niles Poultry Breeding Farm..793–3251
31395 Barnett Chas 792–3920
31396 O'Neal Mike Chevron.....792–5786

Avenue E Ints

31418 Gateway Cleaners 792–7961
31420 Nonnie's Gateway To Beauty..792–1598
31420 Mathews MN Mrs..... 793–4527
31429 DevineEdSeasideServ 792–9922
31429 Devine EF Seaside Service... 792–9922
31442 Minit Market 792–8596
31442 *Perez RR 2 792–8596
1459 Tommy's Supply Co ..792–6390
1459 Tommy's Supply Co ..797–8905
1459 Tommy's Supply Co screens.. 792–6390
1462 Mountain View Lodge 792–2273
1462 *Stones Chas 792–2273
1471 Taco Shack The 792–3582
1472 Apartments
1 Maxwell Jerry
2 Heston Boyd 792–1639
3 *Melchert PR..... 793–5607
4 Shipman Troy
1484 Gardner VC 792–7043
1497 Stader Real Estate ..792–4145
1497 Stader's Real Estate 792–4145
1506 Sherman'sHomeShopfurnishings792–8952
1508 Ecco Lighting 792–8860
1508 Ecco Lighting fixtures..... 792–8860
1512 Mirror of Magic btys In793–3777
1512 Jerry's Enchanted Mirror btyshp793–3777
1516 Crilly Chet Service Station...792–9015
1520 *Crilley CL
1528 Kwake Paul 792–8076
1555 Bullock FE Bud Constr Co... 792–8972
1558 Knoll Haven Antiques 792–4200
1558 *Gazzo AR 792–4200
1581 Miller Ruth Realtor..... 793–2401
1582 *Crilly CG 3..... 792–5244
1594 *Crilly BE 1 792–2703
1614 Bob's Ornamental Iron 792–8847
1614 Fisher Vern..... 792–2028
1640 Airkem Odor Service..... 792–3627
1640 ZimmermanFurnServ .792–3627
1640 Zimmerman Furniture Serv .. 792–3627
1680 No Return
1689 Triple A TreeService 793–4784
1689 Wilson Chas 2 793–4784

18th St Ints

1724 Bryan PB 3
1738 Moseley CD
1741 Guizar Jesus 4
1741 *Estopinal GH 4..... 792–1694
1785 Vacant
1786 *LeMay HC 792–1158
1800 *Bettger Gilbert 2 792–6182
1810 Hightower LM Mrs 2
1826 *Moody AE..... 792–1153
1830 *Kahuda CH 792–1175

17th St Ints

23.84 Acres
SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Inquiry Number: 5260584.7S
May 2, 2018

EDR Environmental Lien and AUL Search

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental LienSearch 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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EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

23.84 ACRES
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

RESEARCH SOURCE

Source 1: Recorder
San Bernardino County, California

Source 2: Assessor
San Bernardino County, California

PROPERTY INFORMATION

Deed 1:

Type of Deed: Grant Deed

Title is vested in: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Title received from: Yin Chi Chuang and Ching Chi Lin Chuang, husband and wife, as Joint Tenants

Deed Dated: 09/28/2012

Deed Recorded: 09/28/2012

Instrument: 2012-0402497

Legal Description: All that certain piece or parcel of land being a portion of Block 139 of Subdivision No. 3 of a portion of the Dunlap Ranch, as per map recorded in Book 20 of Maps, Page 71, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Property Identifiers: 0300-191-01-0000

Deed 2:

Type of Deed: Partnership Grant Deed

Title is vested in: Queen Investments, Inc., a California corporation

Title received from: Yucaipa Boulevard Limited Partnership, a California limited partnership

Deed Dated: 02/05/1990

Deed Recorded: 02/09/1990

Instrument: 90-054398

Legal Description: All that certain piece or parcel of land being Block 138 of Subdivision No. 3 of a portion of the Dunlap Ranch, as per map recorded in Book 20 of Maps, Page 71, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Queen Investments, Inc., a California corporation

Property Identifiers: 0300-191-02-0000

Deed 3:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Michael S. Murray and Karin E. Murray, husband and wife

Deed Dated: 08/09/1990

Deed Recorded: 08/14/1990

Instrument: 90-322323

Legal Description: All that certain piece or parcel of land being a portion of the East 82 feet of the West 248 feet of Block 6 of Subdivision No. 5 of a part of Dunlap Ranch, as per plat recorded in Book 23 of Maps, Pages 57 and 58, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-17-0000

Deed 4:

Type of Deed: Grant Deed

Title is vested in: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Title received from: Yin Chi Chuang and Ching Chi Lin Chuang, husband and wife, as Joint Tenants

Deed Dated: 09/28/2012

Deed Recorded: 09/28/2012

Instrument: 2012-0402497

Legal Description: All that certain piece or parcel of land being a portion of Block 6 of Subdivision No. 5 of a portion of the Dunlap Ranch, as per map recorded in Book 23 of Maps, Pages 57 and 58, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Property Identifiers: 0300-191-18-0000

Deed 5:

Type of Deed: Agreement to Merge

Title is vested in: Stater Bros. Markets

Title received from: Petrolane Properties, Inc.

Deed Dated: 03/29/1983

Deed Recorded: 03/31/1983

Instrument: 83-067976

Legal Description: All that certain piece or parcel of land being Parcel 1 of Parcel Map 5776, as per map filed in Book 58, at Page(s) 13-14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets

Property Identifiers: 0300-191-28-0000

Deed 6:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Charles E. Irvin III, Successor Trustee of The Charles E. Irvin Jr. and Ardis L. Irvin Trust Dated 01/05/1996

Deed Dated: 12/23/2010

Deed Recorded: 01/10/2011

Instrument: 2011-0010689

Legal Description: All that certain piece or parcel of land being Parcel 2 of Parcel Map 5776, as per map recorded in Book 58 of Parcel Maps, Pages 13 and 14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-29-0000

Deed 7:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Charles E. Irvin III, Successor Trustee of The Charles E. Irvin Jr. and Ardis L. Irvin Trust Dated 01/05/1996

Deed Dated: 12/23/2010

Deed Recorded: 01/10/2011

Instrument: 2011-0010689

Legal Description: All that certain piece or parcel of land being Parcel 3 of Parcel Map 5776, as per map recorded in Book 58 of Parcel Maps, Pages 13 and 14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-30-0000

Deed 8:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Sherri Laffey-Long, a married woman as her sole and separate property (who acquired title as Sherri Laffey)

Deed Dated: 11/05/2013

Deed Recorded: 12/04/2013

Instrument: 2013-0521099

Legal Description: All that certain piece or parcel of land being Parcel 4 of Parcel Map 5776, as per map recorded in Book 58, Page(s) 13 and 14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-31-0000

EDR Environmental Lien and AUL Search

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

If found:

1st Party:

2nd Party:

Dated:

Recorded:

Book:

Page:

Docket:

Volume:

Instrument:

Comments:

Miscellaneous:

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found ☐ Not Found ☒

If found:

1st Party:

2nd Party:

Dated:

Recorded:

Book:

Page:

Docket:

Volume:

Instrument:

Comments:

Miscellaneous:

DEED EXHIBIT

Recorded in Official Records, County of San Bernardino

DENNIS DRAEGER
ASSESSOR – RECORDER – CLERK

9/28/2012
12:13 PM
NC

P Counter

Doc#: 2012–0402497

Titles: 1 **Pages: 2**

Fees	18.00
Taxes	1,921.15
Other	0.00
PAID	$1,939.15

RECORDING REQUESTED BY:

Yin Chi Chuang & Ching Chi Lin Chuang

WHEN RECORDED MAIL TO
AND MAIL TAX STATEMENTS TO:

NAME: **Jennifer Chi Chin Chuang &**
Amy TingYa Chuang
ADDRESS: **19313 Kerwin Ranch Ct.**
CITY: **Saratoga**
STATE & ZIP: **CA, 95070-5100**

SPACE ABOVE THIS LINE FOR RECORDER'S USE

APN NO. 0300-191-01-0000 and 0300-191-18-0000

GRANT DEED

The undersigned Grantors declare under penalty of perjury that the following is true and correct:

Documentary Transfer Tax is $1,921.15 +18.00
Computed on the full value of property conveyed in the unincorporated Area, City of Yucaipa

Chuang, Yin-Hao
Declarant or Agent Determining Tax

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
YIN CHI CHUANG AND CHING CHI LIN CHUANG, husband and wife, as Joint Tenants

hereby GRANT(s) to: **JENNIFER CHI CHIN CHUANG**, a single woman, and **AMY TINGYA CHUANG**, a single woman, as Joint Tenants

the real property in the **City of Yucaipa**, County of **San Bernardino**, State of California, described as:
Property is described on Exhibit A attached hereto and made a part hereof.

Dated: 9/28/12
Yin Chi Chuang
YIN CHI CHUANG

Dated: 9-28-12
Ching Chi Lin Chuang
CHING CHI LIN CHUANG

STATE OF CALIFORNIA
COUNTY OF Los Angeles } SS.

On September 28, 2012 before me, MICHAEL CHU, a Notary Public, personally appeared YIN CHI CHUANG and CHING CHI LIN CHUANG, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

Name MICHAEL CHU, NOTARY PUBLIC

MICHAEL CHU
Commission # 1811966
Notary Public - California
Los Angeles County
My Comm. Expires Sep 28, 2012

MAIL TAX STATEMENTS AS DIRECTED ABOVE

Exhibit A
Legal Description

PARCEL NO. 1:

Block 139 of Subdivision No. 3 of a portion of the Dunlap Ranch, in the City of Yucaipa, County of San Bernardino, State of California, as per map recorded in Book 20 of Maps, Page 71, in the office of the County Recorder of said County.

Except therefrom that portion as conveyed to the County of San Bernardino, a body corporate and politic, recorded July 31, 1952 in Book 2992, Page 551 of Official Records, described as follows:

Commencing at the Northeast corner of said Lot 139; thence South 72° 45' West 345.6 feet along the centerline of Yucaipa Boulevard to the Northwest corner of said Lot 139; thence South 36.65 feet along the West line of said Lot 139; thence North 72° 45' East 345.6 feet to a point on the East line of said Lot 139; thence North 36.65 feet along the said East line to the point of beginning and containing 0.0397 acres, more or less, exclusive of the present highway.

PARCEL NO. 2:

Block 6 of Subdivision No. 5 of a part of the Dunlap Ranch, in the City of Yucaipa, County of San Bernardino, State of California, as per map recorded in Book 23 of Maps, Pages 57 and 58, in the office of the County Recorder of said County.

Except therefrom the West 248.00 feet.

Also except therefrom the South 439.5 feet, measured from the center line of 60 foot wide Avenue "E".

Also except therefrom that portion conveyed to the County of San Bernardino for road purposes by deed recorded August 8, 1952 in Book 3000, Page 262 of Official Records.

Areas and distances of the above described property are computed to the center of all adjoining streets and roads, as shown on said map.

RECORDING REQUESTED BY

CHICAGO TITLE COMPANY

AND WHEN RECORDED MAIL THIS DEED AND, UNLESS OTHERWISE SHOWN BELOW, MAIL TAX STATEMENTS TO:

NAME QUEEN INVESTMENTS, INC.
STREET ADDRESS 416 ALAMOSA DRIVE
CITY, STATE, ZIP CLAIRMONT, CALIFORNIA 91711

Title Order No. 8921962-3 Escrow No. 3143

FEE	PAYS	PAID	AMNT
5	2	20	
5 SAV	537 OTT		607
	1540.—		D

90-054395
RECORDED IN OFFICIAL RECORDS
1990 FEB -9 PM 4:31
SAN BERNARDINO CO., CALIF.

This space for Recorder's use

PARTNERSHIP GRANT DEED

THE UNDERSIGNED GRANTOR(s) DECLARE(s)
DOCUMENTARY TRANSFER TAX is $ 1540.-
☐ ——unincorporated area ☒ City of Yucaipa
Parcel No. 0300-191-02
☑ computed on full value of property conveyed, or
☐ computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

YUCAIPA BOULEVARD LIMITED PARTNERSHIP, a California limited partnership

hereby GRANT(S) to

QUEEN INVESTMENTS INC., a California corporation

the following described real property in the City of Yucaipa
county of San Bernardino, state of California:

See Exhibit "A" attached hereto and made a part hereof by this reference.

Subject to all Easements, Rights-of-Way, Covenants and Restrictions of record.

Dated February 5, 1990

YUCAIPA BOULEVARD LIMITED PARTNERSHIP, a California limited partnership

By: Edward B. Djang
General Partner

STATE OF CALIFORNIA
COUNTY OF Orange } SS.

On this 5th day of February, in the year 1990, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Edward B. Djang

_____, personally known to me (or proved to me on the basis of satisfactory evidence) to be one of the partners of the partnership that executed the within instrument, and acknowledged to me that such partnership executed the same.

Signature Patricia A. Bartley

PATRICIA A. BARTLEY
Name (Typed or Printed)
Notary Public in and for said County and State

OFFICIAL SEAL
PATRICIA A BARTLEY
NOTARY PUBLIC-CALIFORNIA
ORANGE COUNTY
MY COMM. EXP. OCT. 30, 1992

(Space above for official notarial seal)

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE

Name | Street Address | City & State

1 100 REV 6/83 PRINTCO

90-054398

EXHIBIT "A"

BLOCK 138 OF SUBDIVISION NO. 3 OF A PORTION OF THE DUNLAP RANCH, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 20 OF MAPS, PAGE 71, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

RECORDING REQUESTED BY
FIRST AMERICAN TITLE INSURANCE CO.

Order No. 980679-LCC
Escrow No. 62775-J
Loan No.

1FEE	2MSYS	3PCOR	4LNNT
4	1		
	12 DTT		SDL
1000	170.50		N

90-322323

RECORDED IN OFFICIAL RECORDS
AUG 14 1990 AT 8:00AM
SAN BERNARDINO COUNTY, CALIF.

WHEN RECORDED MAIL TO:

Stater Bros. Markets
21700 Barton Road
Colton, CA 92324
Attention: Vice President-Real Estate

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO:

SAME AS ABOVE.

DOCUMENTARY TRANSFER TAX $ 170.50
X Computed on the consideration or value of property conveyed; OR
..... Computed on the consideration or value less liens or encumbrances remaining at time of sale.
the undersigned grantor
Signature of Declarant or Agent determining tax — Firm Name

Assessors Parcel No. 300-191-17

GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
MICHAEL S. MURRAY AND KARIN E. MURRAY,
husband and wife

hereby GRANT(S) to
STATER BROS. MARKETS,
a California corporation

the real property in the City of
County of San Bernardino, State of California, described as

980679 LC

The East 82 feet of the West 248 feet of Block 6 of Subdivision No. 5 of a Part of Dunlap Ranch, in the County of San Bernardino, State of California, as per plat recorded in Book 23 of Maps, pages 57 and 58, records of said County.

Saving and excepting therefrom the South 439.5 feet thereof, said 439.5 feet being measured from the center line of 60 feet wide Avenue "E".

Also saving and excepting therefrom that portion conveyed to the County of San Bernardino for road purposes by Deed recorded August 6, 1952 as Instrument No. 394, in Book 3000, page 262, Official Records.

The areas and distances of the above described property computed to the center line of all adjoining streets and roads.

Dated August 9, 1990

Michael S. Murray
Karin E. Murray

STATE OF CALIFORNIA
COUNTY OF San Bernardino } ss.

On August 9, 1990

before me, the undersigned, a Notary Public in and for said State, personally appeared Michael S. Murray and Karin E. Murray

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same.

WITNESS my hand and official seal.

Signature Joan Galloway
Joan Galloway

(OFFICIAL SEAL)
JOAN GALLOWAY
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires Sept. 14, 1993

(This area for official notarial seal)

MAIL TAX STATEMENTS AS DIRECTED ABOVE

1002 (6/82)

WHEN RECORDED MAIL TO:
Stater Bros. Markets
21700 Barton Road
Colton, CA 92324
Attn: Larry M. Powell

RECORDED IN OFFICIAL RECORDS
MAR 31 1983 AT 8 A.M.
SAN BERNARDINO COUNTY, CALIF.

AT THE REQUEST OF
[illegible] INSURANCE CO.

83-067976

State of California

Office of

March Fong Eu

Secretary of State
SACRAMENTO

14.00
E

83-067976

I, MARCH FONG EU, *Secretary of State of the State of California, hereby certify:*

That on the 22nd *day of* March, *19* 83, *there was filed in this office a* Agreement to Merge *merging* PETROLANE PROPERTIES, INC. *a California corporation, into* STATER BROS. MARKETS, *a California corporation and the surviving corporation, by the terms of said agreement.*

Further, that according to our records said merged California corporation has ceased to exist as a separate corporate entity.

IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this 29th *day of* March, 1983.

March Fong Eu

Secretary of State

SEC/STATE FORM CE-103 (1-78)

A262345

548527
SURV

FILED
In the office of the Secretary of State
of the State of California
MAR 22 1983
MARCH FONG EU, Secretary of State
By Bill Hosler
Deputy

83-067976

AGREEMENT TO MERGE

PETROLANE PROPERTIES, INC.

with and into

STATER BROS. MARKETS

under the name of

"STATER BROS. MARKETS"

PETROLANE PROPERTIES, INC., a California corporation, hereinafter sometimes called "PPI", and STATER BROS. MARKETS, a California corporation, hereinafter sometimes called "SBM", agree as follows:

ARTICLE 1. RECITALS OF CONSTITUENT CORPORATIONS

Section 1.01. PPI is a corporation duly organized, validly existing, and in good standing under the laws of the State of California. PPI is authorized to issue 200,000 shares of common stock, with par value of One Dollar ($1.00) per share, 50,000 of which are outstanding on the date hereof.

Section 1.02. SBM is a corporation duly organized, validly existing, and in good standing under the laws of the State of California. SBM is authorized to issue 25,000 shares of common stock without par value, 1,000 of which are issued and outstanding on the date hereof. SBM is authorized to issue 250,000 shares of $11.00 Cumulative Preferred Stock without par value, none of which are outstanding on the date hereof.

Section 1.03. SBM is to be the surviving corporation, as that term is defined in the General Corporation Law of California, to the merger described in this agreement.

ARTICLE 2. MERGER

Section 2.01. PPI shall be merged into SBM under the laws of the State of California.

Section 2.02. The name of the surviving corporation shall be STATER BROS. MARKETS.

83-067976

ARTICLE 3. TERMS AND CONDITIONS

Section 3.01. Between the date of this agreement and the date on which the merger shall become effective, either constituent corporation shall not:

Except in the normal course of business and for adequate value, dispose of any of its assets.

Section 3.02. If at any time the surviving corporation shall consider or be advised that any further assignments or assurances in law are necessary to vest or to perfect or to confirm of record in the surviving corporation the title to any property or rights of PPI, or otherwise carry out the provisions hereof, the proper officers and directors of PPI, as of the effective date of the merger, shall execute and deliver all proper deeds, assignments, confirmations, and assurances in law, and do all acts proper to vest, perfect, and confirm title to such property or rights in the surviving corporation, and otherwise carry out the provisions hereof.

ARTICLE 4. BASIS OF CONVERTING SHARES

Section 4.01.

(a) At the effective date of the merger, each share of the common stock of the disappearing corporation with a par value of One Dollar ($1.00) (other than shares held by disappearing corporation as treasury shares) shall be converted into two-hundredths (.02) of a share of common stock without par value of the surviving corporation.

83-067975

(b) No fractional shares of the common stock of the surviving corporation will be issued to the holders of the common stock of the disappearing corporation, but holders who would otherwise be entitled to receive a fraction of a share of the common stock of the surviving corporation on the basis of the conversion provided for herein shall in lieu thereof receive a cash payment equal to the value of such fraction, based on the market value of the common stock of the disappearing corporation as of the effective date of the merger.

(c) Any shares of the disappearing corporation, common or preferred, held by the disappearing corporation in its treasury on the effective date of the merger shall be surrendered to the surviving corporation for cancellation.

Section 4.02. Each holder of the shares of the disappearing corporation shall surrender his shares, properly endorsed, to the surviving corporation or its agent, and shall thereupon receive in exchange therefor a certificate or certificates representing the number of shares of the surviving corporation into which the shares of the disappearing corporation have been converted.

Section 4.03. The presently outstanding 1,000 shares of common stock of SBM shall be cancelled and no shares of surviving corporation shall be issued in exchange therefor.

83-067975

ARTICLE 5. DIRECTORS

Section 5.01. The following named persons shall serve as the Board of Directors of the surviving corporation until the next annual meeting or until such time as their successors have been elected and have qualified:

JACK H. BROWN

JOESEPH E. DAVIS

BERNARD R. GARRETT

MARK A. RESNIK

L. DOUGLAS McKENZIE

ARTICLE 6. ARTICLES OF INCORPORATION

Section 6.01. The articles of SBM, as existing on the effective date of the merger, shall continue in full force as the articles of the surviving corporation until altered, amended as provided therein, or as provided by law.

ARTICLE 7. BY-LAWS

Section 7.01. The by-laws of SBM, as existing on the effective date of the merger, shall continue in full force as the bylaws of the surviving corporation until altered, amended, or repealed as provided therein or as provided by law.

ARTICLE 8. TERMINATION

Section 8.01. This agreement may be terminated and the merger herein provided for may be abandoned at any time prior to the effective date of the merger, whether before or after shareholder approval, at the election of the Board of Directors of SBM or PPI if the Closing under that certain AGREEMENT FOR THE PURCHASE AND SALE OF STOCK OF STATER BROS. MARKETS AND PETROLANE PROPERTIES, INC., dated the 4th day of March 1983 by and among PETROLANE INCORPORATED, HAMPSHIRE INVESTMENTS, INC., SBM, and PPI, as the term Closing is defined therein, does not occur within two (2) days of the date hereof.

83-067976

Section 8.02. In the event an election is made to terminate this agreement and abandon the merger provided for herein:

(a) The President or any Vice President of the constituent corporation whose Board of Directors has made such election shall give written notice thereof to the other constituent corporation.

(b) Upon the giving of such notice as provided in subsection (a), this agreement shall terminate and the proposed merger be abandoned and, except for payment of its own costs and expenses incident to this agreement, there shall be no liability on the part of either constituent corporation as a result of such termination and abandonment.

ARTICLE 9. INTERPRETATION AND ENFORCEMENT

Section 9.01. Any notice, request, demand, or other communication required or permitted hereunder shall be deemed to be properly given when deposited in the United States mail,

postage prepaid, certified, return receipt requested, or when deposited with a public telegraph company for transmittal, charges prepaid, addressed:

If to PPI:

PETROLANE PROPERTIES, INC.
8575 Higuera Street
Culver City, CA 90230

ATTN: Mark A. Resnik

With a copy to:

Grossman, Barr & Grant
8575 Higuera Street
Culver City, CA 90230

ATTN: Paul R. Grant

If to SBM:

STATER BROS. MARKETS
P. O. Box 150
21700 Barton Road
Colton, CA 92324

ATTN: President

With a copy to:

MARK A. RESNIK
8575 Higuera Street
Culver City, CA 90230

83-067976

Section 9.02. This agreement may be executed in any number of counterparts, each of which shall be deemed an original.

Section 9.03. The validity, interpretation, and performance of this agreement shall be controlled by and construed under the laws of the State of California, the state in which this agreement is being executed

Executed on March 22, 1983, at Los Angeles, California.

SBM:

ATTEST:

By: _____
MARK A. RESNIK
Its Secretary

STATER BROS. MARKETS

By: _____
JACK H. BROWN
Its President

PPI:

ATTEST:

By: _____
MARK A. RESNIK
Its Secretary

PETROLANE PROPERTIES, INC.

By: _____
JACK H. BROWN
Its President

83-067976

M/C/C016-008

CERTIFICATE OF MERGER

STATER BROS. MARKETS

A CALIFORNIA CORPORATION

JACK H. BROWN and MARK A. RESNIK certify:

1. They are the duly elected and acting President and Secretary, respectively, of STATER BROS. MARKETS, a California corporation.

2. This certificate is attached to the Agreement of Merger dated as of March, 22 1983, providing for the merger of this corporation with Petrolane Properties, Inc., a California corporation.

3. The Agreement of Merger in the form attached hereto has been approved by the board of directors of this corporation.

4. The principal terms of the Agreement of Merger in the form attached hereto were approved by this corporation by the vote of a number of shares of each class which equaled or exceeded the vote required, such classes, the total number of outstanding shares of each class entitled to vote on the merger and the percentage vote required of each class being as follows.

Name of Class or Class and Series	Total Number of Outstanding Shares Entitled To Vote	Percentage Vote Required
Common	1,000	More than 50% ~~50%~~ 66 2/3%
$11.00 Cumulative Preferred	None	

Dated: March 22, 1983

JACK H. BROWN, President

MARK A. RESNIK, Secretary

83-067976

The undersigned, Jack H. Brown and Mark A. Resnik, the President and Secretary, respectively, of Stater Bros. Markets, each declares under penalty of perjury that the matters set out in the foregoing Certificate are true and correct of his own knowledge.

Executed at Los Angeles, California, on 22nd day of March, 1983.

JACK H. BROWN

MARK A. RESNIK

83-0679

CERTIFICATE OF MERGER

PETROLANE PROPERTIES, INC.

A CALIFORNIA CORPORATION

JACK H. BROWN and MARK A. RESNIK certify:

1. They are the duly elected and acting President and Secretary, respectively, of PETROLANE PROPERITES, INC., a California corporation.

2. This certificate is attached to the Agreement of Merger dated as of March, 22 1983, providing for the merger of this corporation with Stater Bros. Markets, a California corporation.

3. The Agreement of Merger in the form attached hereto has been approved by the board of directors of this corporation.

4. The principal terms of the Agreement of Merger in the form attached hereto were approved by this corporation by the vote of a number of shares of each class which equaled or exceeded the vote required, such classes, the total number of outstanding shares of each class entitled to vote on the merger and the percentage vote required of each class being as follows.

Name of Class or Class and Series	Total Number of Outstanding Shares Entitled To Vote	Percentage Vote Required
Common	50,000	More than 50%

Dated: March 22, 1983

JACK H. BROWN, President

MARK A. RESNIK, Secretary

83-067975

The undersigned, Bernard R. Garrett and Mark A. Resnik, the President and Secretary, respectively, of Petrolane Properties, Inc., each declares under penalty of perjury that the matters set out in the foregoing Certificate is true and correct of his own knowledge.

Executed at Los Angeles, California, on 22nd day of March, 1983.

JACK H. BROWN

MARK A. RESNIK

83-067976

TRIAL VERSION

Recorded In Official Records, County of San Bernardino

1/10/2011
8:00 AM
MP

DENNIS DRAEGER
ASSESSOR – RECORDER – CLERK

771 Document Processing Solutions

Doc#: 2011–0010689

Titles: 1 **Pages: 2**

Fees	38.00
Taxes	** Conf **
Other	0.00
PAID	$38.00

RECORDING REQUESTED BY
First American Title Insurance Company National Commercial Services
Mail Tax bill to:
AND WHEN RECORDED MAIL DOCUMENT TO:
Stater Bros. Markets
301 S. Tippecanoe Aveune
San Bernardino, CA 92408

Space Above This Line for Recorder's Use Only

A.P.N.: 0300-191-29-0-000 and 0300-191-30-0-000

File No.: NCS-469219-ONT1 (jd)

GRANT DEED

The undersigned Grantor(s) declare(s) that Documentary Transfer Tax shall be shown on a separate Declaration or Statement of Tax Due and not of public record.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Charles E. Irvin III, Successor Trustee of The Charles E. Irvin Jr. and Ardis L. Irvin Trust Dated January 5, 1996**

hereby GRANTS to **Stater Bros. Markets, a California corporation**

the following described property in the City of **Yucaipa**, County of **San Bernardino**, State of **California**:

PARCELS 2 & 3 OF PARCEL MAP 5776 IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 58 OF PARCEL MAPS, PAGES 13 AND 14, RECORDS OF SAID COUNTY.

Mail Tax Statements To: **SAME AS ABOVE**

A.P.N.: 0300-191-29 and 0300-191-30

File No.: NCS-469219-ONT1 (jd)

Dated: **12/23/2010**

Charles E. Irvin III, Successor Trustee of The
Charles E. Irvin Jr. and Ardis L. Irvin Trust
Dated January 5, 1996

Charles E. Irvin III, Successor Trustee

Charles E. Irvin III, Successor Trustee

STATE OF California)SS
COUNTY OF San Bernardino)

On December 23rd, 2010, before me, April Williams, Notary Public, personally appeared Charles E. Irvin III, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

APRIL WILLIAMS
COMM. #1880425
Notary Public - California
San Bernardino County
My Comm. Expires Feb. 19, 2014

My Commission Expires: 2-19-14

This area for official notarial seal

Notary Name: April Williams
Notary Registration Number: 1880425

Notary Phone: none
County of Principal Place of Business: San Bernardino

Electronically Recorded in Official Records, County of San Bernardino

12/04/2013
09:05 AM
NC

DENNIS DRAEGER
ASSESSOR - RECORDER - CLERK
691 First American

Doc #: 2013-0521099

Titles: 1 Pages: 2

Fees	18.00
Taxes	** Conf **
Other	.00
PAID	18.00

RECORDING REQUESTED BY
First American Title Insurance Company National Commercial Services

MAIL TAX STATEMENTS TO
AND WHEN RECORDED MAIL DOCUMENT TO:
Varner & Brandt LLP
3750 University Avenue, Suite 610
Riverside, CA 92501
Attention: Sean S. Varner

Mail Tax Statements to:
Stater Bros. Markets
301 S. Tippecanoe Avenue
San Bernardino, CA 92408
Attn: Vice President – Real Estate

Space Above This Line for Recorder's Use Only

NCS-627002-DH

A.P.N.: 0300-191-31-0000

File No.: NCS-627002-ONT1 (jd)

GRANT DEED

DTT: NOT OF PUBLIC RECORD

The undersigned Grantor(s) declare(s) that Documentary Transfer ~~Tax shall~~ be shown on a separate Declaration or ~~Statement of Tax~~ Due and not of public record pursuant to revenue & taxation code 11932-11933.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Sherri Laffey-Long, a married woman as her sole and separate property (who acquired title as Sherri Laffey)** does hereby **GRANT** to **Stater Bros. Markets, a California corporation** the following described property in the City of **Yucaipa**, County of **San Bernardino**, State of **California**:

PARCEL 4 OF PARCEL MAP 5776, IN THE CITY OF YUCAIPA, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 58, PAGE(S) 13 AND 14 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY

IN WITNESS WHEREOF, the undersigned has executed this Grant Deed dated as of November 5, 2013

By: _____
Sherri ~~Laffey~~-Long

mail tax statements to: same as above

STATE OF CALIFORNIA)SS
COUNTY OF SAN BERNARDINO)

On NOVEMBER 5, 2013, before me, JANETTE DELAP, Notary Public, personally appeared SHERRI LAFFEY-LONG, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

My Commission Expires: MAY 2, 2014

Notary Name: JANETTE DELAP
Notary Registration Number: 1885126

JANETTE DELAP
COMM. # 1885126
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
COMM. EXPIRES MAY 2, 2014

This area for official notarial seal

Notary Phone: (909) 510-6206
County of Principal Place of Business: S. B

APPENDIX E

SELECT FILE REVIEW DOCUMENTATION

(909) 797-2489
EXT. 261

CITY OF Yucaipa

BENJAMIN J. MATLOCK
Associate Planner

34272 YUCAIPA BLVD. - YUCAIPA, CA 92399-9950
FAX (909) 790-9203 email: bmatlock@yucaipa.org
Recycled Paper

5-3-18 STOPPED BY OFFICE
NO RECORDS PER BEN. R.L.

Send Result Report

MFP

CS 6551ci

Firmware Version 2N2_2000.E06.902 2018.01.10

05/14/2018 16:46

[2N2_1000.006.001] [2N4_1100.001.002] [2N4_7000.006.209]

Job No.: 076959 Total Time: 0°00'39" Page: 001

5-21-18 NO RESPONSE

R.V.

Complete

Document: **doc07695920180514164523**

385 N Arrowhead Ave. 2nd Floor, San Bernardino, CA 92415 | Phone: 800.442.2283 - Fax: 909.387.4323

www.SBCounty.gov

www.SBCounty.gov/dph/dehs

SAN BERNARDINO COUNTY | Public Health
Environmental Health Services

REQUEST TO INSPECT/REPRODUCE PUBLIC RECORDS

Return to any of the following offices:
385 N. Arrowhead Ave. 2nd Floor, San Bernardino 92415-0160
15900 Smoke Tree St., Ste. 131, Hesperia 92345
8575 Haven Ave., Ste. 130, Rancho Cucamonga 91730

TO BE COMPLETED BY REQUESTER

INFORMATION FOR RECORDS REQUESTED

Facility Name: (Business or Apartment Complex name) 23.84 Undeveloped Acres			
Location Address: Adjoining South of Yucaipa Blvd., Bryn Avenue E and 15th Street	**City:** Yucaipa	**State:** CA	**Zip:** 92399
Case/File Number: (If known)	**Inspector:** (If known)		

Indicate time frame of information requested: (month/year or date of inspection)

From: 1/1980 To: 4/2018 From: To: From: To:

Specific information requested:
(File, inspection report, complain: etc.)

I am performing a Phase I Environmental Site Assessment at the property and am interested in any files related to any environmental complaints, inspections, or cleanups. I have separately contacted the San Bernardino County Fire Department.

Eight adjoining parcels #0300-191-01, -02, -17, -18, -28, -29, -30, -31

NOTE: EACH REQUESTER AND/OR FILE MUST HAVE A SEPARATE FORM COMPLETED. FOR A LIST REQUEST, PLEASE CALL (800) 442-2283.

FEES

Copy Fee: $.10 Per Page

Certified Copies: Additional $.22 Per Page

REQUESTER INFORMATION

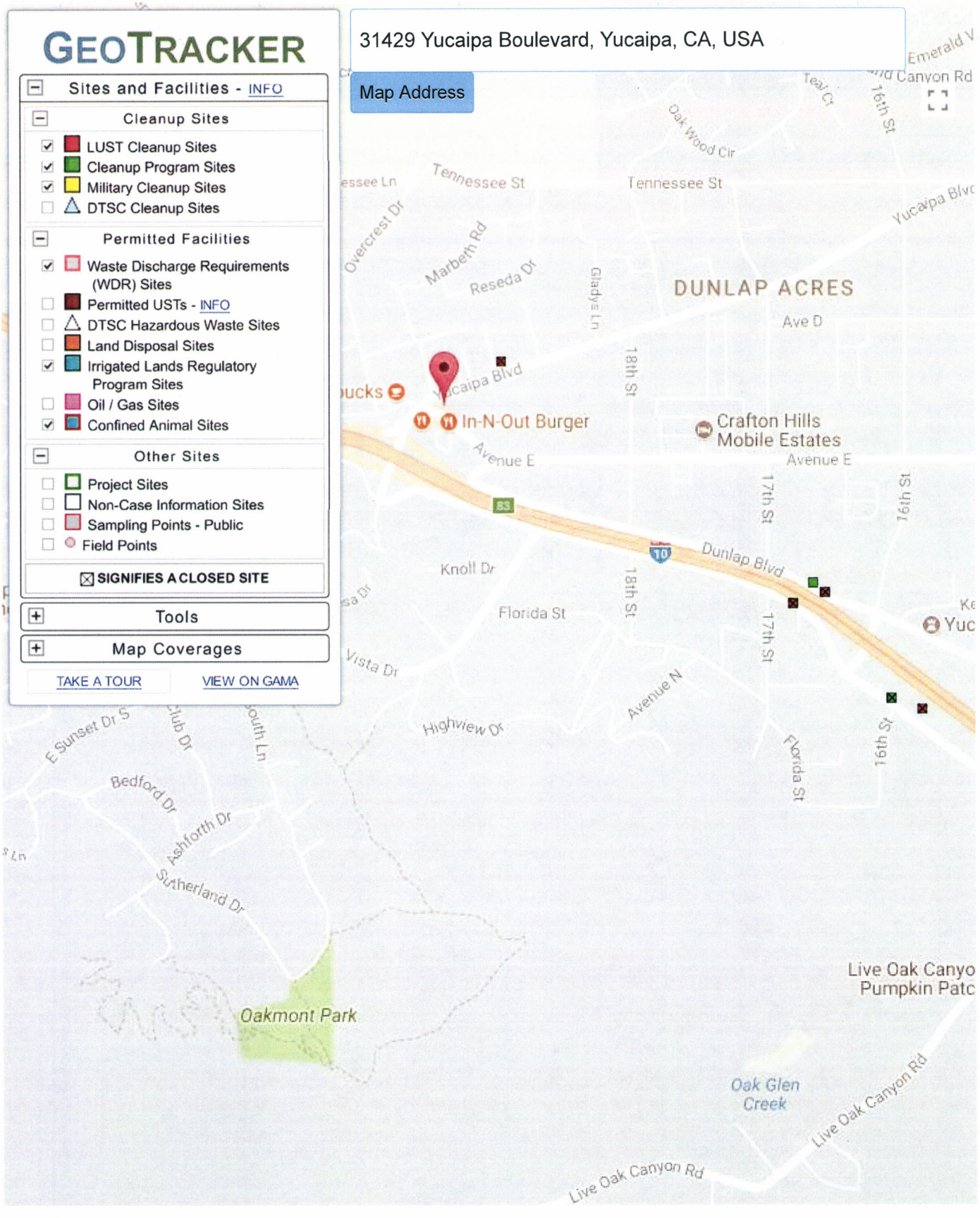
Requester Name: Rusanne Fischer @ The Reynolds Group (Include affiliation, i.e. business name, law office, owner, private citizen, employee, etc.)			
Requester Address: 520 W. First Street	**City:** Tustin	**State:** CA	**Zip:** 92780
E-mail Address: (Preferred method of delivery) fischer@reynolds-group.com			
Phone Number: (To notify when copies/files are ready) 714-730-5397 Ext. 123			

OFFICE USE ONLY

PROGRAM	**DATE**
PAID $	**# PGS**
RECEIPT #	**REC'D BY**

Page 1 of 1 Rev. 09/2015

No.	Date and Time	Destination	Times	Type	Result	Resolution/ECM
001	05/14/18 16:45	**19093874323**	0°00'39"	FAX	OK	200x100 Normal/Off



SITES CURRENTLY VISIBLE ON MAP

CUPA
San Bernardino County Fire Department • Hazardous Materials Division
620 S. E St., San Bernardino, CA 92415-0153 • (909) 386-8468 FAX (909) 386-8460

REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT

The main focus of a REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT is to determine whether there exists in San Bernardino County Fire Department (County Fire) files any record relating to contamination or reports of spills at a particular site. A Certified Hazardous Materials Records Search Finding Report should reveal whether there are any facilities at the site that are subject to current or past regulatory activity by County Fire, such as underground storage tanks, hazardous material handlers, hazardous waste generators, and EPCRA or CalARP facilities, as well as any reports of spills, incidents, complaints, or cleanup activity, that can be a useful tool in providing a history of compliance or non-compliance.

Once County Fire has completed its records search, a Certified Hazardous Materials Records Search Finding Report will be prepared and issued, which will detail all County Fire records associated with a particular site by type, date, location, and status where applicable. (Any files identified in a Certified Hazardous Materials Records Search Finding Report can be made available for copies and/or review upon request.)

If the completed records search reveals no County Fire record of hazardous material activity at the site, a Certified Hazardous Materials Records Search Finding Report will be issued, noting that "no records" were identified.

Please provide a specific site address or location description. If a situs address does not exist or cannot be found, list another type of location identifier such as Assessor Parcel Number (preferable), cross streets or intersections (e.g., NWC 5th Ave. & Main St.), and/or legal description, and if possible attach a map to this request form.

SITE INFORMATION		
Property Owner or Business Name	Location (Site Address and/or Assessor Parcel No.)	City/Community
Undeveloped Land	Adj APNs 0300-191-01, -02, -17, -18, -28, -29, -30, -31	Yucaipa

Please provide your name, the company you represent, and contact information below.

REQUESTOR INFORMATION				
NAME	TITLE (*If individual, leave blank*)	COMPANY (*If individual, leave blank*)		
Rosanne Fischer	Environmental Assessor	The Reynolds Group		
MAILING ADDRESS	CITY		STATE	ZIP CODE
520 W. First Street	Tustin		CA	92780
TELEPHONE	FAX	EMAIL ADDRESS		
714-730-5397 Ext. 123	714-730-6476	fischer@reynolds-group.com		

So that we may provide better service, please check one or more of the boxes below which best describe how the findings of the Certified Hazardous Materials Records Search will be used and/or your relationship to the property in question.

PURPOSE OR RELATIONSHIP TO PROPERTY

- ☑ 1. Phase I site assessment or due diligence **AT THE SITE**
- ☐ 2. Environmental professional involved with remediation **AT THE SITE**
- ☐ 3. Phase I site assessment or due diligence **NEARBY**
- ☐ 4. Environmental professional involved with remediation **NEARBY**
- ☐ 5. Proposed School Site (1/4 mi. search for AHM)
- ☐ 6. Proposed Drinking Water Well
- ☐ 7. Owner or operator of the facility or property
- ☐ 8. Potential buyer
- ☐ 9. Real Estate Agent, Lender, Appraiser
- ☐ 10. Pending escrow
- ☐ 11. Proposed redevelopment
- ☐ 12. Legal or other reason: _____

AGENCY USE	
Certified Record Search Finding Report issued: ___/___/___	Reference No:
Certified No Record Finding Report issued: ___/___/___	Amount Paid:
	Receipt No.:
	Date:

** IMPORTANT –THIS PAGE MUST BE SIGNED PRIOR TO SUBMITTAL **

DISCLAIMER: While all attempts are made to provide accurate, current, and reliable information, County Fire recognizes the possibility of human error. Therefore, County Fire, its officers, employees, agents and volunteers, make no representations as to the accuracy, completeness or suitability of a Certified Hazardous Materials Records Search Finding Report and provides a Certified Hazardous Materials Records Search Finding Report "as is", with no warranties, express or implied, including the implied warranty of fitness for a particular purpose. In no event shall County Fire be liable for any damages of any nature whatsoever, arising out of the issuance of a Certified Hazardous Materials Records Search Finding Report. County Fire therefore assumes no liability for damages incurred directly or indirectly as a result of any errors, omissions or discrepancies in a Certified Hazardous Materials Records Search Finding Report.

RELEASE AND INDEMNIFICATION: In consideration for the issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby release and forever discharge County Fire, its officers, employees, agents and volunteers from any and all claims, actions, losses, damages and/or liability in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, including, but not limited to, claims that may arise due to the active or passive negligence of County Fire, its officers, employees, agents and volunteers.

I am familiar with the provisions of California Civil Code Section 1542, which provides as follows:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

I hereby expressly waive any and all rights that I may have there under. I understand and acknowledge the significance and consequence of this specific waiver of California Civil Code Section 1542 and assume full responsibility for any injuries, damages, losses or liabilities that I may hereafter discover as possibly resulting from County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report.

In further consideration for County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby agree, for myself, my heirs, administrators, executors and assigns, that I shall indemnify, defend (with counsel approved by County) and hold harmless County Fire, its officers, employees, agents and volunteers from any and all claims, demands, actions or suits arising out of or in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report brought by any third party.

* * *

I have read the above terms and conditions, including the paragraphs entitled "DISCLAIMER" and "RELEASE AND INDEMNIFICATION", and by my signature below, I affirm that I understand these terms and conditions and accept them as part of my REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT.

I hereby request a Certified Hazardous Materials Records Search Finding Report for the location described on Page 1 of this application.

- ☐ **I am including payment of the initial fee of $130.00, for the first hour of research, by check or money order, payable to San Bernardino County Fire Dept. I understand that research exceeding one hour will be billed at the rate of $130.00 for each additional hour spent by County Fire in completing this request.**
- ☒ **I have faxed or emailed this request and will forward payment along with the original request form within 48 hours.**

REQUESTOR'S SIGNATURE	
SIGNATURE OF REQUESTOR	DATE
	May 3, 2018

Rev. 2/13/2014

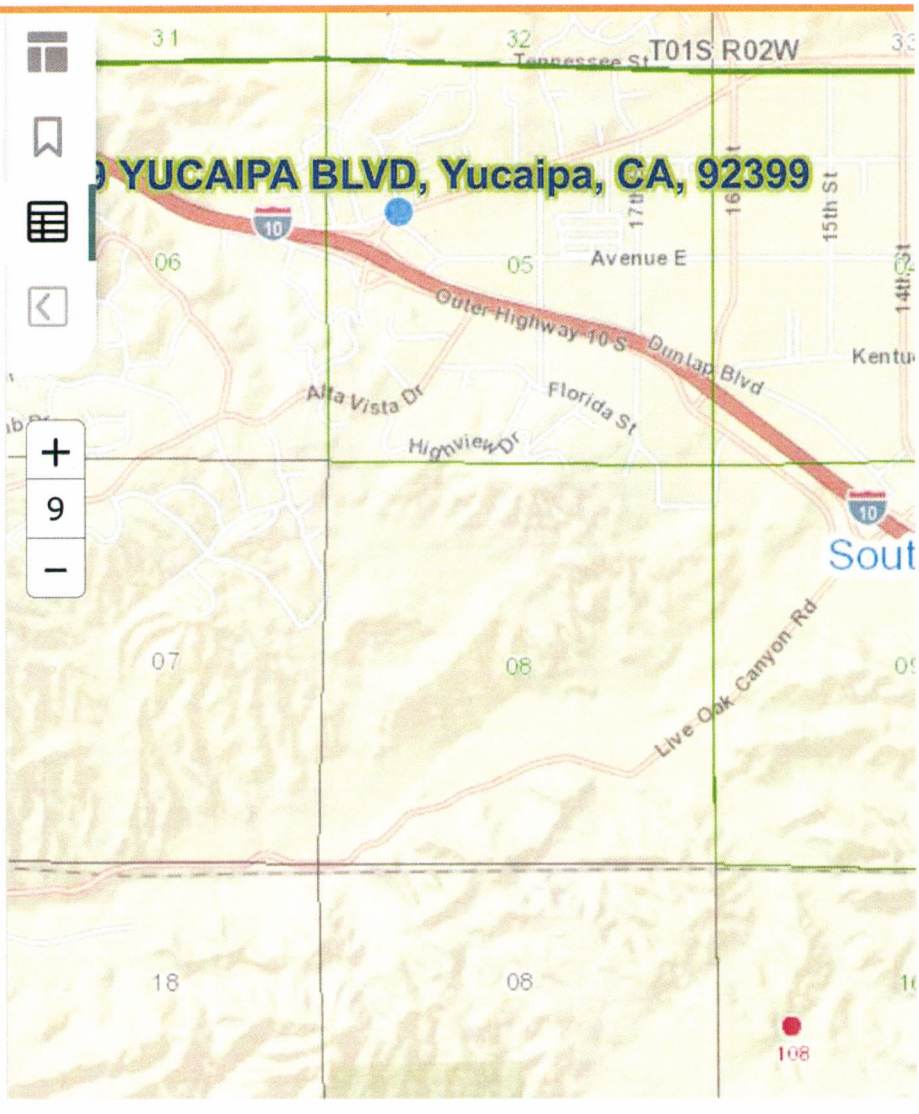

8 Adjoining Undeveloped Parcels
APNs 0300-191-01, -+02, -17, -18, -28, -29, -30, and -31
Legend
SITE
31429 Yucaipa Blvd
Google Earth
© 2018 Google
900 ft
N

Department of Conservation

Division of Oil, Gas & Geothermal Resources - Well Finder

Data Grid:

API #	Operator
06500108	Midway Oil Syndicate



Remove / Select All / Save As 1

1km
0.6mi

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SOUTH COAST AQMD

Facility INformation Detail (FIND)

Facility INformation Detail provides consolidated access to public information about facilities in the AQMD basin. If you have a Facility ID, Application Number, Notice Number and/or Case Number, you can access detail information directly, OR you can utilize the Facility Search feature as your facility information gateway. Regularly scheduled updates are made to this data at least once per week.

Click here for a detailed map search.

Search

◉ Find a Facility

Facility Name:

Street Name: Yucaipa and Avenue E

City: Yucaipa

Zip Code: 92399

○ Select Facility ID:

○ Select Application Nbr:

○ Select NOV or NC:

○ Select Hearing Board Case: -

☐ RECLAIM
☐ TITLE V

There are no facilities that match your search criteria. If you think this result is incorrect, call the number below.

Search Reset

If you are having trouble finding a facility, please Click Here for Instructions

For further information or if you have any questions about the data returned by FIND, email: webinquiry@aqmd.gov

V1.54

APPENDIX F

PHASE II SOIL VAPOR SAMPLING REPORT
DATED MAY 15, 2018

May 15, 2018
(TRG 8460)

Mr. Leonard Fifer
FORCE ENVIRONMENTAL
41870 Kalmia Street, Suite 115
Murrieta, CA 92562

THE
REYNOLDS GROUP
a California corporation

SITE: **23.84 UNDEVELOPED ACRES**
SOUTHEAST CORNER OF YUCAIPA & AVENUE E
YUCAIPA, CALIFORNIA

SUBJECT: **LIMITED PHASE II SOIL VAPOR SAMPLING REPORT**

Dear Mr. Fifer,

This report summarizes soil vapor sampling performed in May 2018 at the 23.84 undeveloped acres adjoining south of Yucaipa Boulevard, between Avenue E to the West and 18th Street to the east in Yucaipa, California (the Site, see **Figure 1** – Site Location Map). The purpose of the work was to confirm that nearby gasoline service stations and auto repair facilities have not impacted shallow soils beneath the subject Site.

1.0 EXECUTIVE SUMMARY

On May 3, 2018, TRG collected 12 soil vapor samples (SV-1 through SV-12) from depths between 4 and 5 feet below ground surface (ft bgs) at various locations throughout the Site, particularly near the adjoining northwest gas station at 31429 Yucaipa Boulevard (see **Figure 2** – Site Plan with Soil Vapor and Soil Boring Locations).

No volatile organic compounds (VOCs) were detected in any of the 12 soil vapor samples collected. As such, it appears no vapor intrusion health risk exists at the Site.

2.0 FIELDWORK

Prior to beginning the fieldwork, Dig-Alert was contacted for underground utility clearance and all interested parties were notified in advance of the project schedule.

2.1 Soil Vapor Sampling

On March 3, 2018, TRG in conjunction with Optimal Technology of Thousand Oaks, California, collected 12 soil vapor samples (SV-1 through SV-12) and one duplicate sample (SV-12-DUP) from depths of 4 or 5 ft bgs at locations shown on **Figure 2**. The soil vapor sampling followed the July 2015 DTSC/LARWQCB *Advisory - Active Soil Gas Investigations* (the *Advisory).*

Soil Vapor Probe Installation

The placement of the temporary soil vapor probes was performed by hydraulically pushing one-inch diameter stainless steel soil vapor probes to the desired depth. Once the probes were installed, hydrated bentonite chips were placed around the probes at the ground surface to ensure proper seal of the probes, and soil vapor samples were directly sampled through the probes. Soil vapor was first purged and then collected. Clean gas probes were used for each sampling location.

Soil Vapor Sampling

Soil vapor samples were collected from the termination of each probe at a constant low flow rate measuring 200 milliliters per minute (ml/min) as shown by an in-line vacuum gauge to limit stripping (ie. enhanced compound partitioning from impacted soil or groundwater), to prevent ambient air intrusion and increase the likelihood of representative samples. The default three

volume purge was used for the soil vapor sampling. One purge volume is defined as the total volume of air space which is the summation of the sample volume, internal sampling equipment volume and annular space around the probe tip. New tubing was used at each sampling point to prevent cross contamination.

Leak testing was conducted at every soil vapor probe location. Isobutane, found in common shaving cream, was used as the tracer gas. The tracer gas compound was applied to the soil vapor probes at each point of connection in which ambient air could enter the sampling system, including the top of the sampling probe where the tubing meets the probe connection and the surface bentonite seals. A detection of the tracer compound in the subsurface soil vapor sample indicates that ambient air intrusion occurred. No leaks were determined to have occurred during the sampling activities.

Vapor samples were obtained in SGE gas-tight syringes by drawing the sample through a luer-lock connection which connects the sampling probe and vacuum pump. Samples were immediately injected into the gas chromatograph/purge and trap after collection.

After sampling, the soil probe locations were backfilled with hydrated bentonite chips and the surfaces repaired with quick setting concrete. No field wastes were generated during the soil vapor work.

3.0 LABORATORY ANALYSES AND RESULTS

All soil vapor samples (SV-1 through SV-26) were immediately analyzed on-Site by Optimal Technology for VOCs using EPA Method 8260B. A copy of Optimal Technology's report is included as **Attachment A**.

Soil vapor samples collected in all 12 locations (SV-1 through SV-12) were non-detect for VOCs.

4.0 CONCLUSIONS

Based on the limited soil vapor sampling performed at the Site, vapor intrusion health risk to occupants of the Site from nearby gas stations and auto repair facilities does not appear to be an issue of concern at the Site.

5.0 REGISTERED PROFESSIONAL STATEMENT

All work on this project was performed under the responsible charge of a California Registered Civil Engineer. The licensed professional whose signature and seal appears at the end of this report supervised and/or conducted all work associated with the project.

Please contact Rosanne Fischer, our Project Manager for this case with any questions. She can be reached directly at 714-730-5397 Ext. 123 or by email to fischer@reynolds-group.com.

Sincerely,

THE REYNOLDS GROUP
California corporation by:



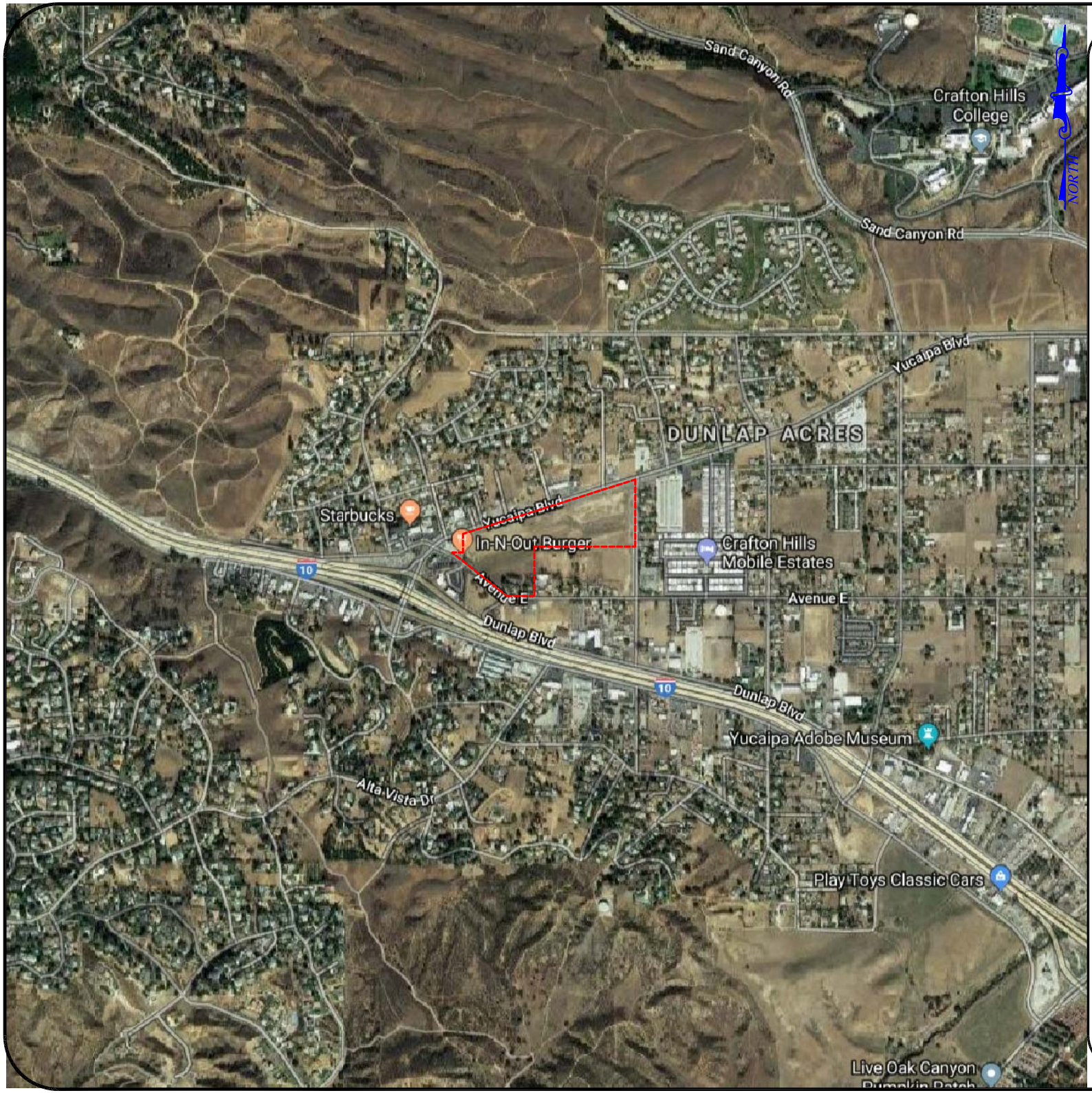
F. Edward Reynolds, Jr.
California Registered Civil Engineer #38677

Rosanne Fischer
Project Manager

Attachments:

Figure 1 -	Site Location Map
Figure 2 -	Site Plan with Soil Vapor Sample Locations
Attachment A -	Optimal Analytical Report

FIGURES



General Notes

- Approximate Property Boundary

Project Details

Name
23 +/- Undeveloped Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460

Figure Details

SITE LOCATION MAP

Figure #
Figure 1

Revise Date
May 2018

*Not To Scale

Scale

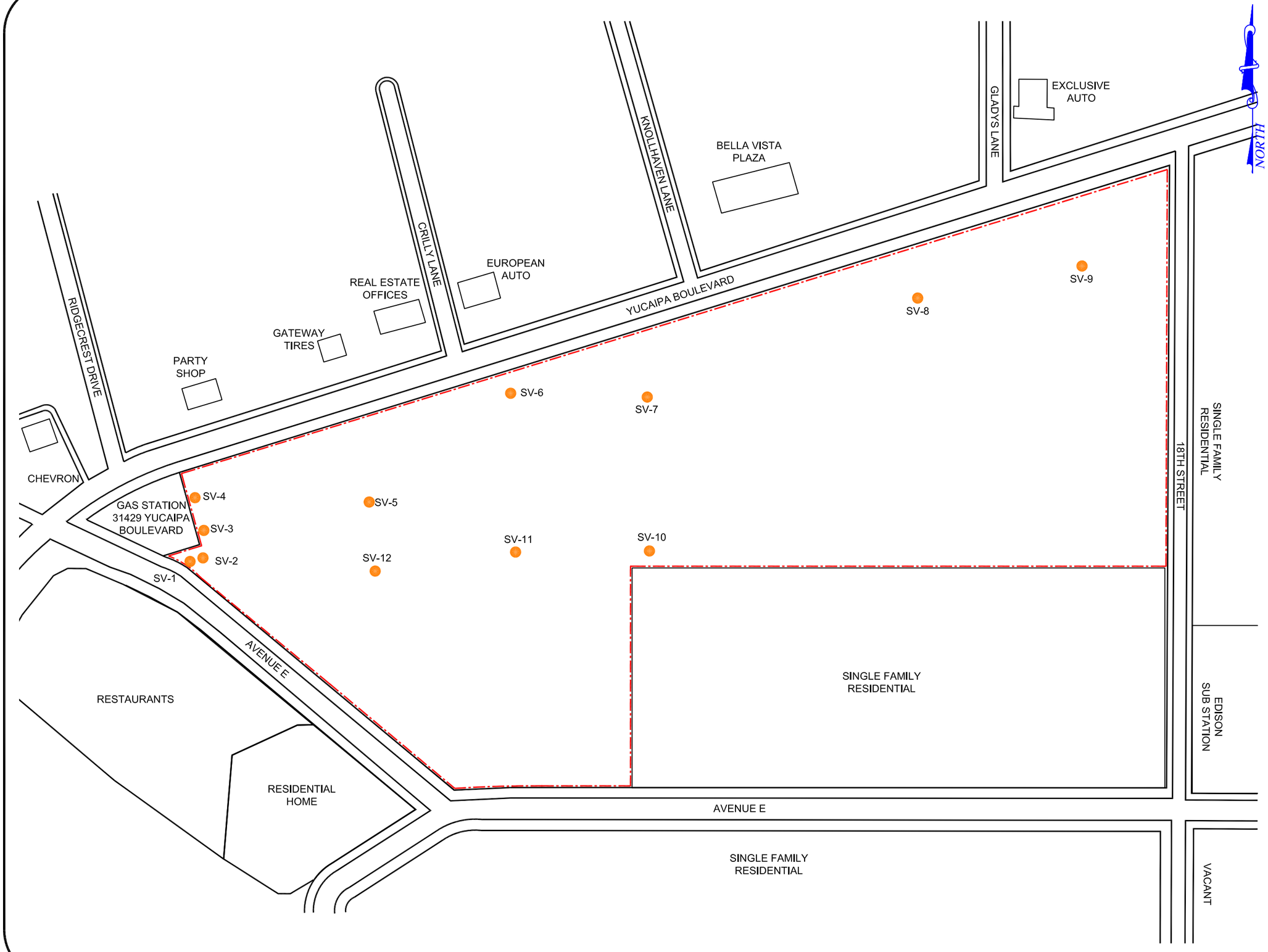
Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES



General Notes

- Property Boundary

SV-1 - Soil Vapor Survey Locations

Project Details

Name
23 +/- Undeveloped Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460

Figure Details

SITE PLAN WITH
SOIL VAPOR SURVEY LOCATIONS

Figure #
Figure 2

Revise Date
May 2018

0' 180'
Approximate Scale

Scale
1"=180'

Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES

ATTACHMENT A

OPTIMAL ANALYTICAL REPORT

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

May 3, 2018

Mr. Joshua Hudekoff
The Reynolds Group
520 W. 1st St.
Tustin, CA 92780

Dear Mr. Hudekoff:

This letter presents the results of the soil vapor investigation conducted by Optimal Technology (Optimal), for The Reynolds Group on May 3, 2018. The study was performed at 31429 Yucaipa Blvd., Yucaipa, California.

Optimal was contracted to perform a soil vapor survey at this site to screen for possible chlorinated solvents and aromatic hydrocarbons. The primary objective of this soil vapor investigation was to determine if soil vapor contamination is present in the subsurface soil.

Gas Sampling Method

Gas sampling was performed by hydraulically pushing soil gas probes to a depth of 4.0-5.0 feet below ground surface (bgs). An electric rotary hammer drill was used to drill a 1.0-inch diameter hole through the overlying surface to allow probe placement when required. The same electric hammer drill was used to push probes in areas of resistance during placement.

At each sampling location, an electric vacuum pump set to draw 0.2 liters per minute (L/min) of soil vapor was attached to the probe and purged prior to sample collection. Vapor samples were obtained in SGE gas-tight syringes by drawing the sample through a luer-lock connection which connects the sampling probe and the vacuum pump. Samples were immediately injected into the gas chromatograph/purge and trap after collection. New tubing was used at each sampling point to prevent cross contamination.

All analyses were performed on a laboratory grade Agilent model 6890N gas chromatograph equipped with an Agilent model 5973N Mass Spectra Detector and Tekmar LSC 3100 Purge and Trap. A Restek column using helium as the carrier gas was used to perform all analysis. All results were collected on a personal computer utilizing Agilent's MS and chromatographic data collection and handling system.

Quality Assurance

5-Point Calibration
The initial five-point calibration consisted of 20, 50, 100, 200 and 500 ul injections of the calibration standard. A calibration factor on each analyte was generated using a best fit line method using the Agilent data system. If the r^2 factor generated from this line was not greater than 0.990, an additional five-point calibration would have been performed. Method reporting limits were calculated to be 0.004-1.0 micrograms per Liter (ug/L) for the individual compounds.

A daily calibration check was performed using a pre-mixed standard supplied by Scotty Analyzed Gases. The standard contained common halogenated solvents and aromatic hydrocarbons (see Table 1). The individual compound concentrations in the standards ranged between 0.025 nanograms per microliter (ng/ul) and 0.25 ng/ul.

TABLE 1

Dichlorodifluoromethane	Carbon Tetrachloride	Chloroethane
Trichlorofluoromethane	1,2-Dichloroethane	Benzene
1,1-Dichloroethene	Trichloroethene	Toluene
Methylene Chloride	1,1,2-Trichloroethane	Ethylbenzene
trans-1,2-Dichloroethene	Tetrachloroethene	m-/p-Xylene
1,1-Dichloroethane	Chloroform	o-Xylene
cis-1,2-Dichloroethene	1,1,1,2-Tetrachloroethane	Vinyl Chloride
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	Freon 113
4-Methyl-2-Pentanone	Cyclohexane	Acetone
Chlorobenzene	2-Butanone	Isobutane

Sample Replicates
A replicate analysis (duplicate) was run to evaluate the reproducibility of the sampling system and instrument. The difference between samples did not vary more than 20%.

Equipment Blanks
Blanks were run at the beginning of each workday and after calibrations. The blanks were collected using an ambient air sample. These blanks checked the septum, syringe, GC column, GC detector and the ambient air. Contamination was not found in any of the blanks analyzed during this investigation. Blank results are given along with the sample results.

Tracer Gas Leak Test
A tracer gas was applied to the soil gas probes at each point of connection in which ambient air could enter the sampling system. These points include the top of the sampling probe where the tubing meets the probe connection and the surface bentonite seals. Isobutane was used as the tracer gas. No Isobutane was found in any of the samples collected.

Purge Volume
The standard purge volume of three volumes was purged in accordance with the July 2015 DTSC/RWQCB Advisory for Active Soil Gas Investigations.

Shut-in Test
A shut-in test was conducted prior to purging or sampling each location to check for leaks in the above-ground sampling system. The system was evaluated to a minimum measured vacuum of 100 inches of water. The vacuum gauge was calibrated and sensitive enough to indicate a water pressure change of at least 0.5 inches.

Scope of Work

To achieve the objective of this investigation a total of 13 vapor samples were collected from 12 locations at the site. Sampling depths, vacuum readings, purge volume and sampling volumes are given on the analytical results page. All the collected vapor samples were analyzed on-site using Optimal's mobile laboratory.

Subsurface Conditions

Subsurface soil conditions at this site offered sampling flows at 0" water vacuum. Depth to groundwater was unknown at the time of the investigation.

Results

During this vapor investigation, none of the compounds listed in Table 1 above were detected above the listed reporting limits. A complete table of analytical results is included with this report.

Disclaimer

All conclusions presented in this letter are based solely on the information collected by the soil vapor survey conducted by Optimal Technology. Soil vapor testing is only a subsurface screening tool and does not represent actual contaminant concentrations in either the soil and/or groundwater. We enjoyed working with you on this project and look forward to future projects. If you have any questions, please contact me at (877) 764-5427.

Sincerely,

John Rice
Project Manager

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

SOIL VAPOR RESULTS

Site Name: 31429 Yucaipa Blvd, Yucaipa, CA
Lab Name: Optimal Technology
Date: 5/3/18
Analyst: J. Rice **Collector:** J. Rice
Inst. ID: Agilent 6890N
Method: Modified EPA 8260B
Detector: Agilent 5973N Mass Spectrometer

SAMPLE ID	BLANK-1	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7
Sampling Depth (Ft.)	N/A	5.0	5.0	5.0	5.0	4.0	4.0	4.0
Purge Volume (ml)	N/A	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Vacuum (in. of Water)	N/A	0	0	0	0	0	0	0
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Dilution Factor	1	1	1	1	1	1	1	1

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.06	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.03	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = Below Listed Reporting Limit

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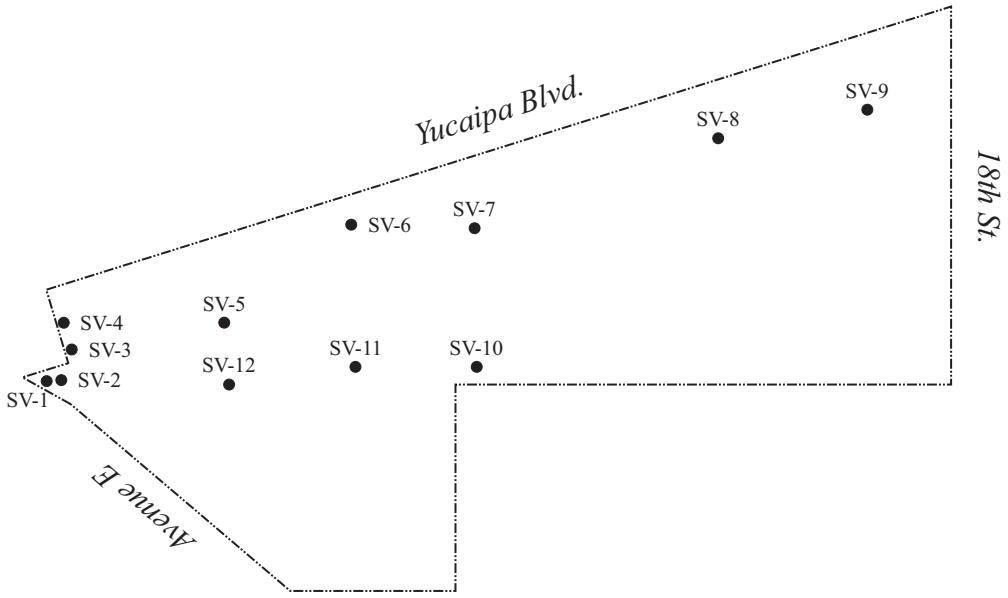
SOIL VAPOR RESULTS

Site Name: 31429 Yucaipa Blvd, Yucaipa, CA
Lab Name: Optimal Technology
Date: 5/3/18
Analyst: J. Rice **Collector:** J. Rice
Inst. ID: Agilent 6890N
Method: Modified EPA 8260B
Detector: Agilent 5973N Mass Spectrometer
Page: 2 of 2

SAMPLE ID	SV-8	SV-9	SV-10	SV-11	SV-12	SV-12 Dup		
Sampling Depth (Ft.)	4.0	4.0	5.0	4.0	5.0	5.0		
Purge Volume (ml)	1,500	1,500	1,500	1,500	1,500	1,500		
Vacuum (in. of Water)	0	0	0	0	0	0		
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000		
Dilution Factor	1	1	1	1	1	1		

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)		
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND		
Chloroethane	1.00	ND	ND	ND	ND	ND	ND		
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND		
Freon 113	1.00	ND	ND	ND	ND	ND	ND		
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND		
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND		
Chloroform	0.06	ND	ND	ND	ND	ND	ND		
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	ND		
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND		
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND		
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND		
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND		
Tetrachloroethene (PCE)	0.10	ND	ND	ND	ND	ND	ND		
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND		
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND		
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND		
Acetone	1.00	ND	ND	ND	ND	ND	ND		
1,1-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND		
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND		
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND		
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND		
Benzene	0.03	ND	ND	ND	ND	ND	ND		
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND		
Toluene	1.00	ND	ND	ND	ND	ND	ND		
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND		
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND		
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND		
o-Xylene	1.00	ND	ND	ND	ND	ND	ND		
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND		

Note: ND = Below Listed Reporting Limit



N

0 190 380

Approximate Scale

Legend

SV-1 - Soil Vapor Sample Number

● - Soil Vapor Sample Location

Optimal Technology
1667 Cross Bridge Place
Thousand Oaks, CA 91362
Toll-free (877) SOIL GAS
*Tel: (818) 734-6230 * Fax: (818) 734-6235*

DATE: May 3, 2018

COMPANY: The Reynolds Group

APPROXIMATE SCALE: 1" = 380'

TITLE: Soil Vapor Sampling Location Map
31429 Yucaipa Blvd., Yucaipa, CA

FIGURE

1

FORCE ENVIRONMENTAL

License # 867264

PHASE I Site Assessment Report

Prepared for:

VantageOne Real Estate Investments, LLC
4 Corporate Plaza, Suite 210
Newport Beach, CA 92660

For the Project
located at:

10.99 +/- Acres Undeveloped Land
Southwest Corner of
Yucaipa Boulevard and 18th Street Yucaipa, California

12288 Rancho Heights Road, Pala, CA 92059 Phone: (951) 299-9393 Fax (951) 848-9467

THE REYNOLDS GROUP
a California corporation

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT



May 21, 2018

10.99 +/- Acres Undeveloped Land
Southwest Corner of
Yucaipa Boulevard and 18th Street
Yucaipa, California

TRG Project #8460-2

Tel 714-730-5397 PO Box 1996, Tustin, California 92781-1996 Fax 714-730-6476
www.reynolds-group.com

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Southwest Corner of
Yucaipa Boulevard and 18th Street
Yucaipa, California

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FIGURES

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Appendix A - Photographs of Property & Vicinity
Appendix B - Current Owner Responses to Interview Questions
Appendix C - EDR Environmental Radius Map Report
Appendix D - Sanborn Map Findings, City Directory Search, and Environmental Lien Search
Appendix E - Select File Review Documentation
Appendix F - Limited Phase II Vapor Soil Sampling Report, dated 5/15/18

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT

10.99 +/- Acres Undeveloped Land
Southwest Corner of
Yucaipa Boulevard and 18th Street
Yucaipa, California

1.0 EXECUTIVE SUMMARY

In May 2018, a Phase I Environmental Site Assessment (Phase I ESA), consistent with American Society for Testing Materials (ASTM) Standard E1527-13, was performed for the three adjoining parcels of undeveloped land located at the southwest corner of Yucaipa Boulevard and 18th Street in Yucaipa, California (the Property, see **Figure 1** – Property Location Map).

Identified as adjoining County of San Bernardino Assessor Parcel Numbers (APNs) 0300-191-01, -02, and -18, the 10.99 +/- acre Property exists as undeveloped land. At the time of inspection, a temporary construction office and equipment staging area related to sewer piping work in Yucaipa Boulevard operated at the northeast corner of the Property. According to historical research performed during this investigation, it appears that the Property has consisted of undeveloped land since at least 1968, preceded by agricultural use dating back to 1938 (the oldest documentation available to TRG).

On May 3, 2018, The Reynolds Group (TRG) conducted an inspection of the Property and vicinity and took photographs. No adverse environmental conditions were observed during the inspection, nor were any discovered in historical research of the Property.

The Property lies in a mixed commercial and residential area of Yucaipa (see **Figure 2** – Property and Area Map). The Client opted to perform a limited Phase II at the Property and adjoining west vacant land to assess if the sites may be impacted from operations at the nearby gas stations and auto repair businesses. On May 5, 2018, twelve (12) shallow soil vapor samples between 4 and 5 feet below

ground surface (ft bgs) were collected at various locations on the Property and adjoining west vacant land. Laboratory analytical results for all soil vapor samples were "non-detect" for volatile organic compounds (VOCs), indicating that vapor intrusion health risk at the Property is not likely. The Phase II work is summarized in Section 8.8 of this report. The complete *Limited Phase II Soil Vapor Sampling Report*, dated May 15, 2018, is provided as **Appendix F**.

A few sites further out in the general area are listed in the historical environmental database report, however, they are not considered environmental concerns to the Property for reasons detailed in Section 7.3 of this report, including distance from the Property and regulatory closure.

Based on historical research and the Property reconnaissance the following recognized environmental condition (REC) was identified at the Property:

1. Possible pesticide and/or herbicide impact to shallow soils from approximately 30 years (1938 to 1968) of agricultural use.

It is the opinion of TRG that shallow soil sampling should be performed throughout the Property to mitigate or confirm the pesticide/herbicide REC.

2.0 INTRODUCTION

2.1 Purpose

TRG was contracted by Force Environmental, Inc. (the Client) to perform the Phase I ESA at the Property as due diligence for a possible real estate transaction.

The purpose of the Phase I ESA was to identify any RECs at the Property. The Phase I ESA was performed using generally accepted Phase I ESA industry standards in accordance with ASTM E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. In this report, and as defined by the ASTM, a REC is "the presence or likely

presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment or under conditions that pose a material threat of future release. De minimis conditions are not recognized environmental conditions."

2.2 Scope of Work

The following scope of work was performed to accomplish the Phase I ESA objectives:

- Visual Reconnaissance – A visual evaluation of the Property was conducted in readily accessible areas to identify RECs. Additionally, visual observations of adjoining properties were made from the vantage point of the subject Property as well as from public right-of-ways to determine the potential impact of these sites on the subject Property.
- Interviews – Verbal or written interviews with individuals knowledgeable and familiar with the Property.
- Records Review – Available environmental reports, agency records, appropriate permits, and historical aerial photographs of the subject Property and surrounding areas were reviewed.
- Agency Document Review – Appropriate regulatory agencies were contacted for information regarding any hazardous materials use, storage, and/or releases at the Property.
- Published Database Review – Reviewed published governmental agency databases to identify sites within ASTM-specified radii of the subject Property with a reported environmental concern or incident. TRG subcontracts the government agency database search to Environmental Data Resources, Inc. (EDR).
- Report Preparation – Prepare a summary report of the Phase I ESA work.
- Environmental Professional – All work associated with the project was performed by an environmental professional or under the supervision of an environmental professional.

2.3 Limitations and Exceptions

Topics not explicitly discussed within this document should not be assumed to have been investigated, such as physical testing, other than any specifically detailed in this report. The work performed in conjunction with this study and data developed are intended as a description of available information on the dates and at the locations described. This report does not warrant against future operations or conditions, nor does it warrant against:

- Operations that are not in evidence from visual observations or search of published agency records, or facts that were concealed, withheld, or not fully disclosed at the time the reconnaissance was conducted.
- Conditions that could only be determined by physical sampling or intrusive testing.
- Conditions or locations other than the Client-provided subject Property address and/or legal parcel description(s).

This report summarizes Phase I ESA work conducted by TRG in May 2018 at the subject Property. Although conditions at neighboring sites may impact the subject Property and, to the extent they were identified and included in the subject Property evaluation, this report does not serve as an assessment of sites other than the subject Property.

The conclusions and opinions presented are based on the scope of work outlined in this report. Evaluation of potential issues such as geotechnical soil conditions, air quality, flood plains, seismic conditions, asbestos-containing materials, mold, radon, lead-based paint, lead in drinking water and wetlands are not required by ASTM E1527-13 standards and, thus, were not included in the scope of services. TRG makes no warranties or guarantees as to the accuracy or completeness of information obtained from or compiled by others. Information may exist beyond the scope of this investigation. Additional information not found/available to TRG at the time of report writing may result in modifications of the conclusions presented. This report is not a legal opinion.

2.4 Reliance

The Phase I ESA was performed for the exclusive use of the Client and its investors, assignees, designees, and successors (collectively "Authorized Parties"). These Authorized Parties intend to rely upon this report as an assessment of the existing environmental condition of the subject Property. TRG recommends that any Authorized Party intending to rely upon the report independently determine whether the scope of services meets their expectations.

TRG's professional services were performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental professionals. No other warranty, expressed or implied, is made as to the professional opinions described in this report. TRG is not responsible or liable for any claims that are associated with the interpretation of the available information. Additionally, TRG is not responsible for any claims from third parties not associated with the Client, unless this report is assigned in its entirety to a party acceptable to TRG.

TRG exercised usual and customary professional care in its efforts to assess property environmental law/code/regulation compliance. However, due to the existence of literally thousands of laws, codes, and regulations pertaining to the environment, TRG cannot provide a definitive opinion concerning compliance with all laws/codes/regulations.

2.5 Proprietary Notice

This document and its contents are privileged and confidential information and should not be duplicated or copied under any circumstances without the expressed permission of TRG. Any unauthorized reuse of TRG reports or data will be at the unauthorized user's sole risk and liability.

3.0 USER PROVIDED INFORMATION

3.1 Reason for Performing the Phase I ESA

According to Tom Robinson, Managing Member of VantageOne Real Estate Investments (potential new owner of the Property), the work was performed as due diligence for a potential Property purchase (see **Appendix B** – Owner Response to Interview Questions).

3.2 Title Records and Property Use Limitations

The Client elected to have TRG perform the ASTM-required environmental lien search. As such, TRG obtained deed related information from Environmental Data Resources (EDR) as part of the Environmental Lien Search (see **Appendix D**), based on the property APNs. Lien Search results show no Property use limitations, and the current Property owners as follows:

APN	Current Owner	Previous Owner	Deed Date
0300-191-01	Jennifer Chi Chin Chuang and Amy Tingya Chuang, as Joint Tenants	Yin Chi Chuang and Chi Lin Chuang, Husband and Wife	9-28-12
0300-191-02	Queen Investments, Inc.	Yucaipa Boulevard LP	2-5-90
0300-191-18	Jennifer Chi Chin Chuang and Amy Tingya Chuang, as Joint Tenants	Yin Chi Chuang and Chi Lin Chuang, Husband and Wife	9-28-12

3.3 Value Reduction for Environmental Issues

With reference to the sale price versus fair market value of the subject Property, according to Mr. Robinson, representing the potential buyer, the sale price of the Property is reasonable and not notably discounted due to potential environmental issues (see **Appendix B**).

4.0 PROPERTY AND ADJOINING SITE CHARACTERISTICS

Figure 1 shows the Property location, **Figure 2** is a plot plan of the Property, **Figure 3** includes historical topographic maps of the area, and **Figure 4** consists of historical aerial photographs of

the vicinity. Photographs of the Property and the immediate area by the Consultant in January 2018 are included in **Appendix A** of this report.

4.1 Location

The Property is located in a mixed commercial and residential area of Yucaipa at the southwest corner of Yucaipa Boulevard and 18th Street. Area landmarks include Interstate 10 approximately 400 feet to the south, the San Bernardino Mountains one mile further south, and Crafton Hills College and Library one mile to the northeast.

4.2 Property Description

The Property currently exists as undeveloped land, sloping north to south, particularly at the approximate west boundary where a 10 to 20-foot slope exists. Bound by Yucaipa Boulevard to the north and 18th Street to the east, the Property is covered with native grass. A graded dirt road runs east-west near the north boundary of the Property, with a construction office, equipment staging area, and stockpiled dirt and asphalt at the northeast corner of the Property. These appeared to be related to sewer/water pipeline construction in Yucaipa Boulevard taking place at the time of inspection. The Property's legal description is provided in the Environmental Lien Search portion of **Appendix D.**

Potable water and sewer services for the Property are provided by Yucaipa Valley Water District. Natural gas is supplied by Southern California Gas Company, and electrical service by Southern California Edison.

4.3 Adjacent Sites

The subject Property sits in a mixed commercial and residential area of Yucaipa. Adjoining north of the Property, north of Yucaipa Boulevard, are several retail businesses including auto repair facilities, real estate offices, restaurants, and fitness and dance studios. Adjoining south and east

of the Property, east of 18th Street, are single family residential homes, some with large yards and/or acreage.

5.0 ENVIRONMENTAL SETTING

According to information obtained from Geotracker at sites in Yucaipa (geotracker.swrcb.ca.gov, Global ID T0607100543 and T0607100136), sediments beneath the Property vicinity consist of Quaternary-aged alluvial fan deposits. Drilling logs at these nearby Sites indicate soils containing primarily sand and silty sand with occasional thin layers of sandy silt or clayey silt to 180 feet below ground surface (ft bgs, the deepest depth explored at the nearby site), and groundwater was not encountered. Groundwater is reported in Yucaipa at depths greater than 200 ft bgs. Groundwater flow direction beneath the Site is likely to the south, in the direction of local topography.

6.0 PROPERTY RECONNAISSANCE

6.1 Property Inspection Observations

On May 3, 2018, a representative of TRG conducted an inspection of the Property. Weather conditions were sunny and warm. Property photographs are included in **Appendix A**. The inspection was performed from the west side to the east moving in a large grid pattern. The subject Property is described in detail in Section 4.2 of this report.

No hazardous chemical use or storage was noted during the Property inspection. Gasoline and diesel operated construction equipment observed parked at the northeast corner of the Site and operating along the north boundary, appear to be newer and for temporary use related to sewer/water pipeline installation in Yucaipa Boulevard. As such, potential gasoline and diesel impact from construction equipment is not an issue of environmental concern at the Site.

No hazardous dumping or disposal observed on the Property. Some domestic trash such as food wrappers, cardboard, and beverage containers were viewed on the Property.

No evidence of wells, underground storage tanks, hydraulic lifts, or other potentially hazardous anomalies were observed on the Property.

No environmentally hazardous leaks or spills were observed during the inspection.

Numerous pole-mounted electrical transformers were observed along the north and east sides of the Property. All appeared in satisfactory condition with no obvious leaks or staining on or around the transformer poles. Maintenance and repair of the transformers is the responsibility of Edison Company.

No pungent or noxious air emissions were noted during the Property inspection.

No pits, ponds, lagoons, other standing water or wetlands were observed on the Property during the inspection.

6.2 Adjacent Site and Vicinity Observations

Adjacent sites are described in Section 4.3 of this report. No obvious issues of environmental concern were noted during the adjacent site inspections, as viewed from public right of ways. A few sites further out from the Property are listed in the Environmental Radius Map Report (see Section 7.1 and **Appendix C**), however, none are considered issues of concern to the Property for reasons including distance and direction from the Property and regulatory closure of the cases.

6.3 Interviews

Lists of standard due diligence questions was provided to TRG's contact for response from the current Property owners, however, the questionnaires were returned having been completed by

a representative of the prospective buyer of the Property. Mr. Tom Robinson, Managing Member of VantageOne Real Estate Investments, LLC, (the potential Property owner) indicated in his responses that he was unaware of any existing or historical environmental hazards at the Property, and that no former operations have been performed at the Property, that it has always existed as "vacant land". The complete questionnaire executed by Tom Robinson is provided as **Appendix B** of this report.

7.0 REGULATORY AGENCY DATABASE REVIEW

TRG retained EDR to provide a list of facilities within the Property vicinity that are currently under review, management, or notification by a regulatory agency as indicated in an EDR Radius Map with GeoCheck Report (see **Appendix C**). The following presents the regulatory files reviewed. The results of the subject Property and surrounding site listings are summarized in Sections 7.2 and 7.3.

Depending on the database, and in compliance with ASTM Standards, the approximate search distance includes only the subject Property or between 0.25 and 1.0 miles from the subject Property.

7.1 Government Databases Searched

The United States Environmental Protection Agency (EPA) National Priority List (NPL) and Delisted NPLs: The NPL is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site, to be included on the NPL, must either meet or surpass a predetermined hazard ranking system score, or be chosen as a state's top-priority site, or meet all three criteria of: 1) the US Department of Health and Human Services issues a health advisory recommending that people be removed from the site to avoid exposure; 2) EPA determines that the site represents a significant threat, and 3) EPA determines that the remedial action is more cost-effective. Delisted NPLs are those sites that may be deleted from the NPL where no further response is appropriate as determined by the EPA.

The required minimum search distance is one mile from the Property for NPLs and ½ mile for Delisted NPLs.

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) and CERCLIS No Further Remedial Action Planned (NFRAP): The CERCLIS database contains information on potentially hazardous waste sites that have been reported to the US EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the CERCLA. CERCLIS contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. CERCLIS NFRAP contains information pertaining to facilities that have been removed from the CERCLIS database due to the absence of contamination following further investigation, sufficient remedial action of any contamination, or where contamination is not serious enough to warrant federal Superfund action or NPL consideration. The required minimum search distance for both CERCLIS and CERCLIS NFRAP is ½ mile from the subject Property.

Resource Conservation and Recovery Act (RCRIS): is a database which includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The list is developed and maintained by the EPA. The purpose of this listing is to summarize registration information and does not imply that contamination has occurred on the property, but does identify potential sources of contamination. The RCRIS database is divided into small quantity generator (SQG) sites, large quantity generator (LQG) sites, and transfer, storage and disposal (TSD) sites. The required minimum search distance for RCRIS SQG and LQG is limited to the subject Property and adjoining sites, and is ½ mile for RCRIS TSD sites.

Institutional and Engineering Controls (IECs): IECs 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 the Property. Deed restrictions are generally required as part of the institutional controls and 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 affect human health. The search includes only the subject Property.

Emergency Response Notification System (ERNS): This listing is a database of incident notification information regarding incidents of reported releases of oil and hazardous substances. The search includes only the subject Property.

Consent: This database lists addresses involved in major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund). It is release periodically by the United States District Courts after settlement by the parties to the litigation matters. The search includes only the subject Property.

Records of Decision (RODs): RODs documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup. The required minimum search radius for RODs is one mile from the subject Property.

Mines: The Mines database is a record of mine locations maintained by the U.S. Department of Labor, Mine Safety, and Health Administration. The required minimum search radius is ¼ mile from the subject Property.

State Hazardous Waste Sites (SHWS): The SHWS database is maintained by the DTSC and is the State's equivalent to CERCLIS. The required minimum search distance from the subject Property is one mile.

Groundwater Contamination Inventory (GWCI): The GWCI is an inventory of all groundwater contamination cases. The required minimum search radius for this database is ½ mile from the Property.

Solid Waste Facilities/Landfills (SWF/LF): This is a database that is maintained by the Integrated Waste Management Board and identifies permitted solid waste facilities or landfills. These

facilities may be active, inactive, or closed facilities, or open dumps that failed to meet RCRA criteria for solid waste landfills or disposal facilities. The required minimum search distance for the SWF/LF database is ½ mile from the Property.

Underground Storage Tanks (USTs) and Tribal USTs: is a list of registered underground storage tanks and those on Indian Land. The database is maintained by local agencies, most notably the fire departments, and contains a comprehensive listing of all registered USTs. The required minimum search distance is limited to the subject Property and adjacent sites for both USTs and Tribal USTs.

Leaking Underground Storage Tanks (LUST) and Tribal LUST: This is a list that compiles the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) identified facilities that have had unauthorized releases from USTs and those on Indian Land. The required minimum search distance for both LUST and Tribal LUST cases is ½ mile from the subject Property.

Above Ground Storage Tanks (ASTs): The AST database is maintained by the RWQCB and contains listings of registered ASTs. The required search distance for this database is limited to the subject Property and adjacent sites.

Spill, Leaks, Investigations, and Clean-Ups (SLIC) is a database showing cases impacted by environmental incidents other than USTs. The required minimum search radius for the SLIC database is ½ mile from the subject Property.

Land Use Controls (AUL): This database lists sites in California that have institutional controls or engineering controls in place. The search requirement includes the subject Property only.

Voluntary Cleanup Program (VCP): The VCP is a listing of facilities and/or sites registered on the voluntary cleanup program database. Upon completion of the negotiated work in the VCP contract agreed upon by the DTSC and the non-responsible party, the non-responsible party

received State Superfund liability protection. The required minimum search distance from the Property is ½ mile.

Dry Cleaners is a database listing dry cleaning facilities that have EPA ID numbers. The Dry Cleaning Facility Restoration Fund database is used to access, prioritize, and clean up contaminated registered dry-cleaning sites. The minimum required search distance for this database is ¼ mile from the subject Property.

Brownfields: The Brownfields is a component of the VCP, which allows a non-responsible party to acquire a contaminated property with State Superfund liability protection for existing contamination by agreeing to perform an environmental assessment and/or remediation. The required minimum search radius for the Brownfields database is ½ mile from the Property.

National Pollutant Discharge Elimination System (NPDES): The NPDES database maintains a database of waste water treatment facility locations. The EDR search radius for this database is limited to the subject Property. The required minimum search distance is limited to the subject Property.

Airs: This is a database listing permitted air facilities. The required minimum search distance is limited to the subject Property.

The aforementioned databases and search distances include those that are required by ASTM standards. Other supplemental database information is available in the full environmental disclosure report provided in **Appendix C**.

7.2 Subject Property Database Summary

There are no listings in the EDR database report for the Property.

7.3 Adjacent and Nearby Sites Database Summary

The following summary includes sites adjacent to or near the subject Property within the ASTM E1527-13 search radii. Where available, information from the EDR database report was updated using the State's Geotracker website (geotracker.swrcb.ca.gov). A review of the EDR database report by TRG is summarized below.

Database	Business Name/Address	Association with Listing	Concern to Property?
RCRA-SQG	• Chevron – 31412 Yucaipa	Generator of small quantities of hazardous waste	No. No violations reported.
ENVIROSTOR	• Sorenson Engineering – 32032 Dunlap • Jorco Chemical Co. – 32185 E. Outer Hwy 10	Under investigation or evaluation by the DTSC.	No. According to Geotracker, both cases have been "closed" since at least 2012.
LUST HIST CORTESE	• European Auto – 31516 Yucaipa • Circle K – 31933 Yucaipa • Sorenson Engineering – 32032 Dunlap	Former leaking USTs	No. All three cases have received regulatory closure for having sufficiently cleaned impacted soil and/or groundwater.
UST	• Circle Service – 31491 Yucaipa • Mobil – 31429 Yucaipa (adjoining northwest) • Chevron – 31412 Yucaipa • Arco AM/PM – 31340 Yucaipa • Yucaipa Gas Mart – 31340 Hampton • GK Market – 31583 E. Outer Hwy 10	Currently registered USTs	No, not at this time. None are shown to have experienced a leak or spill (LUST/SLIC) and, therefore, are not a concern at this time.
SLIC	• Sorenson Engineering – 32032 Dunlap	Spill and/or leak of chlorinated hydrocarbons	No. Open case, however, according to Geotracker (SL0607135888) groundwater impact does not extend beyond 17th Street, east of the subject Property.
EDR HIST CLEANERS	• Nash's Cleaners – 31776 Yucaipa • Steamers Dry Cleaner – 31364 Hampton	Former Dry Cleaning Facility	No. Not shown in SLIC database above as having experience a leak or spill.

8.0 PROPERTY HISTORY/LAND USE REVIEW

8.1 Historical Topographic Maps

Historical topographic maps provided by EDR were also reviewed. Maps were available periodically from 1899 to 2012. The topographic gradient on all maps, where visible, is shown to vary, sloping in a southerly direction north of the Site from the Crafton Hills and in a northerly direction south of the Site from the San Bernardino Mountains. The Property is shown at the most westerly side of the Yucaipa Valley at approximately 2,100 feet above mean sea level (amsl). Yucaipa Creek approximately one mile south of the Property is the main water feature on all maps. Agricultural use on the Property and a small structure at the northeast corner appears on the 1954 map. Two or more structures appear on the Property, one at the northeast corner and one at the northwest corner, along Yucaipa Boulevard on the 1967 through 1996 maps. No structures appear on the Property in the most recent 2012 topogaphic map. Based on the size of the structures (small) and the lack of evidence indicating commercial use from other research performed during this investigation, the markings shown on the Property are likely residential use.

8.2 Historical Aerial Photographs

Aerial photographs of the Property and vicinity, as provided by EDR, were reviewed in order to ascertain historical land uses that may have been responsible for the generation/or storage of potentially hazardous materials at and near the Property. Copies of the aerial photographs are provided as **Figure 4** of this report.

1938 and 1949

The Property appears with agricultural use. One structure, likely a farm house, exists at the northeast corner of the Property. Yucaipa Boulevard to the north, Avenue E to the south, and 18th Street to the east are all paved.

1953 and 1959

The subject Property remains agricultural use. Development in the vicinity has increased notably, although several agricultural parcels remain in the area. Interstate 10 first appears in the 1953 photograph.

1968, 1975, and 1978

There is no longer agricultural use visible on the Property, but the structure at the northeast corner of the Property remains. The vicinity can be characterized as mixed residential and undeveloped land.

1985, 1989, and 1995

The former structure at the northeast corner of the Property is gone and the Property is entire vacant. The immediate vicinity is primarily residential with some commercial buildings along each side of Interstate 10, south of the Property, and along the north side of Yucaipa Boulevard.

2006, 2010, and 2014

The Property and vicinity appear much like today, except without the construction offices/staging area currently operating from the northeast corner of the Property. The parcels are entirely undeveloped, and is the adjoining west area. To the north, north of Yucaipa Boulevard, are commercial (larger) structures followed further north by residential housing. South of the Property also appears with residential use except businesses operating along Interstate 10. The general area east of the Property, east of 18th Street, is primarily residential except a public storage facility along Yucaipa Boulevard and an Edison substation along Avenue E.

8.3 Sanborn Fire Insurance Maps

No Sanborn Fire Insurance Maps were available for the subject Property addresses through EDR (see **Appendix D**).

8.4 City Directory Search

TRG also retained EDR to perform a City Directory Search. The complete City Directory as provided by EDR is included in **Appendix D** of this report. No businesses are shown for the Property based on the APNs provided to EDR by TRG. Listings for adjacent and nearby sites include personal names (indicating residential use), landscape services, construction companies, real estate offices, and other environmentally benign businesses. The auto repair facilities adjacent north of the Property, north of Yucaipa Boulevard, however, they are not issues of concern to the Property for reasons detailed elsewhere in this report.

8.5 Environmental Lien Search

A search for environmental liens was performed for the Property location using assessor parcel numbers associated with the Property. No environmental liens or activity and use limitations currently exist for the subject Property (see **Appendix D**). Lien Search results show the current Property owners as identified in Section 3.2 of this report. The Property's legal description is included in the Lien Search provided in **Appendix D**.

8.6 Vapor Encroachment Screen

A search for vapor encroachment at the Property was performed by EDR in accordance with ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600-10). This screening assist parties seeking to meet the search requirements in Real Estate Transactions. The Property is not listed in the federal

or state databases, nor are any adjacent sites, suggesting no vapor intrusion risk at the Property. In addition, a soil vapor survey was performed at the Property in May 2018 showing non-detect results for VOCs (see Section 8.8 and **Appendix F**).

8.7 Agency Records Review

Agency file review findings are summarized below. Select file review documentation is provided in **Appendix E**.

- *City of Yucaipa Building and Planning Department* – TRG visited the Yucaipa Building and Planning Departments on May 3, 2018, to investigate any records related to the Site. According to Benjamin J. Matlock, Associate Planner, no records exist with the City for the subject Property (ref: 909-797-2489 Ext. 261 / bmatlock@yucaipa.org.

- *San Bernardino County Department of Environmental Health (SBCODEH)* – TRG submitted a public information request for the Property to the SBCODEH. As of the writing of this report, no response was received from the SBCODEH. This is considered a "Data Gap" as defined by ASTM E1527-13, however, it is the opinion of TRG that the SBCODEH data gap does not affect the findings of this investigation since no records for the Property are anticipated to exist with the SBCODEH based on other research performed.

- *Santa Ana Regional Water Quality Control Board (SARWQCB)* – A request for file review was submitted by TRG to the SARWQCB (filereview8@waterboards.ca.gov) for the subject Property APNs/location description. No response was received from the SARWQCB as of the writing of this report. This is considered a "Data Gap" as defined by ASTM E1527-13, however, it is the opinion of TRG that the SARWQCB data gap does not affect the findings of this investigation since no records are anticipated to exist with the SARWQCB based on other research performed.

- *State Water Resources Control Board Geotracker Web Site (geotracker.waterboards.ca.gov)* – The subject Property location is not shown as a case on the Geotracker website. One site adjacent north of the Property is shown, north of Yucaipa Boulevard (European Auto, 31516 Yucaipa Blvd., Global ID T0607100415). Details regarding this case indicate that it was soils only impact, and that is was issued regulatory closure back in 1996. As such, the European Auto case is not considered an issue of concern to the subject Property. No other cases are shown on Geotracker in the immediate vicinity.

- *Division of Oil, Gas, and Geothermal Resources (DOGGR, www.conservation.ca.gov/doggr/wellfinder)* – TRG accessed the DOGGR web site to research oil well information at the Property. The map shows no oil wells on or near the Property. The nearest well (API 06500108) is located roughly 3.5 miles south-southeast of the Property and, due to its distance, is not considered an issue to the Property.

- *South Coast Air Quality Management District (SCAQMD)* – TRG accessed the SCAQMD online public records portal at http://www3.aqmd.gov/webappl/fim/prog/search. The system does not allow for searching by APNs. A physical address is required. This is considered a "Data Gap" as defined by ASTM E1527-13, however, it is the opinion of TRG that the SCAQMD data gap does not affect the findings of this investigation since no records are anticipated to exist based on other research performed.

8.8 Synopsis of Previous Environmental Investigations

Other than the May 2018 limited Phase II soil vapor survey at the Property summarized below, no known previous environmental investigations have been performed at the Property:

- 2018 Soil Vapor Investigation – On May 3, 2018, TRG collected a total of 12 soil vapor samples (SV-1 through SV-12) at the Property and the adjoining west vacant land to depths between 4 and 5 ft bgs. The purpose of the investigation was to determine if shallow soils at the Property and adjacent west vacant land were impacted from operations at nearby auto repair facilities and gas stations. As detailed in the *Limited Phase II Soil Vapor Sampling Report*, dated May 15, 2018 (see **Appendix F**), no VOCs were detected in any of the 12 soil vapor samples collected.

9.0 CONCLUSIONS & OPINIONS

In May 2018, a Phase I Environmental Site Assessment (Phase I ESA), consistent with American Society for Testing Materials (ASTM) Standard E1527-13, was performed for the three parcels of undeveloped land located at the southwest corner of Yucaipa Boulevard and 18th Street (APNs: 0300-191-01, -02, and -18).

Based on historical research and the Property reconnaissance the following recognized environmental condition (REC) was identified at the Property:

1. Possible pesticide and/or herbicide impact to shallow soils from approximately 30 years (1938 to 1968) of agricultural use.

It is the opinion of TRG that shallow soil sampling should be performed throughout the Property to mitigate or confirm the pesticide/herbicide REC.

10.0 PROFESSIONAL CREDENTIALS

All work associated with this Environmental Site Assessment was performed by or under the direct supervision of F. Edward Reynolds, Jr. Mr. Reynolds has worked in the environmental industry for more than 25 years and holds several credentials including those of a Registered

Environmental Property Assessor (#963067) and California Registered Civil Engineer (No. 38677). Mr. Reynolds meets the certification, licensing, education, and experience required under EPA's 40 CFR Part 312 for "Environmental Professionals". TRG, established in 1989, provides environmental consulting and contracting services.

Rosanne Fischer has worked in the environmental industry for more than 20 years. Ms. Fischer is a Registered Environmental Property Assessor (REPA No. 419564) and performs numerous Phase I Environmental Site Assessments each year. Ms. Fischer meets the certification, licensing, education, and experience required under EPA's 40 CFR Part 312 for "Environmental Professionals".

THE REYNOLDS GROUP
a California corporation by:





F. Edward Reynolds, Jr.
California Registered Civil Engineer #38677

Rosanne Fischer, REPA #419564
Project Manager

11.0 REFERENCES

1. Environmental Data Resources, Inc., 6 Armstrong Road, 4th Floor, Shelton, Connecticut.

2. State Water Resources Control Board Geotracker Web Site at http://geotracker.waterboards.ca.gov.

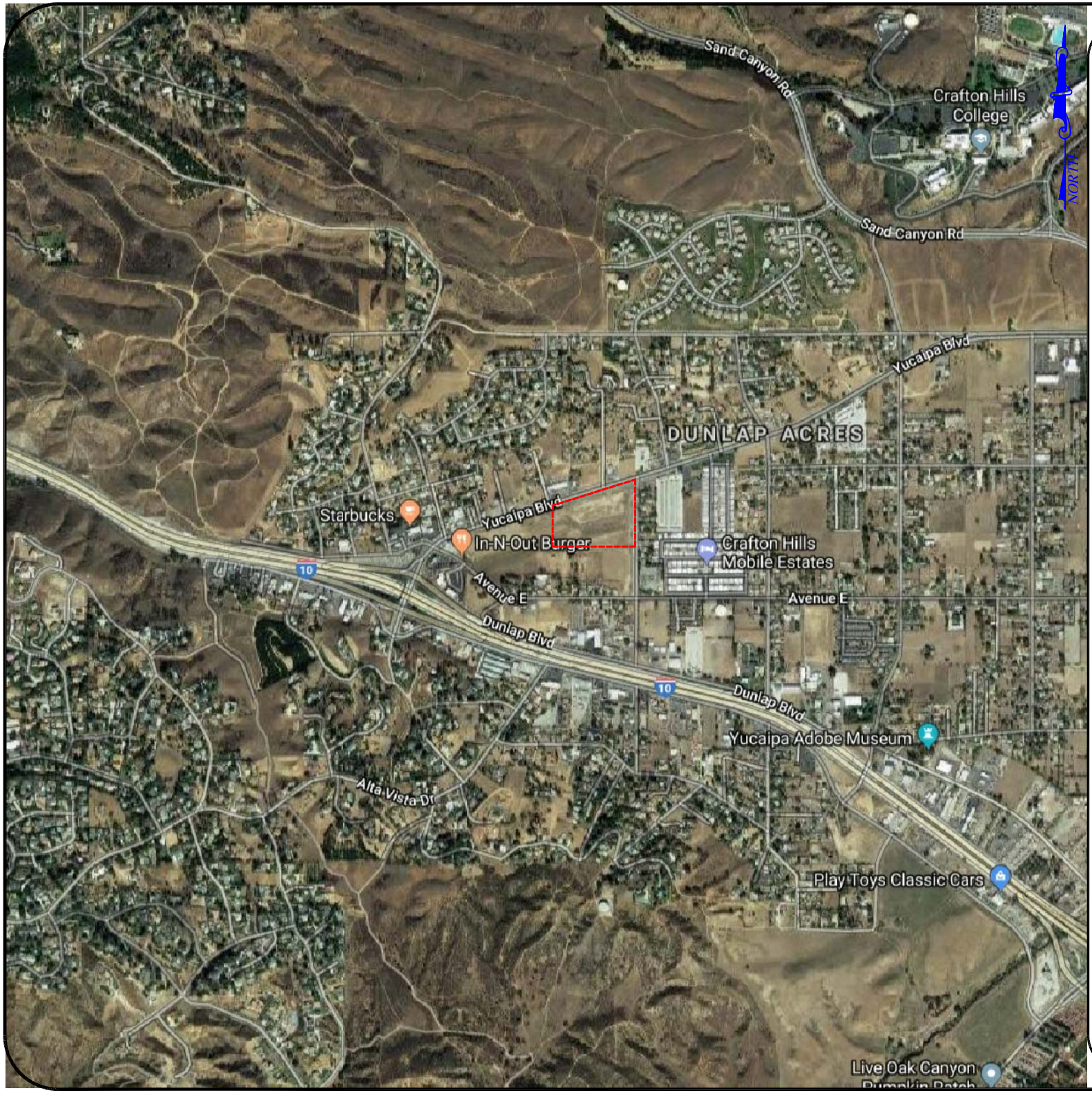
3. Yucaipa Building & Planning Department – 34272 Yucaipa Blvd., Yucaipa, CA.

4. San Bernardino County Department of Environmental Health – 385 N. Arrowhead Avenue, San Bernardino, CA.

5. Santa Ana Regional Water Quality Control Board –filereview8@waterboards.ca.gov

6. Division of Oil, Gas, and Geothermal Resources – www.conservation.ca.gov

7. South Coast Air Quality Management District – publicrecordsrequests@aqmd.gov



General Notes

- - - - - Approximate Property Boundary

Project Details

Name
10.99 Acres

Address
S/ W Corner of Yucaipa Blvd & 18th St
Yucaipa, CA

Number
8460-13

Figure Details

SITE LOCATION MAP

Figure #
Figure 1

Revise Date
July 2018

*Not To Scale

Scale

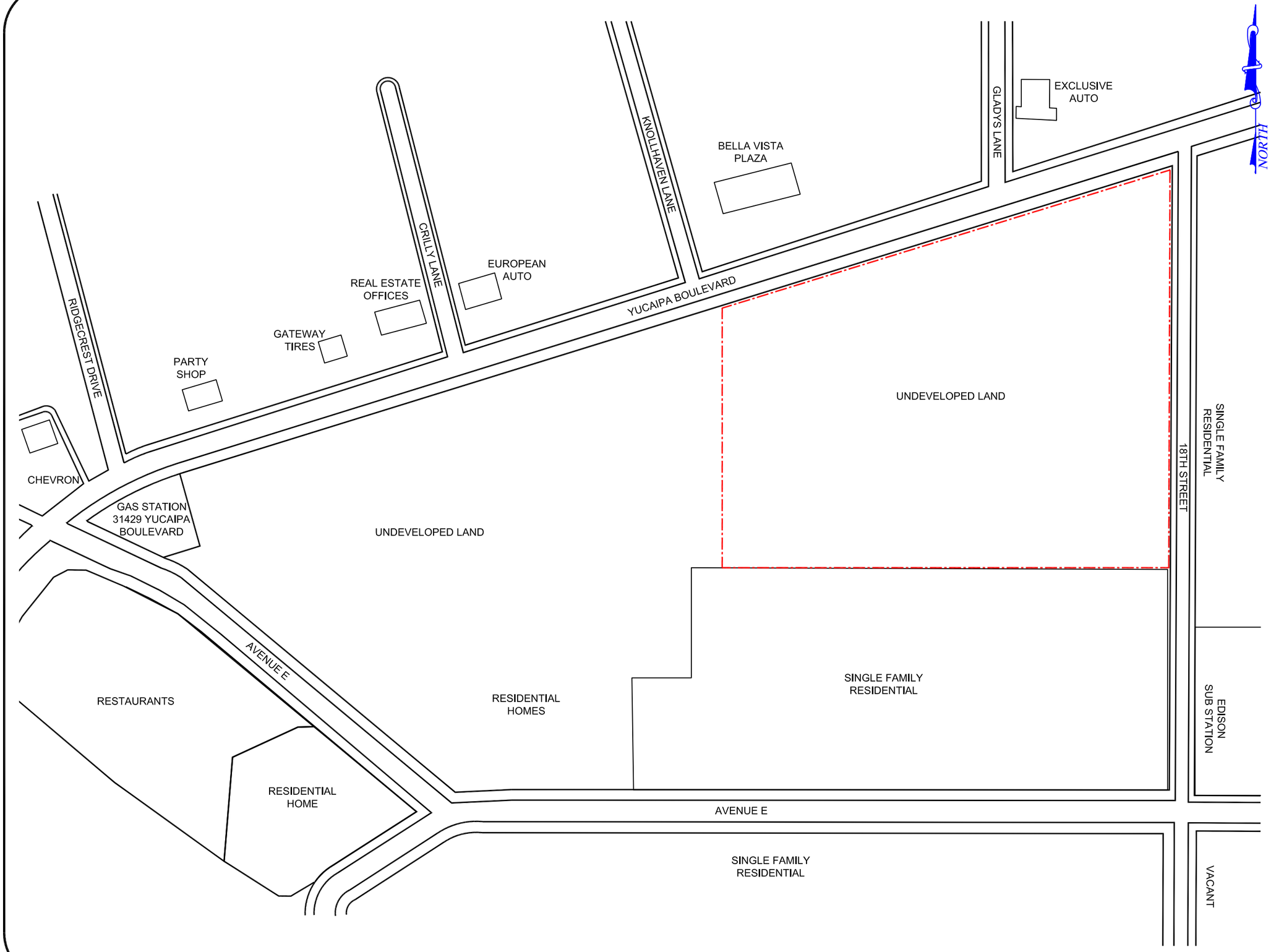
Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES



General Notes

- - - - - Property Boundary

Project Details

Name
10.99 Acres

Address
S/ W Corner of Yucalpa Blvd & 18th St
Yucalpa, CA

Number
8460-B

Figure Details

PROPERTY AND AREA MAP

Figure #
Figure 2

Revise Date
July 2018

0' 180'
Approximate Scale

Scale
1" = 180'

Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES

23.84 Acres

SEC of Yucaipa Blvd. and Avenue E

Yucaipa, CA 92399

Inquiry Number: 5260584.4

April 16, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FIGURE 3

EDR Historical Topo Map Report

04/16/18

Site Name:

23.84 Acres
SEC of Yucaipa Blvd. and Aver
Yucaipa, CA 92399
EDR Inquiry # 5260584.4

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by The Reynolds Group were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 8460

Project: 8460 PSG Yucaipa

Coordinates:

Latitude:	34.028403 34° 1' 42" North
Longitude:	-117.114556 -117° 6' 52" West
UTM Zone:	Zone 11 North
UTM X Meters:	489424.52
UTM Y Meters:	3765311.17
Elevation:	2091.74' above sea level

Maps Provided:

2012	1899
1996	
1988	
1980	
1973	
1967	
1954	
1901	

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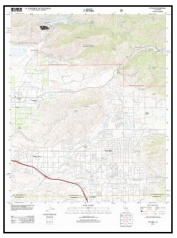
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Redlands
2012
7.5-minute, 24000

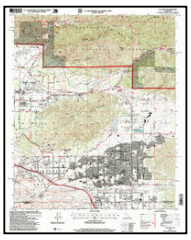


Yucaipa
2012
7.5-minute, 24000

1996 Source Sheets

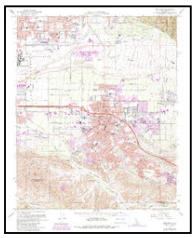


Redlands
1996
7.5-minute, 24000
Aerial Photo Revised 1994

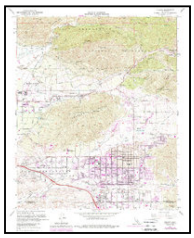


Yucaipa
1996
7.5-minute, 24000
Aerial Photo Revised 1994

1988 Source Sheets



Redlands
1988
7.5-minute, 24000
Aerial Photo Revised 1985



Yucaipa
1988
7.5-minute, 24000
Aerial Photo Revised 1985

1980 Source Sheets



Yucaipa
1980
7.5-minute, 24000
Aerial Photo Revised 1978

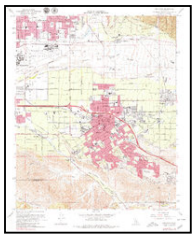


Redlands
1980
7.5-minute, 24000
Aerial Photo Revised 1978

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1973 Source Sheets

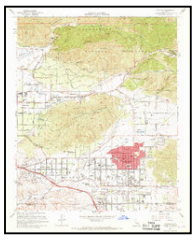


Redlands
1973
7.5-minute, 24000
Aerial Photo Revised 1973

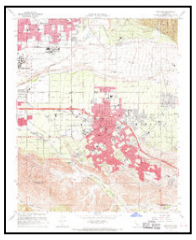


Yucaipa
1973
7.5-minute, 24000
Aerial Photo Revised 1973

1967 Source Sheets

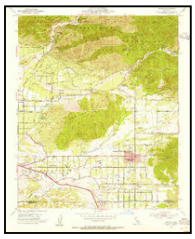


Yucaipa
1967
7.5-minute, 24000
Aerial Photo Revised 1966



Redlands
1967
7.5-minute, 24000
Aerial Photo Revised 1966

1954 Source Sheets



Yucaipa
1954
7.5-minute, 24000
Aerial Photo Revised 1952



Redlands
1954
7.5-minute, 24000
Aerial Photo Revised 1952

1901 Source Sheets



Redlands
1901
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

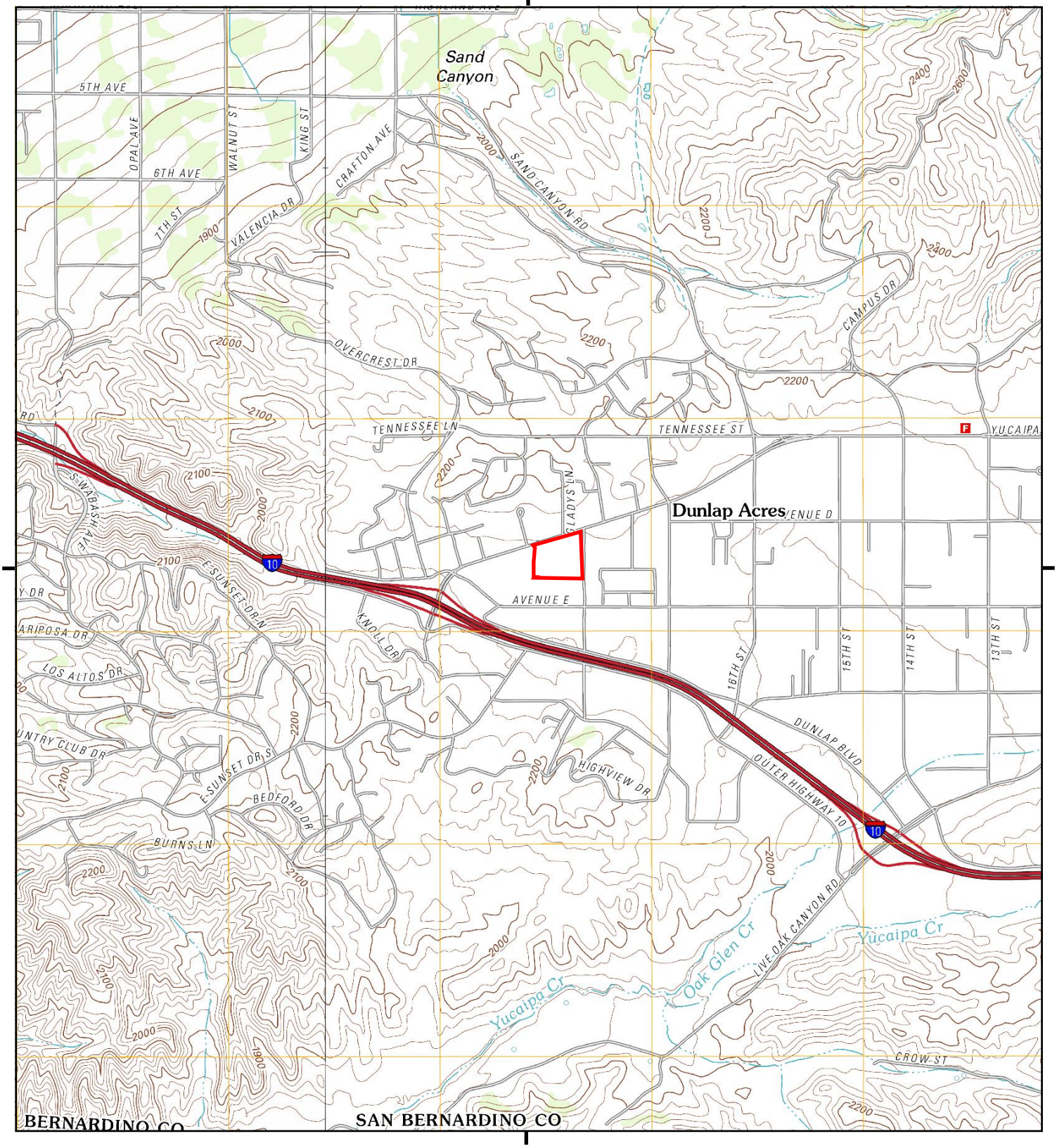
1899 Source Sheets



Redlands
1899
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

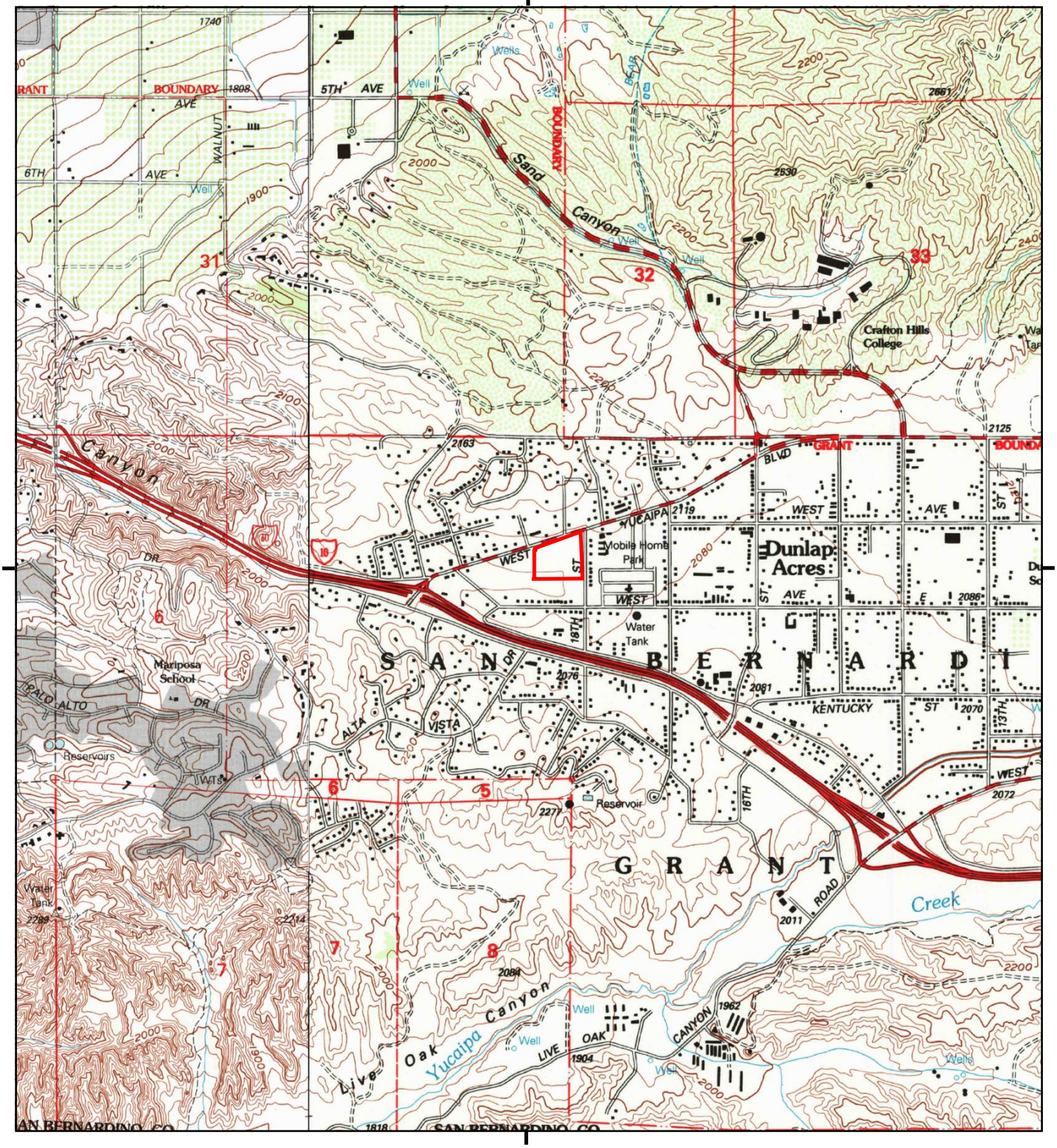
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 2012, 7.5-minute
NW, Redlands, 2012, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

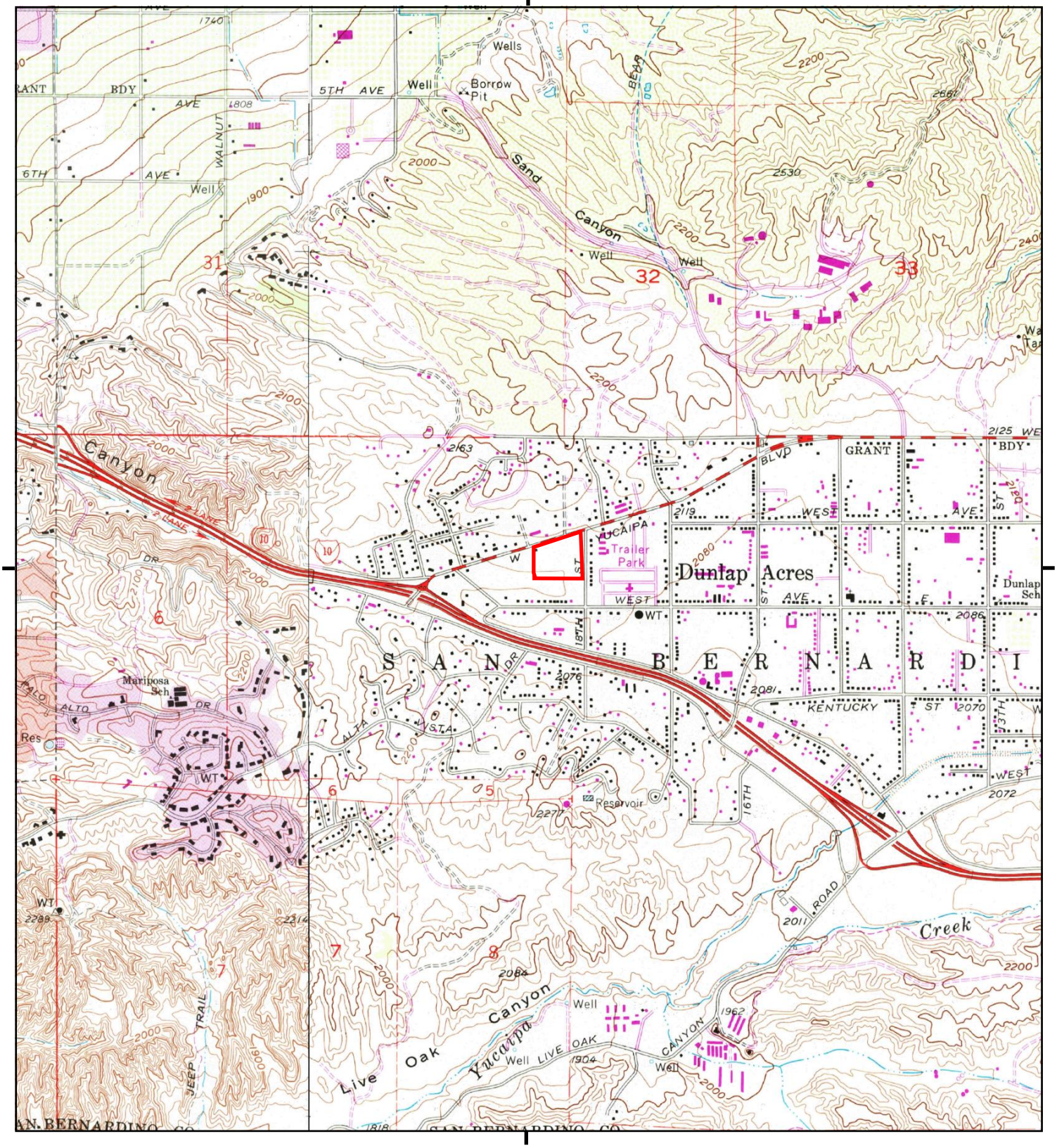
TP, Yucaipa, 1996, 7.5-minute
NW, Redlands, 1996, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1988



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

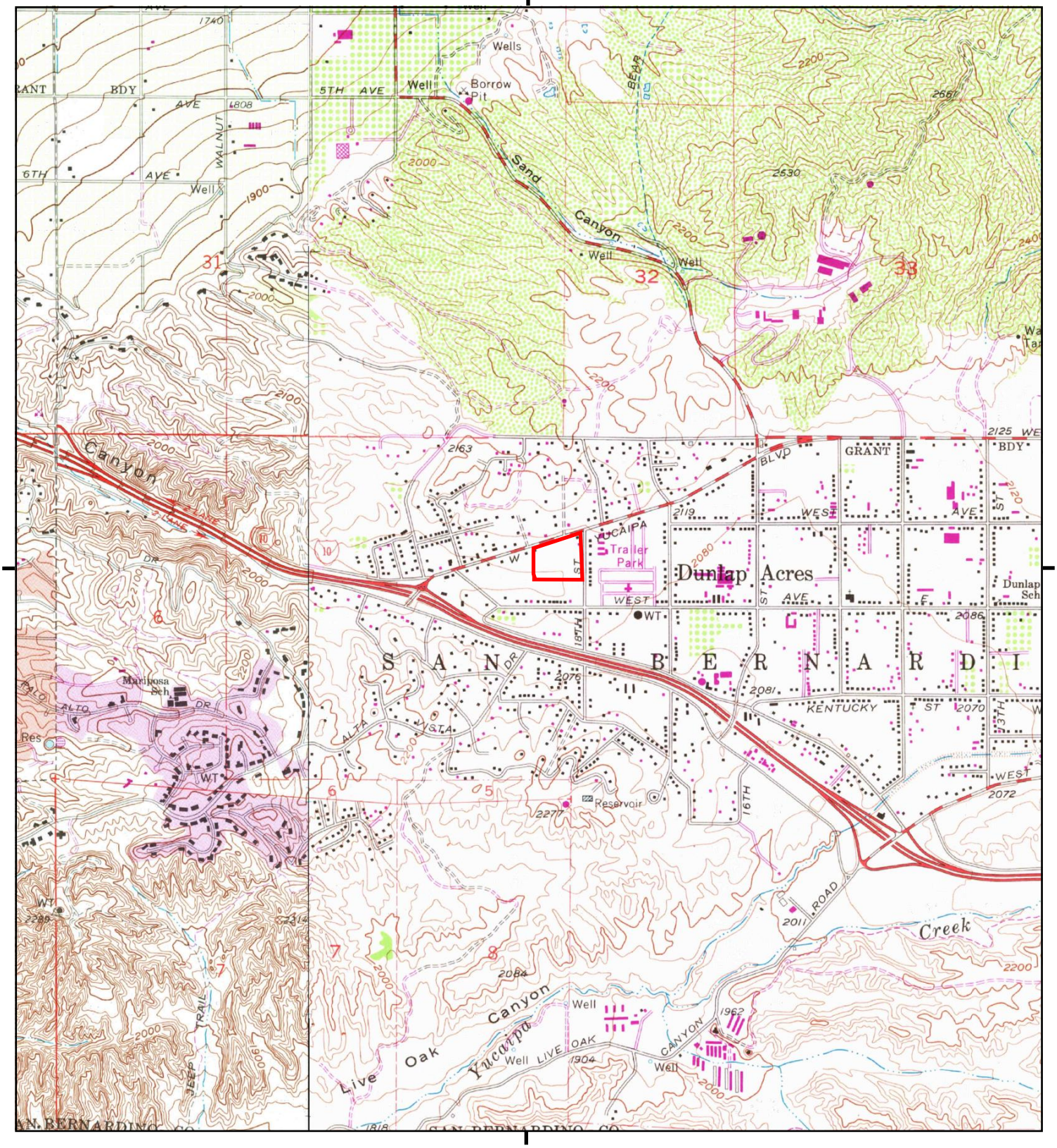
TP, Yucaipa, 1988, 7.5-minute
NW, Redlands, 1988, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1980



This report includes information from the following map sheet(s).

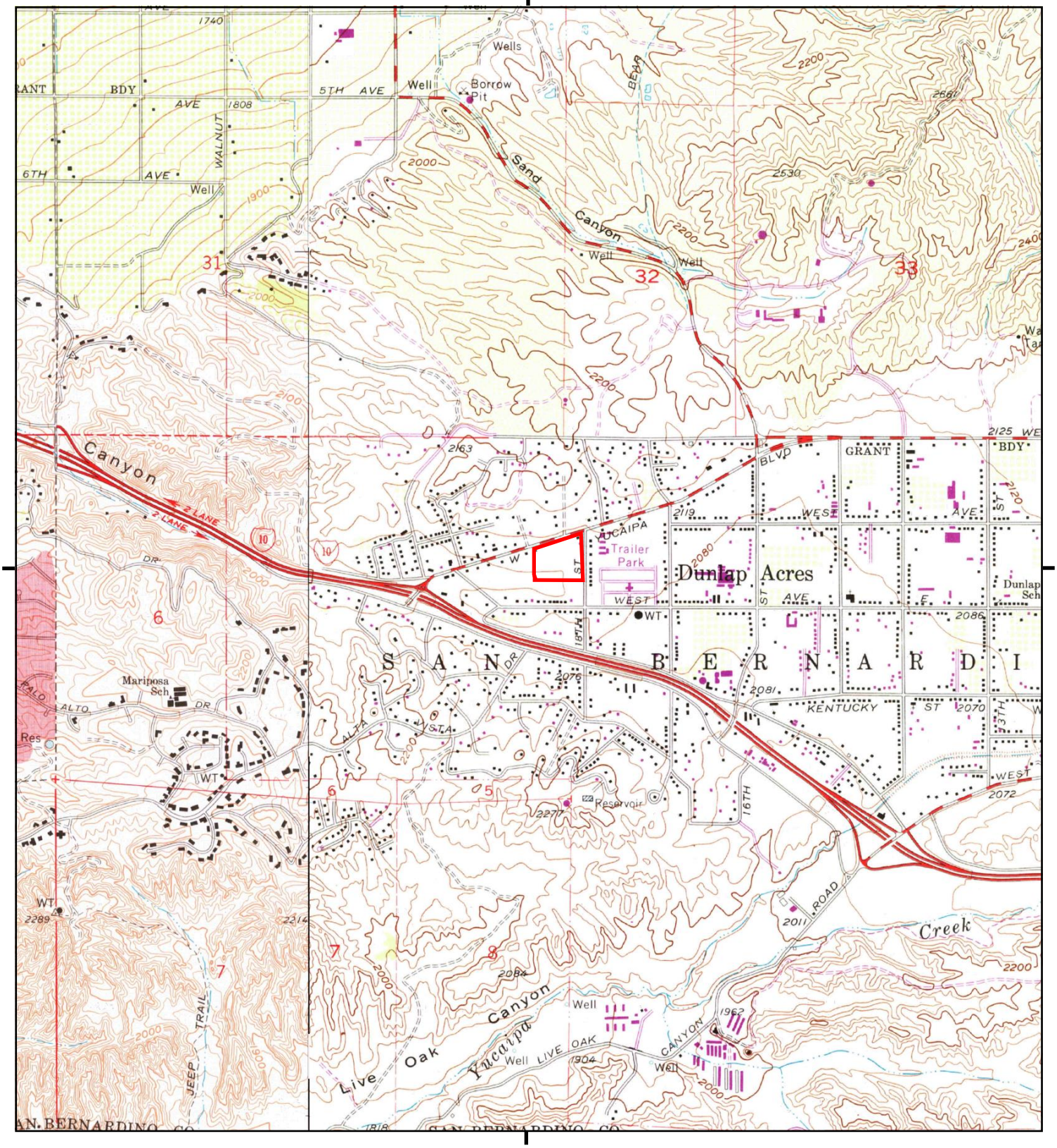
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 1980, 7.5-minute
NW, Redlands, 1980, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

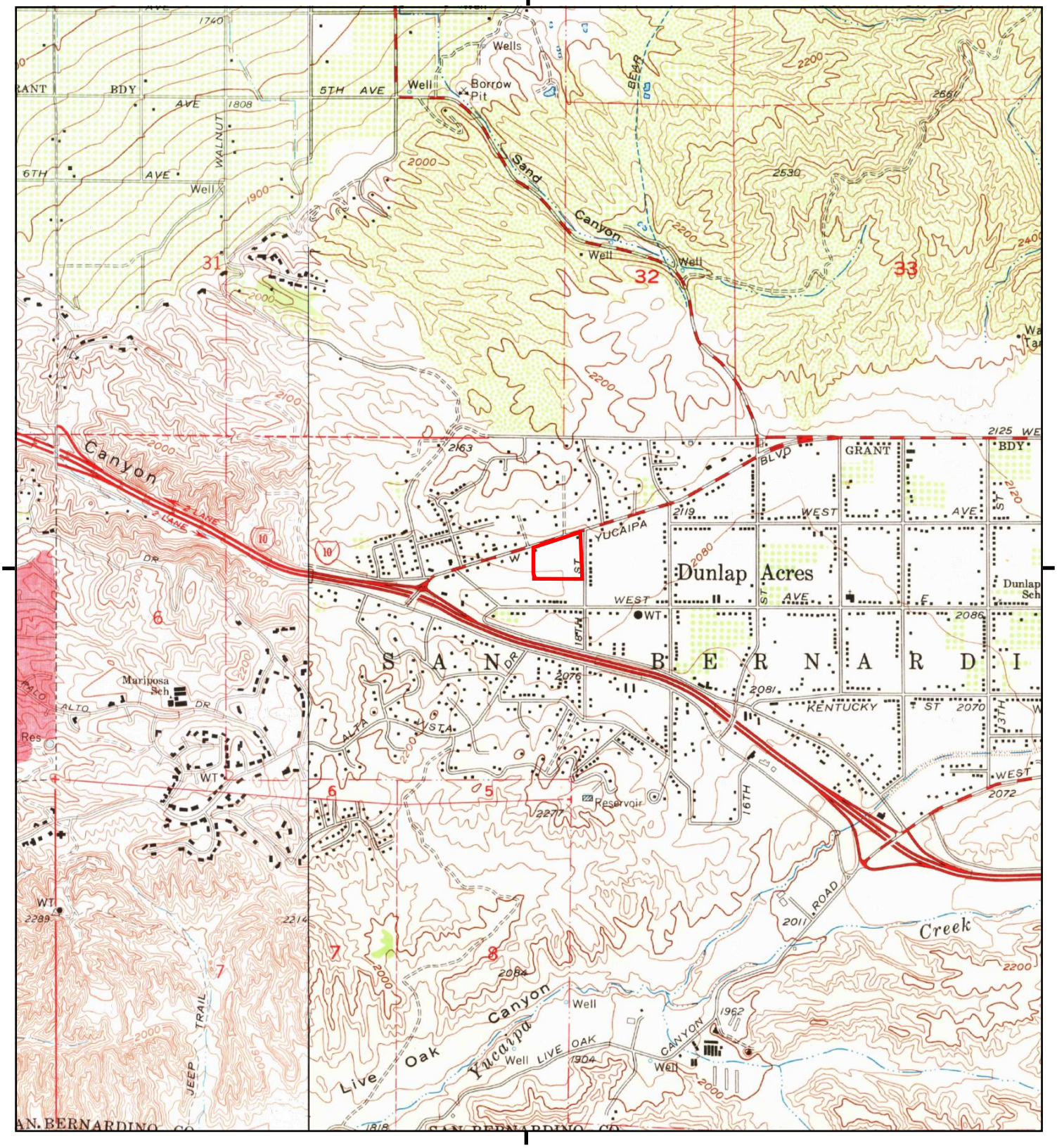
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 1973, 7.5-minute
NW, Redlands, 1973, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

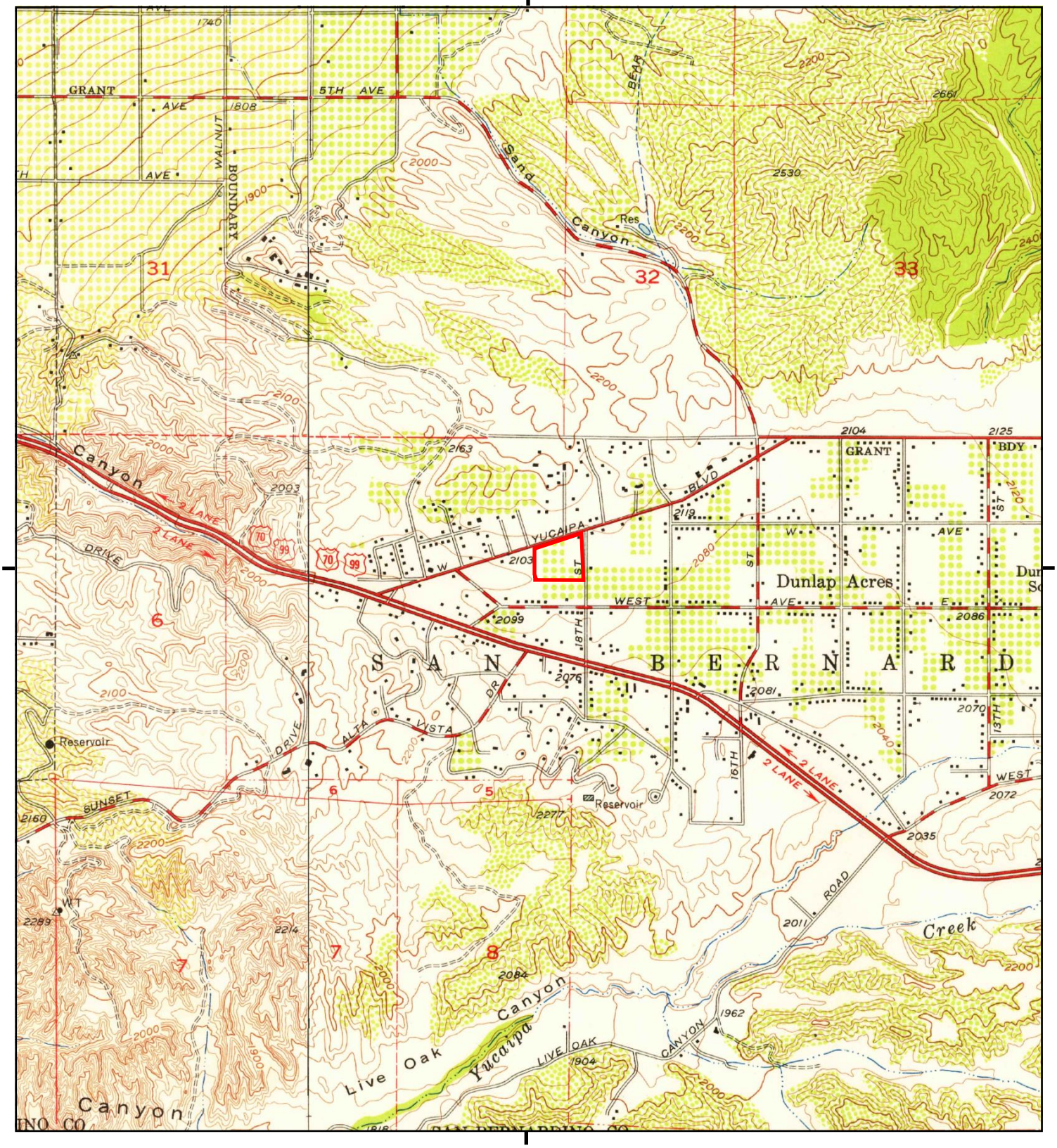
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 1967, 7.5-minute
NW, Redlands, 1967, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

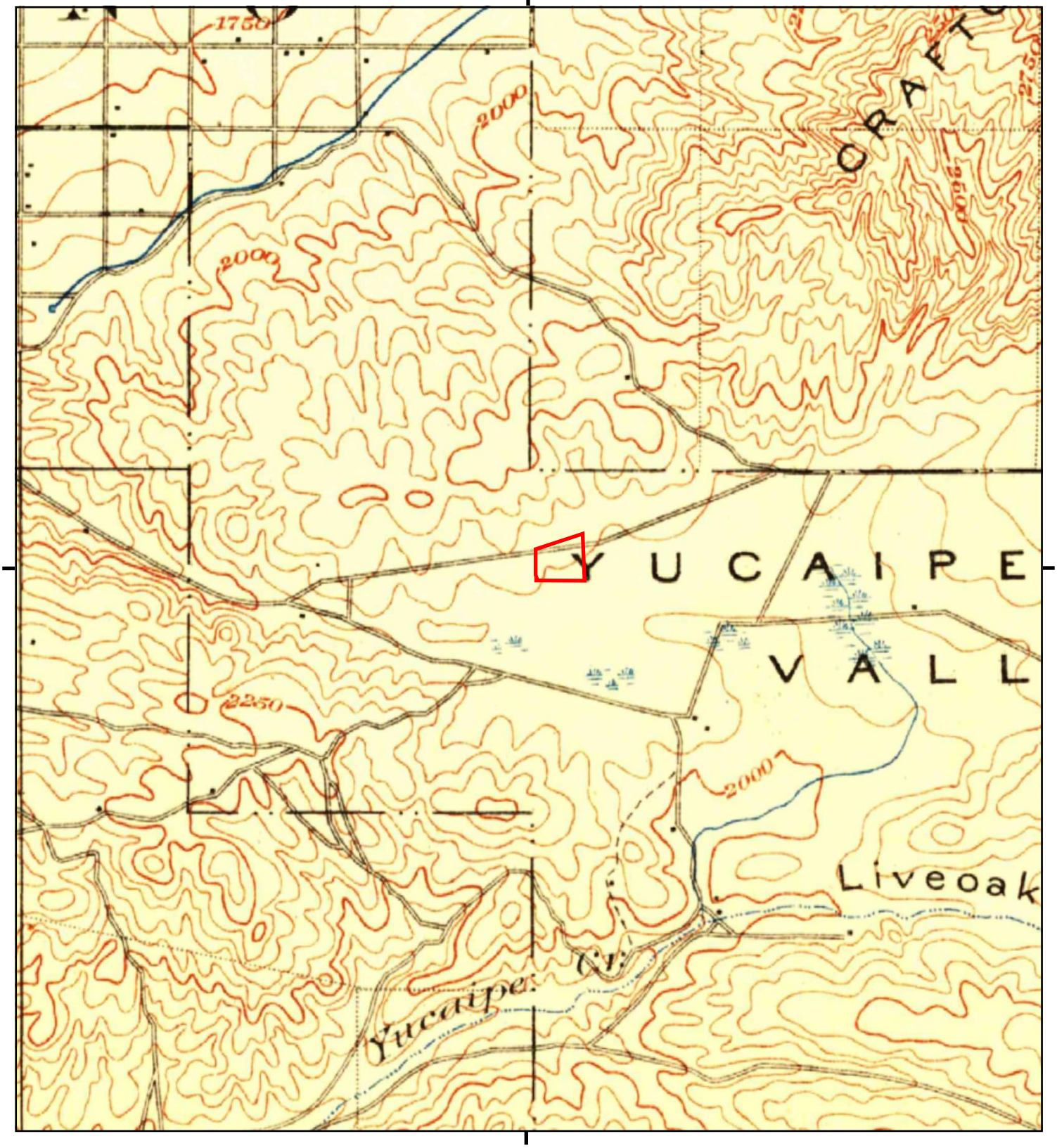
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 1954, 7.5-minute
NW, Redlands, 1954, 7.5-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

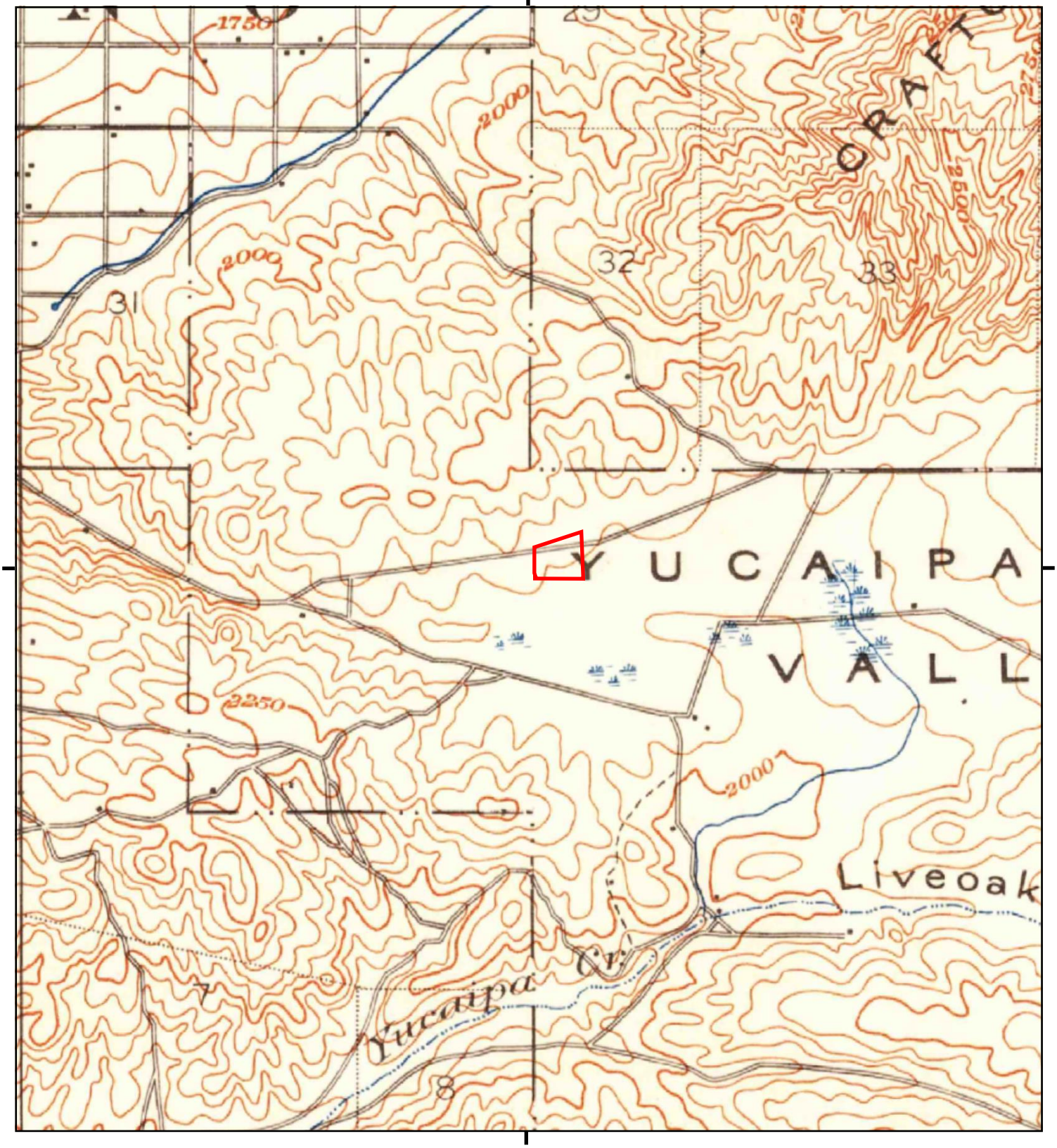
TP, Redlands, 1901, 15-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1899



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Redlands, 1899, 15-minute

SITE NAME: 23.84 Acres
ADDRESS: SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

23.84 Acres

SEC of Yucaipa Blvd. and Avenue E

Yucaipa, CA 92399

Inquiry Number: 5260584.12

April 17, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FIGURE 4

EDR Aerial Photo Decade Package

04/17/18

Site Name:

23.84 Acres
SEC of Yucaipa Blvd. and Aver
Yucaipa, CA 92399
EDR Inquiry # 5260584.12

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: October 02, 1995	USGS/DOQQ
1989	1"=500'	Flight Date: August 14, 1989	USDA
1985	1"=500'	Flight Date: September 02, 1985	USDA
1978	1"=500'	Flight Date: September 20, 1978	USDA
1975	1"=500'	Flight Date: August 01, 1975	USGS
1968	1"=500'	Flight Date: August 11, 1968	USDA
1961	1"=500'	Flight Date: June 14, 1961	USDA
1959	1"=500'	Flight Date: October 16, 1959	USDA
1953	1"=500'	Flight Date: February 22, 1953	USDA
1949	1"=500'	Flight Date: May 23, 1949	USDA
1938	1"=500'	Flight Date: July 04, 1938	USDA

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INQUIRY #: 5260584.12

YEAR: 2014

= 500'

N

EDR


INQUIRY #: 5260584.12
YEAR: 2010
= 500'
N
EDR



INQUIRY #: 5260584.12

YEAR: 2006

= 500'

N

EDR


INQUIRY #: 5260584.12
YEAR: 1995
= 500'
N
EDR



INQUIRY #: 5260584.12

YEAR: 1989

= 500'

N

EDR



INQUIRY #: 5260584.12

YEAR: 1985

= 500'

N

EDR


INQUIRY #: 5260584.12
YEAR: 1978
= 500'
N
EDR



INQUIRY #: 5260584.12

YEAR: 1975

= 500'

N

EDR



INQUIRY #: 5260584.12

YEAR: 1968

= 500'

N

EDR



INQUIRY #: 5260584.12

YEAR: 1961

= 500'

N

EDR



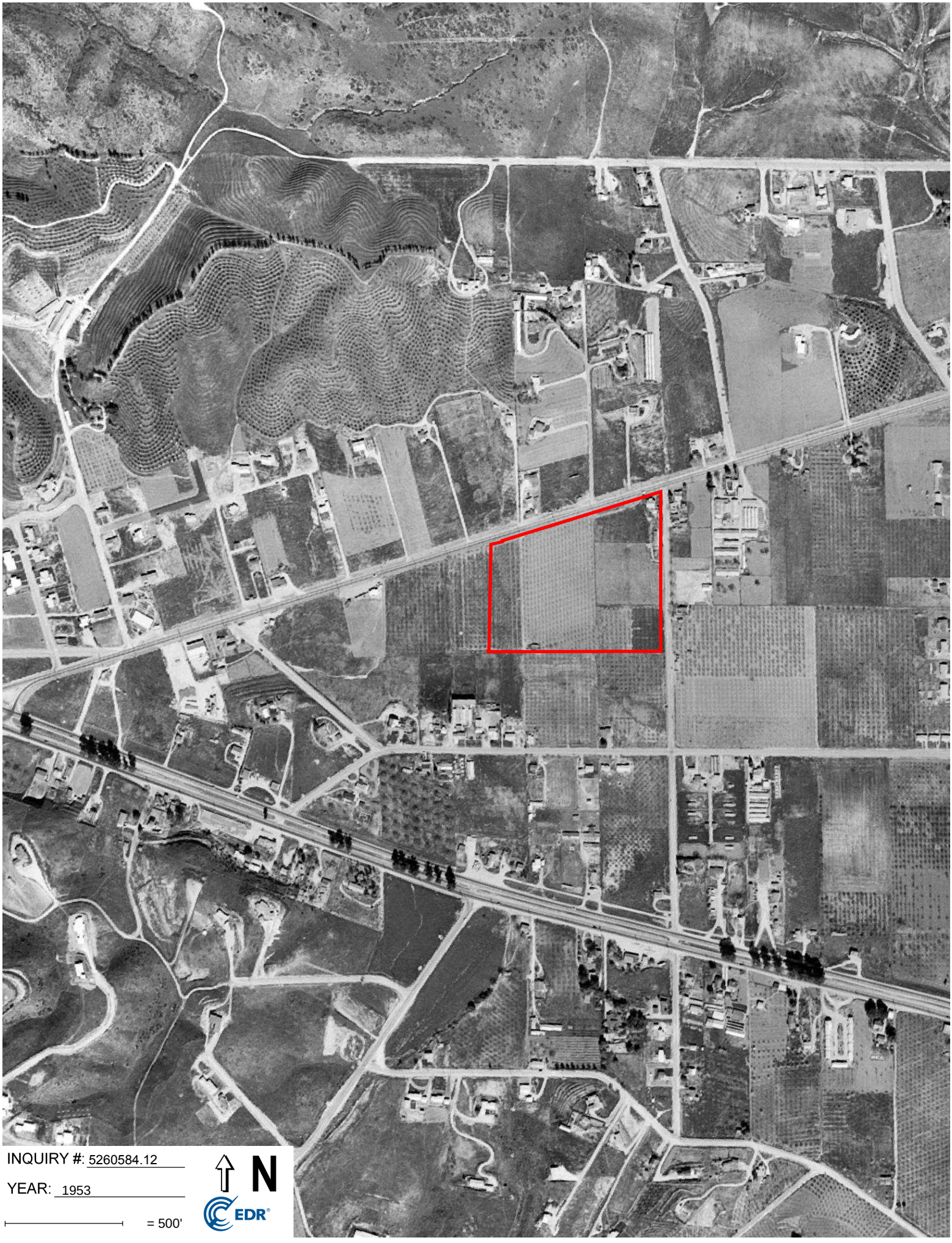
INQUIRY #: 5260584.12

YEAR: 1959

= 500'

N

EDR



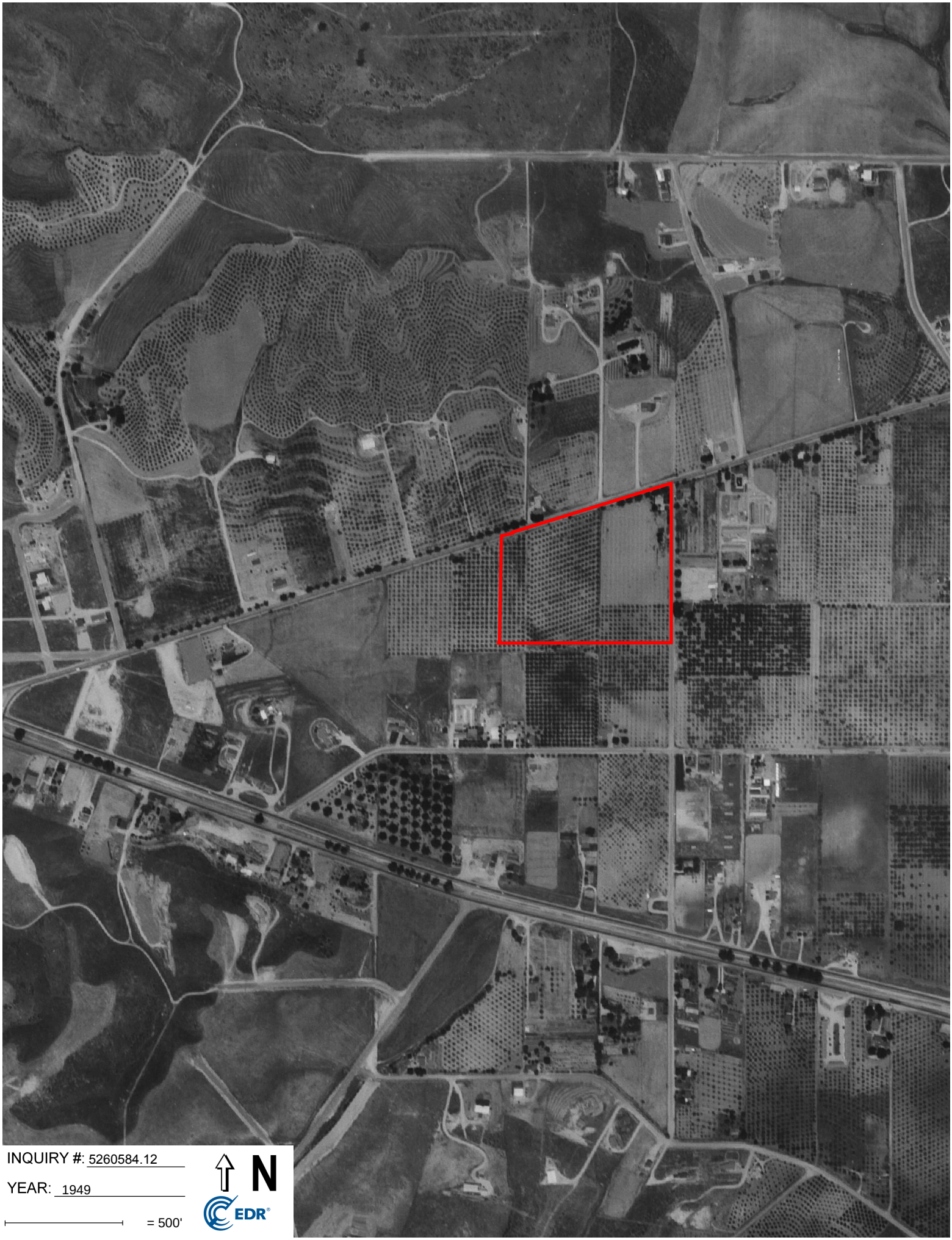
INQUIRY #: 5260584.12

YEAR: 1953

= 500'

N

EDR



INQUIRY #: 5260584.12

YEAR: 1949

= 500'

N

EDR


INQUIRY #: 5260584.12
YEAR: 1938
= 500'
N
EDR

APPENDIX A

PHOTOGRAPHS OF PROPERTY AND VICINITY



1. VIEW OF PROPERTY FROM SOUTHEAST CORNER LOOKING NORTHWEST.



2. EAST BOUNDARY OF PROPERTY, VIEW FROM SOUTHEAST CORNER LOOKING NORTH.



3. NORTH BOUNDARY OF PROPERTY NEXT TO YUCAIPA BLVD. SEWER CONSTRUCTION.



4. VIEW OF PROPERTY FROM APPROXIMATE NORTHWEST CORNER LOOKING SOUTHEAST.



5. APPROXIMATE WEST BOUNDARY OF PROPERTY, VIEW FROM NORTH TO SOUTH.



6. CONSTRUCTION STAGING AREA AT NORTHEAST CORNER OF PROPERTY.



7. STOCKPILE ASPHALT AND SOIL AT NORTHEAST AREA OF PROPERTY.



8. EXCLUSIVE AUTO ADJACENT NORTH OF PROPERTY, NORTH OF YUCAIPA BLVD.



9. RETAIL STRIP CENTER ADJACENT NORTH OF PROPERTY, NORTH OF YUCAIPA BLVD.



10. TYPICAL SINGLE FAMILY RESIDENTIAL ADJACENT SOUTH OF PROPERTY.



11. SINGLE FAMILY RESIDENCES ADJACENT EAST OF PROPERTY, EAST OF 18TH STREET.



12. UNDEVELOPED LAND ADJOINING WEST OF PROPERTY.

APPENDIX B

RESPONSES TO INTERVIEW QUESTIONS

CHUANG & QUEEN CURRENT OWNER INTERVIEW QUESTIONS

THE
REYNOLDS GROUP
A California Corporation

SITE ADDRESS: **10.99 Undeveloped Acres, Yucaipa**
APNs: 0300-191-01, -02, -18

DATE OF RESPONSE: 5/17/2018

RESPONDENT NAME
& TITLE: Tom Robinson, Managing Member

RESPONDENT SIGNATURE: VantageOne Real Estate Investments, LLC

POTENTIAL OWNER

~~CURRENT OWNER~~ PHASE I QUESTIONS (USE ADDITIONAL SHEETS IF NECESSARY TO COMPLETELY ANSWER THE FOLLOWING QUESTIONS:

1. WHO IS THE LEGAL OWNER/ENTITY OF THE PROPERTY? Jennifer Chi Chin Chuang & Amy Tingya Chuang and Queen Investments, Inc

2. HOW LONG HAVE YOU OWNED THE PROPERTY? IF LESS THAN 5 YEARS, PLEASE PROVIDE PREVIOUS OWNER CONTACT INFORMATION? UNDER CONTRACT TO PURCHASE

3. PLEASE PROVIDE HISTORICAL USES AT THE PROPERTY?
AS FAR AS I'm AWARE - VACANT LAND

4. ARE YOU AWARE OF ANY PREVIOUS ENVIRONMENTAL INVESTIGATIONS PERFORMED AT THE PROPERTY? IF SO, PLEASE PROVIDE A COPY OF THE REPORT(S). UNAWARE

5. DO ANY WELLS, UNDERGROUND STORAGE TANKS, CLARIFIERS, OR HYDRAULIC LIFTS EXIST AT THE PROPERTY? ANY CHEMICAL USE? ANY HAZARDOUS DUMPING?
UNAWARE OF ANYTHING

6. ARE YOU AWARE OF ANY EXISTING OR HISTORICAL ENVIRONMENTAL HAZARDS AT THE PROPERTY?
UNAWARE

7. DO ANY ENVIRONMENTAL LIENS, ENGINEERING CONTROLS OR LAND USE RESTRICTIONS EXIST FOR THE PROPERTY?
UNAWARE

8. WHAT IS THE PURPOSE OF HAVING THIS PHASE I PERFORMED? (EX: POTENTIAL SALE, REFINANCE, INTERNAL DUE DILIGENCE ONLY) POTENTIAL PURCHASE

9. IF APPLICABLE, DO YOU BELIEVE THE LISTED SALE PRICE OF THE PROPERTY IS "REASONABLE" AND NOT NOTABLY DISCOUNTED DUE TO POTENTIAL ENVIRONMENTAL ISSUES? YES, REASONABLE

Please e-mail or fax your response to me just as soon as possible and no later than **May 14, 2018**. You may send it to fischer@reynolds-group.com or by fax to (714)730-6476. If you have questions, please feel free in calling me in our offices at (714)730-5397 Ext. 123. Thanks very much!

THE REYNOLDS GROUP
a California corporation by:
Rosanne Fischer, REPA #419564

APPENDIX C

EDR ENVIRONMENTAL RADIUS MAP REPORT

23.84 Acres
SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Inquiry Number: 5260584.2s
April 16, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	107
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-10
Physical Setting Source Map Findings	A-12
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

COORDINATES

Latitude (North):	34.0284030 - 34° 1' 42.25''
Longitude (West):	117.1145560 - 117° 6' 52.40''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	489424.3
UTM Y (Meters):	3765116.8
Elevation:	2092 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5630639 YUCAIPA, CA
Version Date:	2012
Northwest Map:	5630631 REDLANDS, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603, 20140530
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	CIRCLE SERVICE	31491 YUCAIPA VLVD	HIST UST	Higher	31, 0.006, West
A2	CIRCLE SERVICE	31491 YUCAIPA BLVD	UST, SWEEPS UST, HIST UST	Higher	31, 0.006, West
B3	CIRCLE MOBIL	31429 YUCAIPA BLVD	San Bern. Co. Permit	Higher	61, 0.012, West
B4	CIRCLE MOBIL	31429 YUCAIPA BLVD	UST	Higher	61, 0.012, West
A5	GATEWAY TIRE & AUTO	31504 YUCAIPA BLVD	San Bern. Co. Permit	Higher	99, 0.019, WNW
C6	JOES AUTOMATIC TRANS	31710 YUCAIPA BLVD	EDR Hist Auto	Higher	108, 0.020, NE
C7	JOE'S AUTOMATIC TRAN	31710 YUCAIPA	HAZNET, San Bern. Co. Permit	Higher	108, 0.020, NE
C8	EXCLUSIVE AUTO	31710 YUCAIPA BLVD	San Bern. Co. Permit	Higher	108, 0.020, NE
C9	FURNITURE SERVICE	31640 YUCAIPA BLVD	San Bern. Co. Permit	Higher	109, 0.021, NE
10	E & E ORNAMENTAL IRO	31614 YUCAIPA BLVD	San Bern. Co. Permit	Higher	111, 0.021, NNE
A11	YUCAIPA 66 SERVICE	31516 YUCAIPA BLVD	EDR Hist Auto	Higher	114, 0.022, WNW
A12	JOHN LAMASTERS SERVI	31516 YUCAIPA BLVD	HIST UST	Higher	114, 0.022, WNW
A13	EUROPEAN AUTOMOTIVE	31516 YUCAIPA	LUST, SWEEPS UST, HIST CORTESE, San Bern. Co....	Higher	114, 0.022, WNW
A14	JC'S HAWG SHOP	31510 YUCAIPA BLVD	San Bern. Co. Permit	Higher	115, 0.022, WNW
B15	FRONTIER CALIFORNIA,	31432 YUCAIPA BLVD	San Bern. Co. Permit	Higher	116, 0.022, West
B16	BAKER'S DRIVE THRU #	31453 YUCAIPA BLVD	San Bern. Co. Permit	Lower	217, 0.041, WSW
D17	YUCAPIA CLEANERS	31776 YUCAIPA BLVD S	DRYCLEANERS	Higher	251, 0.048, NE
D18	YUCAIPA CLEANERS	31776 YUCAIPA BLVD	San Bern. Co. Permit	Higher	251, 0.048, NE
B19	HERMAN KEITH	31396 YUCAIPA BLVD	EDR Hist Auto	Lower	266, 0.050, West
D20	NASHS CLEANERS	31776 YUCAIPA BLVD S	EDR Hist Cleaner	Higher	268, 0.051, NE
B21	HUGHES CONCRETE PROD	31361 YUCAIPA	SWEEPS UST, HIST UST, EMI	Lower	296, 0.056, West
E22	YUCAIPA CHEVRON	31412 YUCAIPA BLVD	EDR Hist Auto	Higher	300, 0.057, West
E23	99280	31412 YUCAIPA BLVD	HIST UST	Higher	300, 0.057, West
E24	CHEVRON STATION NO 9	31412 YUCAIPA BLVD	RCRA-SQG, FINDS, ECHO	Higher	300, 0.057, West
E25	CHEVRON STATION #992	31412 YUCAIPA BLVD	UST, SWEEPS UST	Higher	300, 0.057, West
E26	CHEVRON STATION #992	31412 YUCAIPA BLVD	HAZNET, San Bern. Co. Permit	Higher	300, 0.057, West
E27	ARCO AM PM	31340 YUCAIPA BLVD	EDR Hist Auto	Lower	317, 0.060, West
E28	ARCO AM/PM	31340 YUCAIPA BLVD	UST	Lower	317, 0.060, West
F29	SCE TENNESSEE SUBSTA	18TH ST & E AVE	San Bern. Co. Permit	Lower	434, 0.082, SE
E30	STEAMERS DRY CLEANER	31364 HAMPTON RD APT	EDR Hist Cleaner	Lower	455, 0.086, West
F31	SCE-TENNESSEE SUBSTA	18TH ST & "E" AVE	AST	Lower	510, 0.097, SE
G32	YUCAIPA GAS MART	31340 HAMPTON RD	San Bern. Co. Permit	Lower	548, 0.104, West
G33	YUCAIPA GAS MART	31340 HAMPTON RD	UST	Lower	548, 0.104, West
H34	VERIZON WIRELESS: YU	31650 DUNLAP BLVD	San Bern. Co. Permit	Lower	602, 0.114, South
35	GK MARKET	31583 OUTER HWY 10	UST	Lower	612, 0.116, SW
H36	AT&T MOBILITY - YUCA	31682 DUNLAP BLVD	HAZNET, San Bern. Co. Permit	Lower	741, 0.140, SSE
37	ROCKY PLAZA MARKET &	31583 OUTER HWY 10 U	San Bern. Co. Permit	Lower	772, 0.146, South
I38	INLAND POWER SWEEPIN	31710 DUNLAP BLVD	RCRA NonGen / NLR, FINDS, ECHO	Lower	951, 0.180, SSE
I39	COLLISION CONCEPT	31710 DUNLAP BLVD	SWEEPS UST, HIST UST, San Bern. Co. Permit	Lower	951, 0.180, SSE

MAPPED SITES SUMMARY

Target Property Address:
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
40	CHAMPIONSHIP AUTOMOT	31763 OUTER HWY 10 S	San Bern. Co. Permit	Lower	959, 0.182, South
41	WESTERN HEIGHTS WATE	31895 AVENUE E	AST, San Bern. Co. Permit	Lower	1106, 0.209, ESE
42	ALAN GRUBEL'S AUTOMO	31285 S OUTER HWY 10	San Bern. Co. Permit	Lower	1182, 0.224, WSW
43	CIRCLE K #0324	31933 HIGHWAY I-10,	LUST, HIST CORTESE	Higher	2419, 0.458, SE
J44	SORENSON ENGINEERING	32032 DUNLAP BLVD	ENVIROSTOR, LUST, SLIC, AST, SWEEPS UST, HIST UST,...	Higher	2494, 0.472, ESE
J45	SORENSON ENGINEERING	32032 DUNLAP BOULEVA	RCRA-LQG, LUST, SLIC, ICIS, US AIRS, FINDS, ECHO,...	Higher	2494, 0.472, ESE
J46	GW INVESTIGATION	32032 DUNLOP BOULEVA	ENF, HIST CORTESE	Higher	2599, 0.492, SE
47	JORCO CHEMICAL COMPA	32185 EAST OUTER HIG	ENVIROSTOR, VCP	Lower	3702, 0.701, SE

EXECUTIVE SUMMARY

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 FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---------- Waste Management Unit Database
SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs
Toxic Pits ---------- Toxic Pits Cleanup Act Sites

US CDL ..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST ..... Facility Inventory Database

Local Land Records

LIENS ..... Environmental Liens Listing
LIENS 2 ..... CERCLA Lien Information
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
ABANDONED MINES ..... Abandoned Mines
FINDS ..... Facility Index System/Facility Registry System

UXO ---------- Unexploded Ordnance Sites
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
ECHO ---------- Enforcement & Compliance History Information
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing
CA BOND EXP. PLAN ---------- Bond Expenditure Plan
CUPA Listings ---------- CUPA Resources List
EMI ---------- Emissions Inventory Data
ENF ---------- Enforcement Action Listing
Financial Assurance ---------- Financial Assurance Information Listing
HAZNET ---------- Facility and Manifest Data
ICE ---------- ICE
HWP ---------- EnviroStor Permitted Facilities Listing
HWT ---------- Registered Hazardous Waste Transporter Database
MINES ---------- Mines Site Location Listing
MWMP ---------- Medical Waste Management Program Listing
NPDES ---------- NPDES Permits Listing
PEST LIC ---------- Pesticide Regulation Licenses Listing
PROC ---------- Certified Processors Database
Notify 65 ---------- Proposition 65 Records
UIC ---------- UIC Listing
WASTEWATER PITS ---------- Oil Wastewater Pits Listing
WDS ---------- Waste Discharge System
WIP ---------- Well Investigation Program Case List

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

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.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/11/2017 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
CHEVRON STATION NO 9	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E24***	***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 identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 01/30/2018 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SORENSON ENGINEERING	***32032 DUNLAP BLVD***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J44***	***46***
Facility Id: 71002160				
Status: Inactive - Needs Evaluation				

Lower Elevation	Address	Direction / Distance	Map ID	Page
JORCO CHEMICAL COMPA	***32185 EAST OUTER HIG***	***SE 1/2 - 1 (0.701 mi.)***	***47***	***102***
Facility Id: 60000998				
Status: No Further Action				

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 4 LUST sites within

approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EUROPEAN AUTOMOTIVE	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Database: LUST, Date of Government Version: 03/12/2018 Status: Completed - Case Closed Facility Status: Case Closed Global Id: T0607100415 Global ID: T0607100415				
CIRCLE K #0324	***31933 HIGHWAY I-10,***	***SE 1/4 - 1/2 (0.458 mi.)***	***43***	***44***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Database: LUST, Date of Government Version: 03/12/2018 Status: Completed - Case Closed Facility Status: Case Closed Global Id: T0607100147 Global ID: T0607100147				
SORENSON ENGINEERING	***32032 DUNLAP BLVD***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J44***	***46***
Database: LUST, Date of Government Version: 03/12/2018 Status: Completed - Case Closed Global Id: T0607199171				
SORENSON ENGINEERING	***32032 DUNLAP BOULEVA***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J45***	***65***
Database: LUST REG 8, Date of Government Version: 02/14/2005 Facility Status: Case Closed Global ID: T0607199171				

SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the SLIC list, as provided by EDR, has revealed that there are 2 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SORENSON ENGINEERING	***32032 DUNLAP BLVD***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J44***	***46***
Database: SLIC, Date of Government Version: 03/12/2018 Facility Status: Open - Assessment & Interim Remedial Action Global Id: SL0607135888				
SORENSON ENGINEERING	***32032 DUNLAP BOULEVA***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J45***	***65***
Database: SLIC REG 8, Date of Government Version: 04/03/2008 Facility Status: Additional Characterization Underway				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 6 UST sites within

approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE SERVICE	***31491 YUCAIPA BLVD***	***W 0 - 1/8 (0.006 mi.)***	***A2***	***8***
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 87012775				
CIRCLE MOBIL	31429 YUCAIPA BLVD	W 0 - 1/8 (0.012 mi.)	B4	11
Database: UST, Date of Government Version: 03/12/2018 Facility Id: FA0006989				
CHEVRON STATION #992	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E25***	***29***
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 86009247 Facility Id: FA0001907				

Lower Elevation	Address	Direction / Distance	Map ID	Page
ARCO AM/PM	31340 YUCAIPA BLVD	W 0 - 1/8 (0.060 mi.)	E28	33
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 88016863				
YUCAIPA GAS MART	31340 HAMPTON RD	W 0 - 1/8 (0.104 mi.)	G33	35
Database: UST, Date of Government Version: 03/12/2018 Facility Id: FA0001039				
GK MARKET	31583 OUTER HWY 10	SW 0 - 1/8 (0.116 mi.)	35	36
Database: UST, Date of Government Version: 03/12/2018 Facility Id: 89017447				

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, and dated 07/06/2016 has revealed that there are 2 AST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SCE-TENNESSEE SUBSTA	18TH ST & "E" AVE	SE 0 - 1/8 (0.097 mi.)	F31	34
WESTERN HEIGHTS WATE	***31895 AVENUE E***	***ESE 1/8 - 1/4 (0.209 mi.)***	***41***	***42***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE SERVICE	***31491 YUCAIPA BLVD***	***W 0 - 1/8 (0.006 mi.)***	***A2***	***8***

Status: A
Comp Number: 57285

EUROPEAN AUTOMOTIVE Status: A Tank Status: A Comp Number: 28083	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
CHEVRON STATION #992 Status: A Tank Status: A Comp Number: 63200	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E25***	***29***

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUGHES CONCRETE PROD Status: A Tank Status: A Comp Number: 2777	***31361 YUCAIPA***	***W 0 - 1/8 (0.056 mi.)***	***B21***	***24***
COLLISION CONCEPT Status: A Comp Number: 10718	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I39***	***40***

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 6 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE SERVICE	31491 YUCAIPA VLVD	W 0 - 1/8 (0.006 mi.)	A1	8
CIRCLE SERVICE Facility Id: 00000057285	***31491 YUCAIPA BLVD***	***W 0 - 1/8 (0.006 mi.)***	***A2***	***8***
JOHN LAMASTERS SERVI Facility Id: 00000028083	31516 YUCAIPA BLVD	WNW 0 - 1/8 (0.022 mi.)	A12	17
99280 Facility Id: 00000063200	31412 YUCAIPA BLVD	W 0 - 1/8 (0.057 mi.)	E23	27

Lower Elevation	Address	Direction / Distance	Map ID	Page
HUGHES CONCRETE PROD Facility Id: 00000002777	***31361 YUCAIPA***	***W 0 - 1/8 (0.056 mi.)***	***B21***	***24***
COLLISION CONCEPT Facility Id: 00000010718	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I39***	***40***

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 12/11/2017 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
INLAND POWER SWEEPIN	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I38***	***38***

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 (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 02/08/2018 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SORENSON ENGINEERING	***32032 DUNLAP BOULEVA***	***ESE 1/4 - 1/2 (0.472 mi.)***	***J45***	***65***

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 12/01/2017 has revealed that there is 1 DRYCLEANERS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
YUCAPIA CLEANERS EPA Id: CAL000272457	31776 YUCAIPA BLVD S	NE 0 - 1/8 (0.048 mi.)	D17	23

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 3 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EUROPEAN AUTOMOTIVE Reg Id: 083602839T	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
CIRCLE K #0324 Reg Id: 083601278T	***31933 HIGHWAY I-10,***	***SE 1/4 - 1/2 (0.458 mi.)***	***43***	***44***
GW INVESTIGATION Reg Id: 8 362307N01	***32032 DUNLOP BOULEVA***	***SE 1/4 - 1/2 (0.492 mi.)***	***J46***	***100***

EXECUTIVE SUMMARY

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 11/30/2017 has revealed that there are 21 San Bern. Co. Permit sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE MOBIL Facility Status: ACTIVE Facility Id: FA0006989	31429 YUCAIPA BLVD	W 0 - 1/8 (0.012 mi.)	B3	11
GATEWAY TIRE & AUTO Facility Status: ACTIVE Facility Id: FA0003430	31504 YUCAIPA BLVD	WNW 0 - 1/8 (0.019 mi.)	A5	12
JOE'S AUTOMATIC TRAN Facility Status: ACTIVE Facility Id: FA0015626	***31710 YUCAIPA***	***NE 0 - 1/8 (0.020 mi.)***	***C7***	***13***
EXCLUSIVE AUTO Facility Status: INACTIVE Facility Id: FA0004148	31710 YUCAIPA BLVD	NE 0 - 1/8 (0.020 mi.)	C8	15
FURNITURE SERVICE Facility Status: INACTIVE Facility Id: FA0003359	31640 YUCAIPA BLVD	NE 0 - 1/8 (0.021 mi.)	C9	15
E & E ORNAMENTAL IRO Facility Status: INACTIVE Facility Id: FA0002817	31614 YUCAIPA BLVD	NNE 0 - 1/8 (0.021 mi.)	10	16
EUROPEAN AUTOMOTIVE Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Id: FA0002951	***31516 YUCAIPA***	***WNW 0 - 1/8 (0.022 mi.)***	***A13***	***18***
JC'S HAWG SHOP Facility Status: INACTIVE Facility Id: FA0004105	31510 YUCAIPA BLVD	WNW 0 - 1/8 (0.022 mi.)	A14	22
FRONTIER CALIFORNIA, Facility Status: ACTIVE Facility Id: FA0007098	31432 YUCAIPA BLVD	W 0 - 1/8 (0.022 mi.)	B15	22
YUCAIPA CLEANERS Facility Status: INACTIVE Facility Id: FA0007883	31776 YUCAIPA BLVD	NE 0 - 1/8 (0.048 mi.)	D18	23
CHEVRON STATION #992 Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0001907	***31412 YUCAIPA BLVD***	***W 0 - 1/8 (0.057 mi.)***	***E26***	***31***

Lower Elevation	Address	Direction / Distance	Map ID	Page
BAKER'S DRIVE THRU # Facility Status: INACTIVE Facility Id: FA0012313	31453 YUCAIPA BLVD	WSW 0 - 1/8 (0.041 mi.)	B16	23
SCE TENNESSEE SUBSTA Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0000279	18TH ST & E AVE	SE 0 - 1/8 (0.082 mi.)	F29	33
YUCAIPA GAS MART	31340 HAMPTON RD	W 0 - 1/8 (0.104 mi.)	G32	35

Facility Status: ACTIVE Facility Id: FA0001039				
VERIZON WIRELESS: YU Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0000749 Facility Id: FA0013929	31650 DUNLAP BLVD	S 0 - 1/8 (0.114 mi.)	H34	36
AT&T MOBILITY - YUCA Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0004342 Facility Id: FA0001677	***31682 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.140 mi.)***	***H36***	***36***
ROCKY PLAZA MARKET & Facility Status: INACTIVE Facility Id: FA0003472	31583 OUTER HWY 10 U	S 1/8 - 1/4 (0.146 mi.)	37	38
COLLISION CONCEPT Facility Status: INACTIVE Facility Id: FA0002422	***31710 DUNLAP BLVD***	***SSE 1/8 - 1/4 (0.180 mi.)***	***I39***	***40***
CHAMPIONSHIP AUTOMOT Facility Status: INACTIVE Facility Id: FA0001852	31763 OUTER HWY 10 S	S 1/8 - 1/4 (0.182 mi.)	40	41
WESTERN HEIGHTS WATE Facility Status: ACTIVE Facility Id: FA0007908	***31895 AVENUE E***	***ESE 1/8 - 1/4 (0.209 mi.)***	***41***	***42***
ALAN GRUBEL'S AUTOMO Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Id: FA0000797	31285 S OUTER HWY 10	WSW 1/8 - 1/4 (0.224 mi.)	42	43

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 5 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JOES AUTOMATIC TRANS	31710 YUCAIPA BLVD	NE 0 - 1/8 (0.020 mi.)	C6	12
YUCAIPA 66 SERVICE	31516 YUCAIPA BLVD	WNW 0 - 1/8 (0.022 mi.)	A11	16
YUCAIPA CHEVRON	31412 YUCAIPA BLVD	W 0 - 1/8 (0.057 mi.)	E22	26

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
HERMAN KEITH	31396 YUCAIPA BLVD	W 0 - 1/8 (0.050 mi.)	B19	24
ARCO AM PM	31340 YUCAIPA BLVD	W 0 - 1/8 (0.060 mi.)	E27	32

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 2 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NASHS CLEANERS	31776 YUCAIPA BLVD S	NE 0 - 1/8 (0.051 mi.)	D20	24

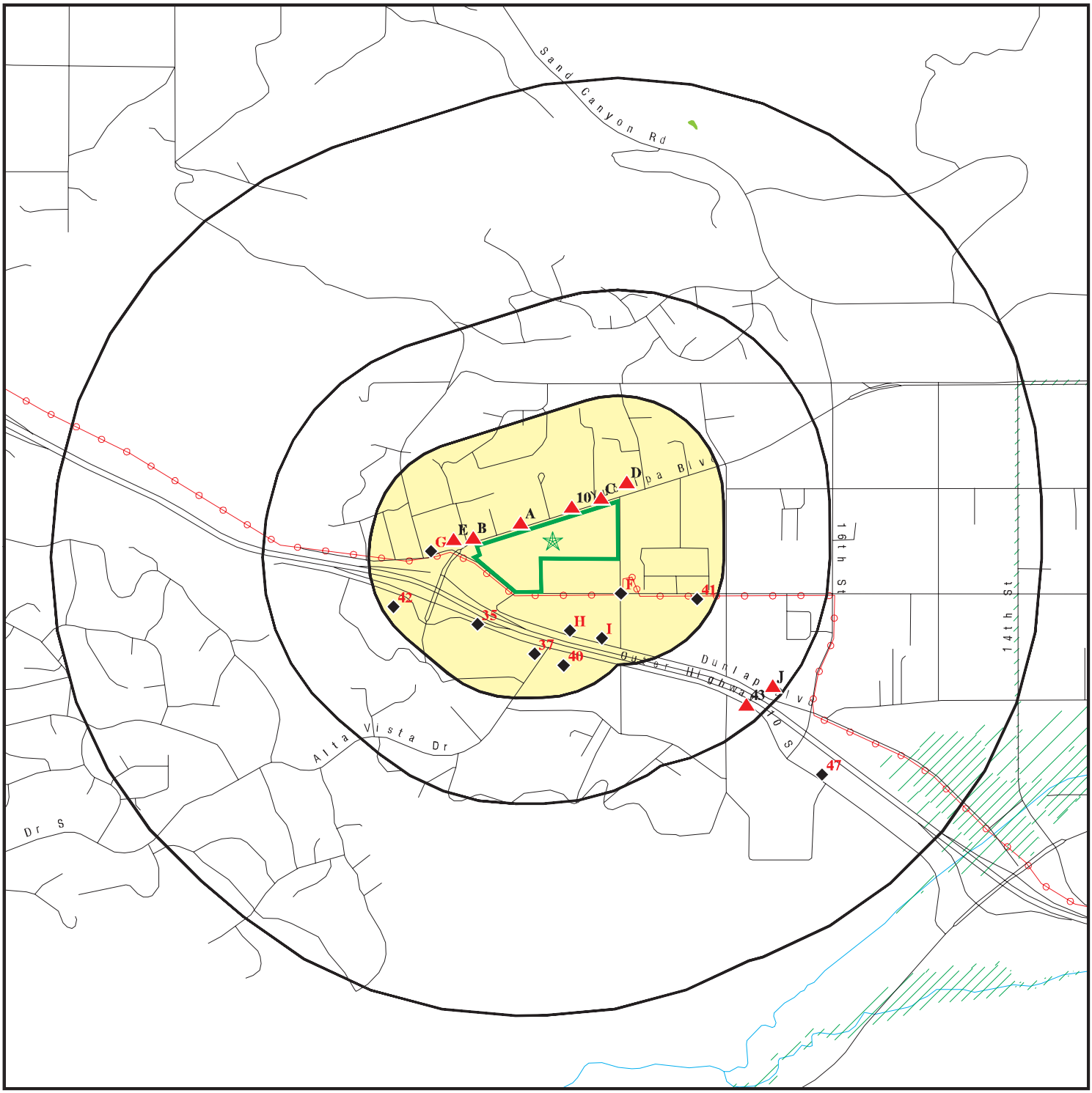
Lower Elevation	Address	Direction / Distance	Map ID	Page
STEAMERS DRY CLEANER	31364 HAMPTON RD APT	W 0 - 1/8 (0.086 mi.)	E30	34

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
METH-LAB YUCAIPA	SEMS-ARCHIVE
EDISON/REDLANDS MGP	EDR MGP

OVERVIEW MAP - 5260584.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 23.84 Acres	CLIENT: The Reynolds Group
ADDRESS: SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT: Rosanne Fischer INQUIRY #: 5260584.2s
LAT/LONG: 34.028403 / 117.114556	DATE: April 16, 2018 4:12 pm

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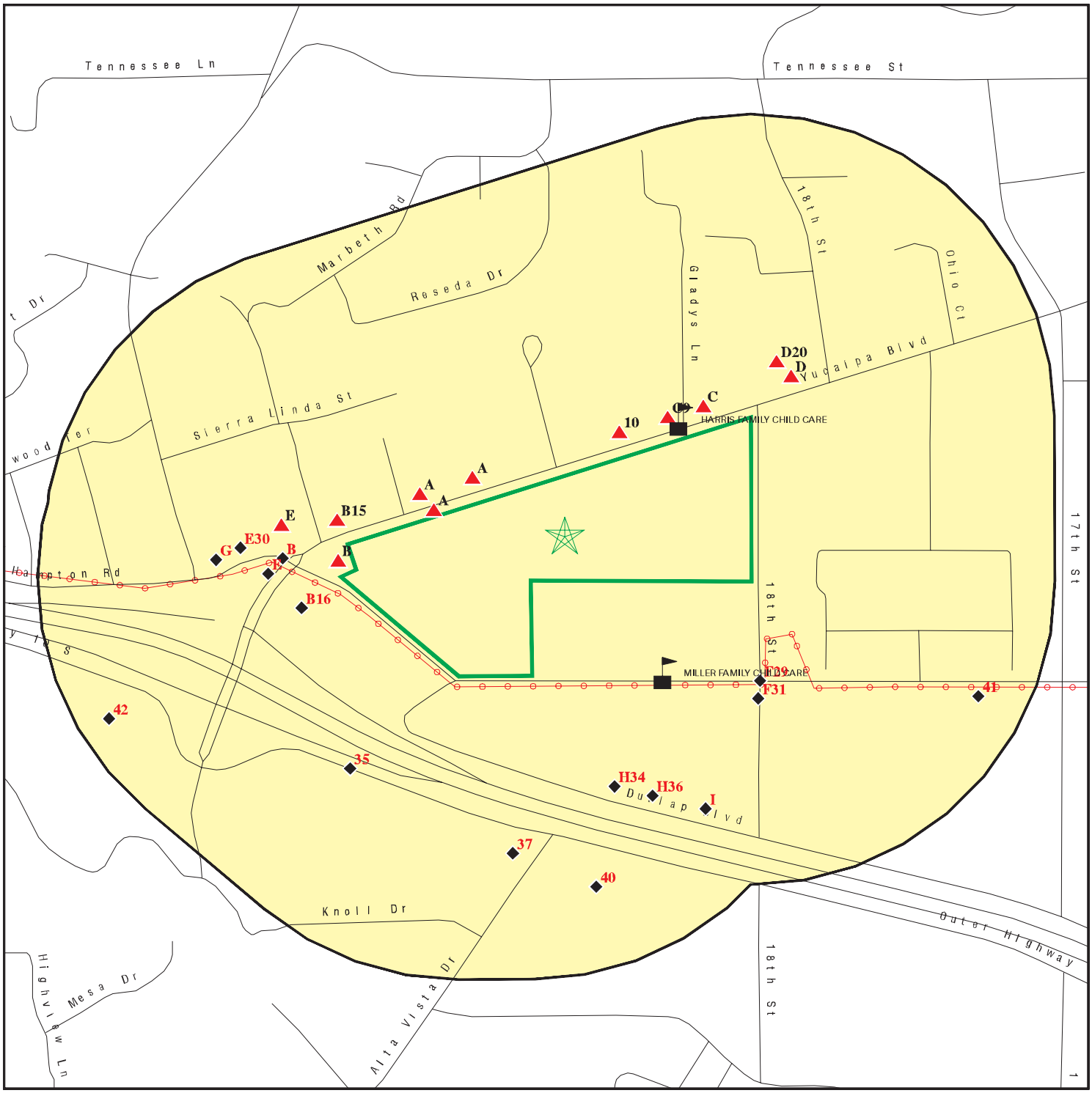
DETAIL MAP - 5260584.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 23.84 Acres	CLIENT: The Reynolds Group
ADDRESS: SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT: Rosanne Fischer
LAT/LONG: 34.028403 / 117.114556	INQUIRY #: 5260584.2s DATE: April 16, 2018 4:12 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		1	0	NR	NR	NR	1
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	1	1	NR	2
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	0	3	NR	NR	4

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		0	0	2	NR	NR	2
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		6	0	NR	NR	NR	6
AST	0.250		1	1	NR	NR	NR	2
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		4	1	NR	NR	NR	5
HIST UST	0.250		5	1	NR	NR	NR	6
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	1	NR	NR	1
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		1	0	NR	NR	NR	1
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	0	2	NR	NR	3
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
San Bern. Co. Permit	0.250		15	6	NR	NR	NR	21
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		5	NR	NR	NR	NR	5
EDR Hist Cleaner	0.125		2	NR	NR	NR	NR	2
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	42	10	9	1	0	62

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **CIRCLE SERVICE** **HIST UST** **S118408681**
West **31491 YUCAIPA VLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.006 mi.
31 ft. **Site 1 of 7 in cluster A**

Relative:
Higher

Actual:
2107 ft.

HIST UST:

File Number:	00029C23
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029C23.pdf
Region:	Not reported
Facility ID:	Not reported
Facility Type:	Not reported
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

A2 **CIRCLE SERVICE** **UST** **U001575866**
West **31491 YUCAIPA BLVD** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **HIST UST**
0.006 mi.
31 ft. **Site 2 of 7 in cluster A**

Relative:
Higher

Actual:
2107 ft.

UST:

Facility ID:	87012775
Permitting Agency:	SAN BERNARDINO COUNTY
Latitude:	34.02874
Longitude:	-117.11643

SWEEPS UST:

Status:	Active
Comp Number:	57285
Number:	9
Board Of Equalization:	44-021251
Referral Date:	07-28-92
Action Date:	06-29-94
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported

CIRCLE SERVICE (Continued) **U001575866**

Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000001
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: 4

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000002
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000003
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251

CIRCLE SERVICE (Continued) **U001575866**

Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	36-000-057285-000004
Tank Status:	Not reported
Capacity:	500
Active Date:	Not reported
Tank Use:	OIL
STG:	WASTE
Content:	WASTE OIL
Number Of Tanks:	Not reported

HIST UST:

File Number:	Not reported
URL:	Not reported
Region:	STATE
Facility ID:	00000057285
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	8184427956
Owner Name:	CIRCLE "B" INDUSTRIES INC.
Owner Address:	P.O. BOX 519
Owner City,St,Zip:	TEMPLE CITY, CA 91780
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	004
Container Num:	4
Year Installed:	Not reported

CIRCLE SERVICE (Continued) **U001575866**

Tank Capacity:	00000500
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test

B3 **CIRCLE MOBIL** **San Bern. Co. Permit** **S105974516**
West **31429 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.012 mi.
61 ft. **Site 1 of 6 in cluster B**

Relative: **Higher**

Actual: **2093 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0011371
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0011372
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0029702
Permit Category:	WASTE INCIDENTAL UST OPERATION ONLY
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0003195
Permit Category:	HAZMAT HANDLER - UST ONLY
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

B4 **CIRCLE MOBIL** **UST** **U004263973**
West **31429 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.012 mi.
61 ft. **Site 2 of 6 in cluster B**

Relative: **Higher**

Actual: **2093 ft.**

UST:

Facility ID:	FA0006989
Permitting Agency:	San Bernardino County Fire Department
Latitude:	34.028099
Longitude:	-117.117821

A5 **GATEWAY TIRE & AUTO SVC** **San Bern. Co. Permit** **S104766482**
WNW **31504 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.019 mi.
99 ft. **Site 3 of 7 in cluster A**

Relative:
Higher

Actual:
2108 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0003430
Owner:	CARDENAS, ARNULFO
Permit Number:	PT0006411
Permit Category:	SMALL QUANTITY GENERATOR
Facility Status:	ACTIVE
Expiration Date:	11/30/2018

Region:	SAN BERNARDINO
Facility ID:	FA0003430
Owner:	CARDENAS, ARNULFO
Permit Number:	PT0006412
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status:	ACTIVE
Expiration Date:	11/30/2018

C6 **JOES AUTOMATIC TRANSM SVC** **EDR Hist Auto** **1020592944**
NE **31710 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.020 mi.
108 ft. **Site 1 of 4 in cluster C**

Relative:
Higher

Actual:
2126 ft.

EDR Hist Auto

Year:	Name:	Type:
1982	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1983	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1985	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1986	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1987	JOES AUTOMATIC TRANSMISSION SV	Automotive Repair Shops, NEC
1988	JOES AUTOMATIC TRANSM SVC	Automotive Repair Shops, NEC
1989	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1990	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1991	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1992	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1993	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1994	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1995	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1996	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1997	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1998	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
1999	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2000	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2001	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2002	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2003	JOES AUTOMATIC TRANSM SVC	Automotive Transmission Repair Shops
2004	EXCLUSIVE AUTO	General Automotive Repair Shops
2005	EXCLUSIVE AUTO	General Automotive Repair Shops
2006	EXCLUSIVE AUTO	General Automotive Repair Shops
2007	EXCLUSIVE AUTO	General Automotive Repair Shops
2008	EXCLUSIVE AUTO	General Automotive Repair Shops
2009	EXCLUSIVE AUTO	General Automotive Repair Shops
2010	EXCLUSIVE AUTO	General Automotive Repair Shops

JOES AUTOMATIC TRANSM SVC (Continued) **1020592944**

2011	EXCLUSIVE AUTO	General Automotive Repair Shops
2012	EXCLUSIVE AUTO	General Automotive Repair Shops
2013	EXCLUSIVE AUTO	General Automotive Repair Shops
2014	EXCLUSIVE AUTO	General Automotive Repair Shops

C7 **JOE'S AUTOMATIC TRANSMISSION SVC INC** **HAZNET** **S113074496**
NE **31710 YUCAIPA** **San Bern. Co. Permit** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.020 mi.
108 ft. **Site 2 of 4 in cluster C**

Relative:
Higher

Actual:
2126 ft.

HAZNET:

envid:	S113074496
Year:	2002
GEPAID:	CAL000135486
Contact:	JOSEPH MAGENHEIM
Telephone:	9097941916
Mailing Name:	Not reported
Mailing Address:	34428 YUCAIPA BLVD STE E-173
Mailing City,St,Zip:	YUCAIPA, CA 923992474
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	0.54
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	San Bernardino

envid:	S113074496
Year:	2001
GEPAID:	CAL000135486
Contact:	JOSEPH MAGENHEIM
Telephone:	9097941916
Mailing Name:	Not reported
Mailing Address:	34428 YUCAIPA BLVD STE E-173
Mailing City,St,Zip:	YUCAIPA, CA 923992474
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Tons:	0.5
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	San Bernardino

envid:	S113074496
Year:	2000
GEPAID:	CAL000135486
Contact:	JOSEPH MAGENHEIM
Telephone:	9097941916
Mailing Name:	Not reported
Mailing Address:	34428 YUCAIPA BLVD STE E-173
Mailing City,St,Zip:	YUCAIPA, CA 923992474
Gen County:	Not reported
TSD EPA ID:	CAT080013352

JOE'S AUTOMATIC TRANSMISSION SVC INC (Continued) **S113074496**

TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 0.45
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

envid: S113074496
Year: 1999
GEPAID: CAL000135486
Contact: JOE'S AUTOMATIC TRANS. SVC,INC
Telephone: 9097941916
Mailing Name: Not reported
Mailing Address: 31710 YUCAIPA BLVD
Mailing City,St,Zip: YUCAIPA, CA 923990000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 1.4386
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

envid: S113074496
Year: 1998
GEPAID: CAL000135486
Contact: JOE'S AUTOMATIC TRANS. SVC,INC
Telephone: 9097941916
Mailing Name: Not reported
Mailing Address: 31710 YUCAIPA BLVD
Mailing City,St,Zip: YUCAIPA, CA 923990000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: .9591
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0015626
Owner: Singh Car Care Services
Permit Number: PT0034183
Permit Category: SMALL QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 11/30/2018

Region: SAN BERNARDINO

JOE'S AUTOMATIC TRANSMISSION SVC INC (Continued) **S113074496**

Facility ID: FA0015626
Owner: Singh Car Care Services
Permit Number: PT0034182
Permit Category: HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 11/30/2018

C8 **EXCLUSIVE AUTO** **San Bern. Co. Permit** **S103652283**
NE **31710 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.020 mi.
108 ft. **Site 3 of 4 in cluster C**

Relative: **Higher**
Actual: **2126 ft.**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004148
Owner: EXA INC
Permit Number: PT0003884
Permit Category: SMALL QUANTITY GENERATOR
Facility Status: INACTIVE
Expiration Date: 08/31/2014

Region: SAN BERNARDINO
Facility ID: FA0004148
Owner: EXA INC
Permit Number: PT0003883
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status: INACTIVE
Expiration Date: 08/31/2014

C9 **FURNITURE SERVICE** **San Bern. Co. Permit** **S106910869**
NE **31640 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.021 mi.
109 ft. **Site 4 of 4 in cluster C**

Relative: **Higher**
Actual: **2126 ft.**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003359
Owner: MADRID, LOUIS, W
Permit Number: PT0004066
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 11/30/2002

10
NNE
< 1/8
0.021 mi.
111 ft.

E & E ORNAMENTAL IRON
31614 YUCAIPA BLVD
YUCAIPA, CA 92399

San Bern. Co. Permit **S104765918**
N/A

Relative:
Higher

Actual:
2126 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002817
Owner: ESTRADA, ELPIDIO
Permit Number: PT0006347
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 11/30/2013

A11
WNW
< 1/8
0.022 mi.
114 ft.

YUCAIPA 66 SERVICE
31516 YUCAIPA BLVD
YUCAIPA, CA 92399

EDR Hist Auto **1021671999**
N/A

Site 4 of 7 in cluster A

Relative:
Higher

Actual:
2113 ft.

EDR Hist Auto

Year:	Name:	Type:
1969	CRILLY CHESTER L & ORA P	Gasoline Service Stations
1970	CRILLY CHESTER L & ORA P	Gasoline Service Stations
1973	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1974	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1975	YUCAIPA 66 SERVICE	Gasoline Service Stations
1975	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1976	YUCAIPA 66 SERVICE	Gasoline Service Stations
1976	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1977	YUCAIPA 66 SERVICE	Gasoline Service Stations
1977	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1978	YUCAIPA 66 SERVICE	Gasoline Service Stations
1978	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1979	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1979	YUCAIPA 66 SERVICE	Gasoline Service Stations
1980	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1980	YUCAIPA 66 SERVICE	Gasoline Service Stations
1980	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1982	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1982	YUCAIPA 66 SERVICE	Gasoline Service Stations
1982	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1983	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1983	CRILLY CHESTER PHILLIPS 66	Gasoline Service Stations
1983	YUCAIPA 66 SERVICE	Gasoline Service Stations
1985	YUCAIPA 66 SERVICE	Gasoline Service Stations
1985	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1986	YUCAIPA 66 SERVICE	Gasoline Service Stations
1986	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1987	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1987	YUCAIPA 66 SERVICE	Gasoline Service Stations
1988	YUCAIPA 66 SERVICE	Gasoline Service Stations
1988	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1989	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1990	LAMASTERS JOHN SERVICE	Gasoline Service Stations
1994	BISH FULL SERVICE	Gasoline Service Stations
1995	BISH FULL SERVICE	Gasoline Service Stations

A12
WNW
< 1/8
0.022 mi.
114 ft.

JOHN LAMASTERS SERVICE
31516 YUCAIPA BLVD
YUCAIPA, CA 92399

Site 5 of 7 in cluster A

HIST UST **U001575874**
N/A

Relative:
Higher

Actual:
2113 ft.

HIST UST:

File Number:	00029B7C
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029B7C.pdf
Region:	STATE
Facility ID:	00000028083
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	JOHN LAMASTER
Telephone:	7147943332
Owner Name:	CHET CRILLY
Owner Address:	31520 YUCAIPA BLVD.
Owner City,St,Zip:	YUCAIPA, CA 92399
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

A13 **EUROPEAN AUTOMOTIVE** **LUST** **S102037889**
WNW **31516 YUCAIPA** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **HIST CORTESE**
0.022 mi. **San Bern. Co. Permit**
114 ft. **Site 6 of 7 in cluster A**

Relative:
Higher

Actual:
2113 ft.

LUST:

Lead Agency:	SAN BERNARDINO COUNTY
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607100415
Global Id:	T0607100415
Latitude:	34.029189
Longitude:	-117.115917
Status:	Completed - Case Closed
Status Date:	10/31/1996
Case Worker:	JC
RB Case Number:	083602839T
Local Agency:	SAN BERNARDINO COUNTY
File Location:	Local Agency
Local Case Number:	96027
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0607100415
Contact Type:	Local Agency Caseworker
Contact Name:	JACKSON CRUTSINGER
Organization Name:	SAN BERNARDINO COUNTY
Address:	620 SOUTH E STREET
City:	SAN BERNARDINO
Email:	jcrutsinger@sbcfire.org
Phone Number:	Not reported

Global Id:	T0607100415
Contact Type:	Regional Board Caseworker
Contact Name:	VALERIE JAHN-BULL
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	valerie.jahn-bull@waterboards.ca.gov
Phone Number:	9517824903

LUST:

Global Id:	T0607100415
Action Type:	REMEDIATION
Date:	05/22/1996
Action:	Not reported

Global Id:	T0607100415
Action Type:	Other
Date:	05/22/1996
Action:	Leak Discovery

Global Id:	T0607100415
Action Type:	Other
Date:	05/22/1996
Action:	Leak Stopped

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Global Id: T0607100415
Action Type: Other
Date: 06/05/1996
Action: Leak Reported

Global Id: T0607100415
Action Type: ENFORCEMENT
Date: 09/04/1996
Action: LOP Case Closure Summary to RB

Global Id: T0607100415
Action Type: ENFORCEMENT
Date: 10/31/1996
Action: Closure/No Further Action Letter

LUST:
Global Id: T0607100415
Status: Open - Case Begin Date
Status Date: 05/22/1996

Global Id: T0607100415
Status: Open - Site Assessment
Status Date: 05/22/1996

Global Id: T0607100415
Status: Open - Site Assessment
Status Date: 06/05/1996

Global Id: T0607100415
Status: Completed - Case Closed
Status Date: 10/31/1996

LUST REG 8:
Region: 8
County: San Bernardino
Regional Board: Santa Ana Region
Facility Status: Case Closed
Case Number: 083602839T
Local Case Num: 96027
Case Type: Aquifer affected
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Cross Street: RIDGECREST
Enf Type: CLOS
Funding: Not reported
How Discovered: Tank Closure
How Stopped: Not reported
Leak Cause: UNK
Leak Source: UNK
Global ID: T0607100415
How Stopped Date: 5/22/1996
Enter Date: 6/20/1996
Date Confirmation of Leak Began: 5/22/1996
Date Preliminary Assessment Began: 5/22/1996

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Discover Date:	5/22/1996
Enforcement Date:	Not reported
Close Date:	10/31/1996
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	6/5/1996
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	6/20/1996
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.0283624
Longitude:	-117.1180938
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	VJJ
Staff Initials:	JC3
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported

Summary: Not reported

SWEEPS UST:

Status:	Active
Comp Number:	28083
Number:	9
Board Of Equalization:	44-020831
Referral Date:	07-28-92
Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	1
SWRCB Tank Id:	36-000-028083-000001
Tank Status:	A
Capacity:	7500
Active Date:	07-01-85
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	4

Status:	Active
Comp Number:	28083
Number:	9
Board Of Equalization:	44-020831

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 2
SWRCB Tank Id: 36-000-028083-000002
Tank Status: A
Capacity: 7500
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-028083-000003
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 4
SWRCB Tank Id: 36-000-028083-000004
Tank Status: A
Capacity: Not reported
Active Date: 07-01-85
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 36
Reg By: LTNKA
Reg Id: 083602839T

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002951

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Owner: ARYAFAR, BEHROUZ
Permit Number: PT0002763
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status: ACTIVE
Expiration Date: 12/31/2018

Region: SAN BERNARDINO
Facility ID: FA0002951
Owner: ARYAFAR, BEHROUZ
Permit Number: PT0002764
Permit Category: HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status: FEE EXEMPT
Expiration Date: 12/31/2003

A14
WNW
< 1/8
0.022 mi.
115 ft.

JC'S HAWG SHOP **San Bern. Co. Permit** **S104905437**
31510 YUCAIPA BLVD **N/A**
YUCAIPA, CA 92399

Site 7 of 7 in cluster A

Relative: Higher

Actual: 2109 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004105
Owner: SLAGEL, BRUCE
Permit Number: PT0009873
Permit Category: CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR
Facility Status: INACTIVE
Expiration Date: 12/31/2005

Region: SAN BERNARDINO
Facility ID: FA0004105
Owner: SLAGEL, BRUCE
Permit Number: PT0014134
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 12/31/2004

B15
West
< 1/8
0.022 mi.
116 ft.

FRONTIER CALIFORNIA, INC.: MENTONE RSU0 **San Bern. Co. Permit** **S104771965**
31432 YUCAIPA BLVD **N/A**
YUCAIPA, CA 92399

Site 3 of 6 in cluster B

Relative: Higher

Actual: 2101 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007098
Owner: Frontier California Inc.
Permit Number: PT0003922
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 05/31/2018

B16 **BAKER'S DRIVE THRU #137** **San Bern. Co. Permit** **S109598418**
WSW **31453 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.041 mi.
217 ft. **Site 4 of 6 in cluster B**

Relative: **Lower**
Actual: **2086 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0012313
Owner:	BAKER'S BURGERS INC
Permit Number:	PT0021841
Permit Category:	BULK CO2 AT RETAIL FOOD FACILITIES
Facility Status:	INACTIVE
Expiration Date:	05/31/2010

D17 **YUCAPIA CLEANERS** **DRYCLEANERS** **S106077108**
NE **31776 YUCAIPA BLVD STE 9** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.048 mi.
251 ft. **Site 1 of 3 in cluster D**

Relative: **Higher**
Actual: **2133 ft.**

DRYCLEANERS:

EPA Id:	CAL000272457
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	06/26/2003
Facility Active:	No
Inactive Date:	06/30/2008
Facility Addr2:	Not reported
Owner Name:	JERRY KANG
Owner Address:	31710 YUCAIPA BLVD
Owner Address 2:	Not reported
Owner Telephone:	9097945690
Contact Name:	JERRY KANG
Contact Address:	31776 YUCAIPA BLVD STE 9
Contact Address 2:	Not reported
Contact Telephone:	9097945690
Mailing Name:	Not reported
Mailing Address 1:	31776 YUCAIPA BLVD STE 9
Mailing Address 2:	Not reported
Mailing City:	YUCAIPA
Mailing State:	CA
Mailing Zip:	92399
Owner Fax:	Not reported
Region Code:	4

D18 **YUCAIPA CLEANERS** **San Bern. Co. Permit** **S105974522**
NE **31776 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.048 mi.
251 ft. **Site 2 of 3 in cluster D**

Relative: **Higher**
Actual: **2133 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0007883
Owner:	KANG, JERRY

YUCAIPA CLEANERS (Continued) **S105974522**

Permit Number: PT0013788
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 08/31/2009

Region: SAN BERNARDINO
Facility ID: FA0007883
Owner: KANG, JERRY
Permit Number: PT0013787
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 08/31/2009

B19 **HERMAN KEITH** **EDR Hist Auto** **1020390481**
West **31396 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.050 mi.
266 ft. **Site 5 of 6 in cluster B**

Relative: EDR Hist Auto
Lower

Actual:
2090 ft.

Year:	Name:	Type:
1969	HERMAN KEITH	Gasoline Service Stations
1970	HERMAN KEITH	Gasoline Service Stations

D20 **NASHS CLEANERS** **EDR Hist Cleaner** **1020047029**
NE **31776 YUCAIPA BLVD STE 9** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.051 mi.
268 ft. **Site 3 of 3 in cluster D**

Relative: EDR Hist Cleaner
Higher

Actual:
2138 ft.

Year:	Name:	Type:
2008	NASHS CLEANERS	Drycleaning Plants, Except Rugs

B21 **HUGHES CONCRETE PROD.** **SWEEPS UST** **U001575871**
West **31361 YUCAIPA** **HIST UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **EMI**
0.056 mi.
296 ft. **Site 6 of 6 in cluster B**

Relative: SWEEPS UST:
Lower

Actual:
2086 ft.

Status: Active
Comp Number: 2777
Number: 9
Board Of Equalization: 44-019856
Referral Date: 03-23-92
Action Date: 03-23-92
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 36-000-002777-000003
Tank Status: A
Capacity: 6000
Active Date: 06-28-88

HUGHES CONCRETE PROD. (Continued) **U001575871**

Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 2

Status: Active
Comp Number: 2777
Number: 9
Board Of Equalization: 44-019856
Referral Date: 03-23-92
Action Date: 03-23-92
Created Date: 02-29-88
Owner Tank Id: 2
SWRCB Tank Id: 36-000-002777-000004
Tank Status: A
Capacity: 550
Active Date: 06-28-88
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

HIST UST:
File Number: 00029FDE
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029FDE.pdf
Region: STATE
Facility ID: 00000002777
Facility Type: Other
Other Type: MANUFACTURER
Contact Name: W.H.HUGHES
Telephone: 7147947676
Owner Name: HUGHES CONCRETE PRODUCTS, INC
Owner Address: 31361 YUCAIPA BLVD
Owner City,St,Zip: YUCAIPA, CA 92399
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000300
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 003
Container Num: 1
Year Installed: Not reported

HUGHES CONCRETE PROD. (Continued) **U001575871**

Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	None

Tank Num:	004
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00000550
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	None

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EMI:

Year:	1987
County Code:	36
Air Basin:	SC
Facility ID:	21152
Air District Name:	SC
SIC Code:	1442
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

E22 **YUCAIPA CHEVRON** **EDR Hist Auto** **1022116982**
West **31412 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 1 of 8 in cluster E**

Relative: EDR Hist Auto
Higher

Actual: **2095 ft.**

Year:	Name:	Type:
1992	YUCAIPA CHEVRON	Gasoline Service Stations
1993	YUCAIPA CHEVRON	Gasoline Service Stations
1994	YUCAIPA CHEVRON	Gasoline Service Stations
1995	YUCAIPA CHEVRON	Gasoline Service Stations
1996	YUCAIPA CHEVRON	Gasoline Service Stations
1997	YUCAIPA CHEVRON	Gasoline Service Stations
1998	YUCAIPA CHEVRON	Gasoline Service Stations
2002	YUCAIPA CHEVRON	Gasoline Service Stations
2003	YUCAIPA CHEVRON	Gasoline Service Stations
2004	YUCAIPA CHEVRON	Gasoline Service Stations
2005	YUCAIPA CHEVRON	Gasoline Service Stations, NEC
2006	YUCAIPA CHEVRON	Gasoline Service Stations, NEC
2007	YUCAIPA CHEVRON	Gasoline Service Stations, NEC

YUCAIPA CHEVRON (Continued) **1022116982**

2009 YUCAIPA CHEVRON Gasoline Service Stations, NEC

E23 **99280** **HIST UST** **U001575864**
West **31412 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 2 of 8 in cluster E**

Relative: **Higher**
Actual: **2095 ft.**

HIST UST:

File Number:	00029BE6
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029BE6.pdf
Region:	STATE
Facility ID:	00000063200
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	LOPEZ,JAMES
Telephone:	7147943816
Owner Name:	CHEVRON U.S.A. INC.
Owner Address:	575 MARKET
Owner City,St,Zip:	SAN FRANCISCO, CA 94105
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	1965
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	1965
Tank Capacity:	00007000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	1965
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000170
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	1965
Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	0000100
Leak Detection:	Stock Inventor

99280 (Continued) **U001575864**

Click here for Geo Tracker PDF:

E24 **CHEVRON STATION NO 99280** **RCRA-SQG** **1000819732**
West **31412 YUCAIPA BLVD** **FINDS** **CAD983657305**
< 1/8 **YUCAIPA, CA 92399** **ECHO**
0.057 mi.
300 ft. **Site 3 of 8 in cluster E**

Relative:
Higher

Actual:
2095 ft.

RCRA-SQG:

Date form received by agency:	06/17/2002
Facility name:	CHEVRON STATION NO 99280
Facility address:	31412 YUCAIPA BLVD YUCAIPA, CA 92399-1631
EPA ID:	CAD983657305
Mailing address:	P O BOX 6004 SAN RAMON, CA 94583
Contact:	KATHY NORRIS
Contact address:	P O BOX 6004 SAN RAMON, CA 94583
Contact country:	US
Contact telephone:	925-842-5931
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	CHEVRON PRODUCTS CO
Owner/operator address:	P O BOX 6004 SAN RAMON, CA 94583
Owner/operator country:	Not reported
Owner/operator telephone:	925-842-5931
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No

CHEVRON STATION NO 99280 (Continued) **1000819732**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110002891041

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000819732
Registry ID: 110002891041
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002891041

E25 **CHEVRON STATION #99280/1476** **UST** **U003939026**
West **31412 YUCAIPA BLVD** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 4 of 8 in cluster E**

Relative:
Higher

Actual:
2095 ft.

UST:
Facility ID: 86009247
Permitting Agency: SAN BERNARDINO COUNTY
Latitude: 34.029868
Longitude: -117.117274

Facility ID: FA0001907
Permitting Agency: San Bernardino County Fire Department
Latitude: 34.028288
Longitude: -117.118415

SWEEPS UST:
Status: Active

CHEVRON STATION #99280/1476 (Continued) **U003939026**

Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 36-000-063200-000001
Tank Status: A
Capacity: 1000
Active Date: 04-28-89
Tank Use: OIL
STG: W
Content: WASTE OIL
Number Of Tanks: 4

Status: Active
Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 2
SWRCB Tank Id: 36-000-063200-000002
Tank Status: A
Capacity: 10000
Active Date: 04-28-89
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-063200-000003
Tank Status: A
Capacity: 10000
Active Date: 04-28-89
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 63200
Number: 9
Board Of Equalization: 44-021363
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88

CHEVRON STATION #99280/1476 (Continued) **U003939026**

Owner Tank Id: 4
SWRCB Tank Id: 36-000-063200-000004
Tank Status: A
Capacity: 10000
Active Date: 04-28-89
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

E26 **CHEVRON STATION #99280/1476** **HAZNET** **S113102410**
West **31412 YUCAIPA BLVD** **San Bern. Co. Permit** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
300 ft. **Site 5 of 8 in cluster E**

Relative:
Higher

Actual:
2095 ft.

HAZNET:
envid: S113102410
Year: 2001
GEPAID: CAL000196507
Contact: MATTHEW FOSTER/MANAGER
Telephone: 9093891153
Mailing Name: Not reported
Mailing Address: 31412 YUCAIPA BLVD
Mailing City,St,Zip: YUCAIPA, CA 923990000
Gen County: Not reported
TSD EPA ID: KYD053348108
TSD County: Not reported
Waste Category: Solids or sludges with halogenated organic compounds >= 1,000 Mg./L
Disposal Method: Invalid Code
Tons: 0.46
Cat Decode: Not reported
Method Decode: Not reported
Facility County: San Bernardino

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0011638
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0011639
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0011640
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)

CHEVRON STATION #99280/1476 (Continued) **S113102410**

Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0020288
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0002453
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0003341
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 10/31/2003

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON USA INC.)
Permit Number: PT0003340
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 10/31/2003

E27 **ARCO AM PM** **EDR Hist Auto** **1021059509**
West **31340 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.060 mi.
317 ft. **Site 6 of 8 in cluster E**

Relative: EDR Hist Auto
Lower

Actual:
2083 ft.

Year:	Name:	Type:
1994	PETROMART INC	Convenience Stores
1995	PETROMART INC	Convenience Stores
1996	PETROMART INC	Convenience Stores
1997	PETROMART INC	Convenience Stores
1998	PETROMART INC	Convenience Stores
2001	PETROMART INC	Convenience Stores
2002	ARCO AM/PM	Convenience Stores
2003	ARCO AM/PM	Convenience Stores
2004	ARCO AM/PM	Convenience Stores
2005	ARCO AM/PM	Convenience Stores
2006	ARCO AM/PM	Convenience Stores
2007	ARCO AM PM	Convenience Stores
2008	ARCO AM PM	Convenience Stores
2009	ARCO AM PM	Convenience Stores

ARCO AM PM (Continued) **1021059509**

2010	BP NORTH AMERICA	Gasoline Service Stations, NEC
2010	ARCO AM PM	Convenience Stores
2011	ARCO AM PM	Convenience Stores
2011	BP NORTH AMERICA	Gasoline Service Stations, NEC
2012	ARCO AM PM	Convenience Stores
2013	ARCO AM PM	Convenience Stores
2014	ARCO AM PM	Convenience Stores

E28 **ARCO AM/PM** **UST** **U003785099**
West **31340 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.060 mi.
317 ft. **Site 7 of 8 in cluster E**

Relative: UST:
Lower Facility ID: 88016863
Actual: Permitting Agency: SAN BERNARDINO COUNTY
2083 ft. Latitude: 34.02761
Longitude: -117.11899

F29 **SCE TENNESSEE SUBSTATION** **San Bern. Co. Permit** **S121309523**
SE **18TH ST & E AVE** **N/A**
< 1/8 **YUCAIPA, CA 92374**
0.082 mi.
434 ft. **Site 1 of 2 in cluster F**

Relative: San Bern. Co. Permit:
Lower Region: SAN BERNARDINO
Actual: Facility ID: FA0000279
2089 ft. Owner: Southern California Edison
Permit Number: PT0000382
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 02/28/2018

Region: SAN BERNARDINO
Facility ID: FA0000279
Owner: Southern California Edison
Permit Number: PT0020835
Permit Category: APSA EXEMPT
Facility Status: ACTIVE
Expiration Date: 02/28/2018

Region: SAN BERNARDINO
Facility ID: FA0000279
Owner: Southern California Edison
Permit Number: PT0022738
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 02/28/2014

E30 **STEAMERS DRY CLEANERS** **EDR Hist Cleaner** **1020094956**
West **31364 HAMPTON RD APT D** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.086 mi.
455 ft. **Site 8 of 8 in cluster E**

Relative: EDR Hist Cleaner
Lower

Actual:
2087 ft.

Year:	Name:	Type:
2006	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2007	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2008	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2009	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2010	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC

F31 **SCE-TENNESSEE SUBSTATION** **AST** **S105047563**
SE **18TH ST & "E" AVE** **N/A**
< 1/8 **REDLANDS, CA**
0.097 mi.
510 ft. **Site 2 of 2 in cluster F**

Relative: AST:
Lower

Actual:
2087 ft.

Certified Unified Program Agencies:	San Bernardino
Owner:	SOUTHERN CALIFORNIA EDISON
Total Gallons:	15,665
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported
Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

G32 **YUCAIPA GAS MART** **San Bern. Co. Permit** **S109521083**
West **31340 HAMPTON RD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.104 mi.
548 ft. **Site 1 of 2 in cluster G**

Relative: San Bern. Co. Permit:
Lower

Actual:
2075 ft.

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0004050
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0023925
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010973
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010974
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010975
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

G33 **YUCAIPA GAS MART** **UST** **U004263529**
West **31340 HAMPTON RD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.104 mi.
548 ft. **Site 2 of 2 in cluster G**

Relative: UST:
Lower

Actual:
2075 ft.

Facility ID: FA0001039
Permitting Agency: San Bernardino County Fire Department
Latitude: 34.028301
Longitude: -117.119667

H34 **VERIZON WIRELESS: YUCAIPA** **San Bern. Co. Permit** **S104763380**
South **31650 DUNLAP BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.114 mi.
602 ft. **Site 1 of 2 in cluster H**

Relative:
Lower

Actual:
2081 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0000749
Owner: Verizon Wireless
Permit Number: PT0008177
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0013929
Owner: AMERICAN TOWERS - EH&S Dept.
Permit Number: PT0024606
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: INACTIVE
Expiration Date: 09/30/2014

Region: SAN BERNARDINO
Facility ID: FA0000749
Owner: Verizon Wireless
Permit Number: PT0018578
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 09/30/2013

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35 **GK MARKET** **UST** **U003976924**
SW **31583 OUTER HWY 10** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.116 mi.
612 ft.

Relative:
Lower

Actual:
2080 ft.

UST:
Facility ID: 89017447
Permitting Agency: SAN BERNARDINO COUNTY
Latitude: 34.0258476
Longitude: -117.1140138

H36 **AT&T MOBILITY - YUCAIPA VALLEY (USID12323)** **HAZNET** **S104764527**
SSE **31682 DUNLAP BLVD** **San Bern. Co. Permit** **N/A**
1/8-1/4 **YUCAIPA, CA 92399**
0.140 mi.
741 ft. **Site 2 of 2 in cluster H**

Relative:
Lower

Actual:
2080 ft.

HAZNET:
envid: S104764527
Year: 2013
GEPAID: CAC002733059
Contact: RANDY LAZZARD
Telephone: 9097947774
Mailing Name: Not reported
Mailing Address: 31682 DUNLAP BLVD.
Mailing City,St,Zip: YUCAIPA, CA 92399

AT&T MOBILITY - YUCAIPA VALLEY (USID12323) (Continued) **S104764527**

Gen County: San Bernardino
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.76
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

envid: S104764527
Year: 2013
GEPAID: CAC002733059
Contact: RANDY LAZZARD
Telephone: 9097947774
Mailing Name: Not reported
Mailing Address: 31682 DUNLAP BLVD.
Mailing City,St,Zip: YUCAIPA, CA 92399
Gen County: San Bernardino
TSD EPA ID: CAD097030993
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.035
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Not reported

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004342
Owner: New Cingular Wireless PCS, LLC dba AT&T Mobility
Permit Number: PT0008338
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 11/30/2018

Region: SAN BERNARDINO
Facility ID: FA0001677
Owner: Onelda Snyder
Permit Number: PT0014180
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR
Facility Status: ACTIVE
Expiration Date: 05/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001677
Owner: Onelda Snyder
Permit Number: PT0007948
Permit Category: HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 05/31/2018

Region: SAN BERNARDINO
Facility ID: FA0004342

AT&T MOBILITY - YUCAIPA VALLEY (USID12323) (Continued) **S104764527**

Owner: New Cingular Wireless PCS, LLC dba AT&T Mobility
Permit Number: PT0020797
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 11/30/2013

37
South
1/8-1/4
0.146 mi.
772 ft.

ROCKY PLAZA MARKET & LIQUOR
31583 OUTER HWY 10 UNIT 4
YUCAIPA, CA 92399

San Bern. Co. Permit **S110374351**
N/A

Relative:
Lower

Actual:
2078 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0004155
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0010998
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0010999
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0011000
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

I38
SSE
1/8-1/4
0.180 mi.
951 ft.

INLAND POWER SWEEPING
31710 DUNLAP BLVD
YUCAIPA, CA 92399

RCRA NonGen / NLR **1000151894**
FINDS **CAD073571648**
ECHO

Site 1 of 2 in cluster I

Relative:
Lower

Actual:
2079 ft.

RCRA NonGen / NLR:
Date form received by agency: 07/10/1980
Facility name: INLAND POWER SWEEPING
Facility address: 31710 DUNLAP BLVD
YUCAIPA, CA 92399

INLAND POWER SWEEPING (Continued) **1000151894**

EPA ID: CAD073571648
Mailing address: PO BOX 322
YUCAIPA, CA 92399
Contact: ENVIRONMENTAL MANAGER
Contact address: 31710 DUNLAP BLVD
YUCAIPA, CA 92399
Contact country: US
Contact telephone: 714-825-3314
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: KERRY A RIEGER & DENNIS C RIEGER
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
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
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
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 waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

INLAND POWER SWEEPING (Continued) **1000151894**

Violation Status: No violations found

FINDS:

Registry ID: 110002657296

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000151894
Registry ID: 110002657296
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002657296

I39 **COLLISION CONCEPT** **SWEEPS UST** **U001575872**
SSE **31710 DUNLAP BLVD** **HIST UST** **N/A**
1/8-1/4 **YUCAIPA, CA 92399** **San Bern. Co. Permit**
0.180 mi.
951 ft. **Site 2 of 2 in cluster I**

Relative: **Lower**
Actual: **2079 ft.**

SWEEPS UST:
Status: Active
Comp Number: 10718
Number: 9
Board Of Equalization: Not reported
Referral Date: 03-24-92
Action Date: 03-24-92
Created Date: 02-29-88
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 10718
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-010718-000001
Tank Status: Not reported
Capacity: 12000

COLLISION CONCEPT (Continued) **U001575872**

Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: 1

HIST UST:
File Number: 00029D83
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029D83.pdf
Region: STATE
Facility ID: 00000010718
Facility Type: Other
Other Type: CONTRACTOR
Contact Name: DENNIS C. RIEGER
Telephone: 7149859303
Owner Name: DENNIS C. RIEGER
Owner Address: 31046 E. SUNSET DR. SO
Owner City,St,Zip: REDLANDS, CA 92373
Total Tanks: 0001

Tank Num: 001
Container Num: 1
Year Installed: 1980
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002422
Owner: COLLISION CONCEPT
Permit Number: PT0004865
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 05/31/1999

40
South
1/8-1/4
0.182 mi.
959 ft.

CHAMPIONSHIP AUTOMOTIVE **San Bern. Co. Permit** **S105047617**
31763 OUTER HWY 10 S **N/A**
REDLANDS, CA 92373

Relative:
Lower

Actual:
2076 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001852
Owner: CHAMPIONSHIP AUTOMOTIVE
Permit Number: PT0000440
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 03/31/2005

Region: SAN BERNARDINO
Facility ID: FA0001852

CHAMPIONSHIP AUTOMOTIVE (Continued) **S105047617**

Owner: CHAMPIONSHIP AUTOMOTIVE
Permit Number: PT0000441
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 03/31/2005

41
ESE
1/8-1/4
0.209 mi.
1106 ft.

WESTERN HEIGHTS WATER-WELL SITE 10
31895 AVENUE E
YUCAIPA, CA 92399

AST **S105974513**
San Bern. Co. Permit **N/A**

Relative:
Lower

Actual:
2084 ft.

AST:

Certified Unified Program Agencies:	Not reported
Owner:	WESTERN HEIGHTS WATER COMPANY
Total Gallons:	Not reported
CERSID:	10047700
Facility ID:	FA0007908
Business Name:	WESTERN HEIGHTS WATER CO.
Phone:	909-790-1901
Fax:	909-797-2619
Mailing Address:	32352 AVENUE D
Mailing Address City:	YUCAIPA
Mailing Address State:	CA
Mailing Address Zip Code:	92399
Operator Name:	WESTERN HEIGHTS WATER CO
Operator Phone:	909-790-1901
Owner Phone:	909-790-1901
Owner Mail Address:	32352 AVENUE D
Owner State:	CA
Owner Zip Code:	92399
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

Certified Unified Program Agencies:	San Bernardino
Owner:	WESTERN HEIGHTS WATER COMPANY
Total Gallons:	3,000
CERSID:	Not reported
Facility ID:	Not reported
Business Name:	Not reported
Phone:	Not reported
Fax:	Not reported
Mailing Address:	Not reported
Mailing Address City:	Not reported
Mailing Address State:	Not reported
Mailing Address Zip Code:	Not reported
Operator Name:	Not reported
Operator Phone:	Not reported
Owner Phone:	Not reported
Owner Mail Address:	Not reported
Owner State:	Not reported

WESTERN HEIGHTS WATER-WELL SITE 10 (Continued) **S105974513**

Owner Zip Code:	Not reported
Owner Country:	Not reported
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	Not reported

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0007908
Owner:	WESTERN HEIGHTS WATER COMPANY
Permit Number:	PT0013951
Permit Category:	APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status:	ACTIVE
Expiration Date:	08/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0007908
Owner:	WESTERN HEIGHTS WATER COMPANY
Permit Number:	PT0013817
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status:	ACTIVE
Expiration Date:	08/31/2018

42
WSW
1/8-1/4
0.224 mi.
1182 ft.

ALAN GRUBEL'S AUTOMOTIVE
31285 S OUTER HWY 10
REDLANDS, CA 92373

San Bern. Co. Permit **S105158993**
N/A

Relative:
Lower

Actual:
2046 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0000797
Owner:	James Dodd
Permit Number:	PT0009944
Permit Category:	CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0000797
Owner:	James Dodd
Permit Number:	PT0009945
Permit Category:	HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status:	FEE EXEMPT
Expiration Date:	10/31/2002

43
SE
1/4-1/2
0.458 mi.
2419 ft.

CIRCLE K #0324
31933 HIGHWAY I-10, OUTER
YUCAIPA, CA 92399

LUST **S104025225**
HIST CORTESE **N/A**

Relative:
Higher

Actual:
2101 ft.

LUST:

Lead Agency:	SAN BERNARDINO COUNTY
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607100147
Global Id:	T0607100147
Latitude:	34.0228553
Longitude:	-117.106589
Status:	Completed - Case Closed
Status Date:	08/15/1990
Case Worker:	CR2
RB Case Number:	083601278T
Local Agency:	SAN BERNARDINO COUNTY
File Location:	Local Agency
Local Case Number:	90043
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0607100147
Contact Type:	Regional Board Caseworker
Contact Name:	CARL BERNHARDT
Organization Name:	SANTA ANA RWQCB (REGION 8)
Address:	3737 MAIN STREET, SUITE 500
City:	RIVERSIDE
Email:	cbernhardt@waterboards.ca.gov
Phone Number:	9517824495

Global Id:	T0607100147
Contact Type:	Local Agency Caseworker
Contact Name:	CATHERINE RICHARDS
Organization Name:	SAN BERNARDINO COUNTY
Address:	620 SOUTH E STREET
City:	SAN BERNARDINO
Email:	crichards@sbcfire.org
Phone Number:	9093868419

LUST:

Global Id:	T0607100147
Action Type:	ENFORCEMENT
Date:	08/15/1990
Action:	Closure/No Further Action Letter

Global Id:	T0607100147
Action Type:	Other
Date:	11/16/1988
Action:	Leak Discovery

Global Id:	T0607100147
Action Type:	Other
Date:	11/16/1988
Action:	Leak Stopped

CIRCLE K #0324 (Continued) **S104025225**

Global Id: T0607100147
Action Type: Other
Date: 05/25/1989
Action: Leak Reported

LUST:
Global Id: T0607100147
Status: Open - Case Begin Date
Status Date: 11/16/1988

Global Id: T0607100147
Status: Open - Site Assessment
Status Date: 08/01/1989

Global Id: T0607100147
Status: Completed - Case Closed
Status Date: 08/15/1990

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083601278T
Local Case Num:	90043
Case Type:	Soil only
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	16TH STREET
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0607100147
How Stopped Date:	11/16/1988
Enter Date:	9/7/1989
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	8/1/1989
Discover Date:	11/16/1988
Enforcement Date:	1/1/1965
Close Date:	8/15/1990
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	9/7/1989
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Yes

CIRCLE K #0324 (Continued) **S104025225**

Oversite Program:	LUST
Latitude:	34.0218096
Longitude:	-117.104169
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	0
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
MTBE Class:	*
Staff:	CAB
Staff Initials:	CR2
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Work Suspended:	Not reported
Summary:	RWQCB DOCUMENTATION LIMITED TO URR.

HIST CORTESE:

Region:	CORTESE
Facility County Code:	36
Reg By:	LTNKA
Reg Id:	083601278T

J44 **SORENSON ENGINEERING INC, FRANK SORENSON** **ENVIROSTOR** **U001575886**
ESE **32032 DUNLAP BLVD** **LUST** **N/A**
1/4-1/2 **YUCAIPA, CA 92399** **SLIC**
0.472 mi. **AST**
2494 ft. **Site 1 of 3 in cluster J** **SWEEPS UST**
HIST UST
Relative: Higher **EMI**
NPDES
Actual: 2092 ft. **San Bern. Co. Permit**

ENVIROSTOR:

Facility ID:	71002160
Status:	Inactive - Needs Evaluation
Status Date:	Not reported
Site Code:	Not reported
Site Type:	Tiered Permit
Site Type Detailed:	Tiered Permit
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Not reported
Division Branch:	Cleanup Cypress
Assembly:	42
Senate:	23
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Latitude: 34.02339
Longitude: -117.1059
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: CAD008261737
Alias Type: EPA Identification Number
Alias Name: 110000497971
Alias Type: EPA (FRS #)
Alias Name: 71002160
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LUST:
Lead Agency: SAN BERNARDINO COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607199171
Global Id: T0607199171
Latitude: 34.023141
Longitude: -117.105568
Status: Completed - Case Closed
Status Date: 05/04/2004
Case Worker: CR2
RB Case Number: 083603657T
Local Agency: SAN BERNARDINO COUNTY
File Location: Local Agency
Local Case Number: 2000001
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline, MTBE / TBA / Other Fuel Oxygenates
Site History: Not reported

LUST:
Global Id: T0607199171
Contact Type: Local Agency Caseworker
Contact Name: CATHERINE RICHARDS
Organization Name: SAN BERNARDINO COUNTY
Address: 620 SOUTH E STREET
City: SAN BERNARDINO
Email: crichards@sbcfire.org
Phone Number: 9093868419

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Global Id: T0607199171
Contact Type: Regional Board Caseworker
Contact Name: ROSE SCOTT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: rose.scott@waterboards.ca.gov
Phone Number: 9513206375

LUST:
Global Id: T0607199171
Action Type: REMEDIATION
Date: 06/01/2000
Action: Excavation

Global Id: T0607199171
Action Type: Other
Date: 03/02/2000
Action: Leak Discovery

Global Id: T0607199171
Action Type: ENFORCEMENT
Date: 12/11/2003
Action: * No Action

Global Id: T0607199171
Action Type: ENFORCEMENT
Date: 05/04/2004
Action: Closure/No Further Action Letter - #2000001

Global Id: T0607199171
Action Type: Other
Date: 03/02/2000
Action: Leak Stopped

Global Id: T0607199171
Action Type: Other
Date: 03/15/2000
Action: Leak Reported

LUST:
Global Id: T0607199171
Status: Open - Case Begin Date
Status Date: 03/02/2000

Global Id: T0607199171
Status: Open - Site Assessment
Status Date: 05/03/2000

Global Id: T0607199171
Status: Open - Remediation
Status Date: 06/16/2000

Global Id: T0607199171
Status: Completed - Case Closed
Status Date: 05/04/2004

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

SLIC:

Region:	STATE
Facility Status:	**Open - Assessment & Interim Remedial Action**
Status Date:	02/08/2013
Global Id:	SL0607135888
Lead Agency:	SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number:	Not reported
Latitude:	34.023391
Longitude:	-117.105932
Case Type:	Cleanup Program Site
Case Worker:	AK
Local Agency:	Not reported
RB Case Number:	2080038
File Location:	Regional Board
Potential Media Affected:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Other Chlorinated Hydrocarbons, Tetrachloroethylene (PCE), Trichloroethylene (TCE)
Site History:	The Site is located approximately 0.75 miles north of Interstate 10 and the Live Oak Canyon exit, within the southern portion of San Bernardino County. The Site occupies approximately 10 acres of land within a mixed industrial and residential area. The Site is relatively flat with an average elevation of 2,085 feet above mean sea level. At the Site, first groundwater is generally present within lenses of silty sand that are interbedded in a slightly to moderately plastic clay-rich soil mixture. The general groundwater flow direction at the Site is toward the northeast, with an average groundwater gradient of 0.021 feet per foot. The depth to the groundwater in the existing monitoring wells ranges from 29 to 46 feet at the northern area of the Site. Groundwater was not encountered in the monitoring wells installed to a depth of 100 feet, in the southern area of the Site. There are currently seventeen monitoring wells at on- and off-Site locations: JMW-1 through JMW-4, JMW-6, JMW-8 through JMW-11, and JMW-17 and JMW-18 at on-Site locations. JMW-7 at Dafna Village (private property) JMW-13, JMW-14, and JMW-15(S/D) on public streets in the downgradient area. Previous investigations at the Site included evaluations of soil vapor, soil matrix and groundwater (using Hydropunch technology and installation of groundwater monitoring wells) to define the extent of VOCs in the soil and groundwater. Soil and soil vapor impacts were detected in the southern portion of the Site. Soil vapor impacts were not detected in the northern portion of the Site. During the most recent investigation, tetrachloroethylene (PCE) was detected in soil vapor samples with a concentration range of 0.137 to 381 micrograms per liter (a%g/L). PCE concentrations in soil ranged from 5 to 319 micrograms per kilogram (a%g/kg). The maximum PCE concentration detected in groundwater was 34,200 a%g/L, in a sample from well JMW-9

Click here to access the California GeoTracker records for this facility:

AST:

Certified Unified Program Agencies:	Not reported
Owner:	David Sorenson
Total Gallons:	Not reported
CERSID:	10044940
Facility ID:	FA0006292
Business Name:	SORENSON ENGINEERING INC

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Phone:	909.795.2434
Fax:	909.795.7190
Mailing Address:	32032 Dunlap Boulevard
Mailing Address City:	Yucaipa
Mailing Address State:	CA
Mailing Address Zip Code:	92399
Operator Name:	Sorenson Engineering, Inc.
Operator Phone:	909.795.2434
Owner Phone:	909.795.2434
Owner Mail Address:	32032 Dunlap Blvd
Owner State:	CA
Owner Zip Code:	92399
Owner Country:	United States
Property Owner Name:	Sorenson Engineering, Inc.
Property Owner Phone:	909.795.2434
Property Owner Mailing Address:	32032 Dunlap Blvd
Property Owner City:	Yucaipa
Property Owner Stat :	CA
Property Owner Zip Code:	92399
Property Owner Country:	United States
EPAID:	CAD008261737

SWEEPS UST:

Status:	Active
Comp Number:	63321
Number:	9
Board Of Equalization:	44-021366
Referral Date:	09-12-91
Action Date:	09-12-91
Created Date:	02-29-88
Owner Tank Id:	1
SWRCB Tank Id:	36-000-063321-000001
Tank Status:	A
Capacity:	500
Active Date:	07-01-85
Tank Use:	OIL
STG:	W
Content:	WASTE OIL
Number Of Tanks:	4

Status:	Active
Comp Number:	63321
Number:	9
Board Of Equalization:	44-021366
Referral Date:	09-12-91
Action Date:	09-12-91
Created Date:	02-29-88
Owner Tank Id:	2
SWRCB Tank Id:	36-000-063321-000002
Tank Status:	A
Capacity:	2000
Active Date:	07-01-85
Tank Use:	UNKNOWN
STG:	P
Content:	Not reported
Number Of Tanks:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Status: Active
Comp Number: 63321
Number: 9
Board Of Equalization: 44-021366
Referral Date: 09-12-91
Action Date: 09-12-91
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-063321-000003
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 63321
Number: 9
Board Of Equalization: 44-021366
Referral Date: 09-12-91
Action Date: 09-12-91
Created Date: 02-29-88
Owner Tank Id: 4
SWRCB Tank Id: 36-000-063321-000004
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

HIST UST:
File Number: 0002A67A
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002A67A.pdf
Region: STATE
Facility ID: 00000063321
Facility Type: Other
Other Type: MANUFACTURER
Contact Name: ALLEN FEARY
Telephone: 7147952434
Owner Name: SORENSON ENG. INC.
Owner Address: 32032 DUNLAP BLVD.
Owner City,St,Zip: YUCAIPA, CA 92399
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

EMI:

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	0
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1996
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	24

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Reactive Organic Gases Tons/Yr:	17
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1997
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1998
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1999
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Year:	2000
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2001
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	10
Reactive Organic Gases Tons/Yr:	10
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2002
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2003
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2004
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5.1459
Reactive Organic Gases Tons/Yr:	2.5
Carbon Monoxide Emissions Tons/Yr:	0.00927
NOX - Oxides of Nitrogen Tons/Yr:	0.4345
SOX - Oxides of Sulphur Tons/Yr:	0.00022
Particulate Matter Tons/Yr:	0.00199
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2005
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	4.88653
Reactive Organic Gases Tons/Yr:	2.52918861
Carbon Monoxide Emissions Tons/Yr:	.00875
NOX - Oxides of Nitrogen Tons/Yr:	.9345
SOX - Oxides of Sulphur Tons/Yr:	.00015
Particulate Matter Tons/Yr:	.05807
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.0124545

Year:	2006
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.025349745305051464
Reactive Organic Gases Tons/Yr:	4.208
Carbon Monoxide Emissions Tons/Yr:	.009

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

NOX - Oxides of Nitrogen Tons/Yr:	.962
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.058
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01254

Year:	2007
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.025349745305051464
Reactive Organic Gases Tons/Yr:	4.208
Carbon Monoxide Emissions Tons/Yr:	.009
NOX - Oxides of Nitrogen Tons/Yr:	.962
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.058
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01254

Year:	2008
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.602823133751223530
Reactive Organic Gases Tons/Yr:	4.20134359088
Carbon Monoxide Emissions Tons/Yr:	.00637
NOX - Oxides of Nitrogen Tons/Yr:	1.74
SOX - Oxides of Sulphur Tons/Yr:	.0001092
Particulate Matter Tons/Yr:	.071365
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01459675

Year:	2009
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11.2214092358771
Reactive Organic Gases Tons/Yr:	5.4418199999999999
Carbon Monoxide Emissions Tons/Yr:	9.1000000000000004E-3
NOX - Oxides of Nitrogen Tons/Yr:	1.3899999999999999
SOX - Oxides of Sulphur Tons/Yr:	0.000156
Particulate Matter Tons/Yr:	0.10195
Part. Matter 10 Micrometers and Smllr Tons/Yr:	9.7852499999999995E-2

Year:	2010

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	27.611583339232499
Reactive Organic Gases Tons/Yr:	11.264900000000001
Carbon Monoxide Emissions Tons/Yr:	7.5900000000000004E-3
NOX - Oxides of Nitrogen Tons/Yr:	1.8230500000000001
SOX - Oxides of Sulphur Tons/Yr:	1.2999999999999999E-4
Particulate Matter Tons/Yr:	0.15622
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.030913

Year:	2011
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	19.046371404
Reactive Organic Gases Tons/Yr:	7.78235
Carbon Monoxide Emissions Tons/Yr:	0.01015
NOX - Oxides of Nitrogen Tons/Yr:	2.36562
SOX - Oxides of Sulphur Tons/Yr:	0.00017
Particulate Matter Tons/Yr:	0.05143
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0114209

Year:	2012
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	19.823754428
Reactive Organic Gases Tons/Yr:	8.00662
Carbon Monoxide Emissions Tons/Yr:	0.02642
NOX - Oxides of Nitrogen Tons/Yr:	1.47851
SOX - Oxides of Sulphur Tons/Yr:	0.00045
Particulate Matter Tons/Yr:	0.01686
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.007505

Year:	2013
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11.814530938
Reactive Organic Gases Tons/Yr:	4.74873393
Carbon Monoxide Emissions Tons/Yr:	0.02677
NOX - Oxides of Nitrogen Tons/Yr:	0.21771
SOX - Oxides of Sulphur Tons/Yr:	0.00045
Particulate Matter Tons/Yr:	0.00786
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0058482

Year:	2014
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12.614347308
Reactive Organic Gases Tons/Yr:	6.35768
Carbon Monoxide Emissions Tons/Yr:	0.0217
NOX - Oxides of Nitrogen Tons/Yr:	0.17872
SOX - Oxides of Sulphur Tons/Yr:	0.00037
Particulate Matter Tons/Yr:	0.00478
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0047748

Year:	2015
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	14.331192857
Reactive Organic Gases Tons/Yr:	7.223505934
Carbon Monoxide Emissions Tons/Yr:	0.0273
NOX - Oxides of Nitrogen Tons/Yr:	0.311866155
SOX - Oxides of Sulphur Tons/Yr:	0.000468
Particulate Matter Tons/Yr:	0.012266073
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.01200943008

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	213412
Order No:	Not reported
Regulatory Measure Type:	Industrial
Place Id:	Not reported
WDID:	8 36I013373
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	05/09/2008
PROCESSED DATE:	09/03/1997
STATUS CODE NAME:	Active
STATUS DATE:	09/03/1997
PLACE SIZE:	14359
PLACE SIZE UNIT:	SqFt
FACILITY CONTACT NAME:	Paul Sewell
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	909-795-2434
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR NAME:	Sorenson Engineering Inc
OPERATOR ADDRESS:	32032 Dunlap Blvd
OPERATOR CITY:	Yucaipa
OPERATOR STATE:	California
OPERATOR ZIP:	92399
OPERATOR CONTACT NAME:	Paul Sewell
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	909-795-2434
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	California
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	909-795-2434
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Yucaipa Creek

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

CERTIFIER NAME:	Jeromy Roush
CERTIFIER TITLE:	Facility Maintenance Manager
CERTIFICATION DATE:	27-FEB-17
PRIMARY SIC:	3451-Screw Machine Products
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	415492
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36C361525
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/26/2011
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	12/13/2016
Discharge Name:	Sorenson Engineering
Discharge Address:	32032 DUNLAP BOULEVARD
Discharge City:	Yucaipa
Discharge State:	California
Discharge Zip:	92399
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

Npdes Number:	CAS000001
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	213412
Order No:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36I013373
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/03/1997
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Sorenson Engineering Inc
Discharge Address:	32032 Dunlap Blvd
Discharge City:	Yucaipa
Discharge State:	California
Discharge Zip:	92399
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	415492
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	8 36C361525
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	12/13/2016
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	07/08/2011
PROCESSED DATE:	07/26/2011
STATUS CODE NAME:	Terminated
STATUS DATE:	01/11/2017
PLACE SIZE:	16.21
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Paul Sewell
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	909-795-7600
FACILITY CONTACT PHONE EXT:	204
FACILITY CONTACT EMAIL:	bmayer@sitetechinc.com
OPERATOR NAME:	Sorenson Engineering
OPERATOR ADDRESS:	32032 DUNLAP BOULEVARD
OPERATOR CITY:	Yucaipa
OPERATOR STATE:	California
OPERATOR ZIP:	92399
OPERATOR CONTACT NAME:	Paul Sewell
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	909-795-2434
OPERATOR CONTACT PHONE EXT:	204
OPERATOR CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	Sorenson Engineering
DEVELOPER ADDRESS:	32032 DUNLAP BOULEVARD
DEVELOPER CITY:	Yucaipa
DEVELOPER STATE:	California
DEVELOPER ZIP:	92399
DEVELOPER CONTACT NAME:	Paul Sewell
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Y
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Not reported

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

CERTIFIER NAME: Joe Watanabe
CERTIFIER TITLE: Not reported
CERTIFICATION DATE: 06-OCT-14
PRIMARY SIC: Not reported
SECONDARY SIC: Not reported
TERTIARY SIC: Not reported

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0028871
Permit Category: CA ANNUAL FEE
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0000852
Permit Category: LARGE QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0000851
Permit Category: HAZARDOUS MATERIALS 51-70 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0028867
Permit Category: APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0001598
Permit Category: PBR ANNUAL FEE
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0015161
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO

SORENSON ENGINEERING INC, FRANK SORENSON (Continued) **U001575886**

Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0024069
Permit Category: HAZARDOUS WASTE GENERATOR RCRA LQG
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0015162
Permit Category: RISK MANAGEMENT PLAN - LEVEL II
Facility Status: INACTIVE
Expiration Date: 09/30/2011

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0001601
Permit Category: CALARP FACILITY PERMIT
Facility Status: INACTIVE
Expiration Date: 09/30/2011

J45 **SORENSON ENGINEERING, INC.** **RCRA-LQG** **1000208532**
ESE **32032 DUNLAP BOULEVARD** **LUST** **CAD008261737**
1/4-1/2 **YUCAIPA, CA 92399** **SLIC**
0.472 mi. **ICIS**
2494 ft. **Site 2 of 3 in cluster J** **US AIRS**
FINDS
Relative: Higher **ECHO**
Cortese
Actual: 2092 ft. **WDS**

RCRA-LQG:
Date form received by agency: 03/01/2016
Facility name: SORENSON ENGINEERING, INC.
Facility address: 32032 DUNLAP BOULEVARD
YUCAIPA, CA 92399
EPA ID: CAD008261737
Mailing address: DUNLAP BOULEVARD
YUCAIPA, CA 92399
Contact: JOE WATANABE
Contact address: DUNLAP BOULEVARD
YUCAIPA, CA 92399
Contact country: US
Contact telephone: 909-795-2434
Telephone ext.: 297
Contact email: JWATANABE@SORENSONENG.COM
EPA Region: 09
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less

SORENSON ENGINEERING, INC. (Continued) **1000208532**

of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	DAVID SORESON
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

Owner/operator name:	DAVID SORENSON
Owner/operator address:	32032 DUNLAP BOULEVARD
	YUCAIPA, CA 92399
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

Owner/operator name:	DAVID SORESON
Owner/operator address:	DUNLAP BOULEVARD
	YUCAIPA, CA 92399
Owner/operator country:	US
Owner/operator telephone:	909-795-2434
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

Owner/operator name:	DAVID SORENSON
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1961
Owner/Op end date:	Not reported

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 134
. Waste name: Aqueous solution with <10% total organic residues

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 171
. Waste name: Metal sludge (see 121)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 212
. Waste name: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 724
. Waste name: Liquids with lead > 500 mg/l

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: 751

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste name: Solids or sludge with halogenated organic comp. > 1000 mg/kg

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: 792
. Waste name: Liquids with pH < 2 with metals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D029
. Waste name: 1,1-DICHLOROETHYLENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM;

SORENSON ENGINEERING, INC. (Continued) **1000208532**

(2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

. Waste code: F007
. Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS.

. Waste code: F008
. Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS IN WHICH CYANIDES ARE USED IN THE PROCESS.

Historical Generators:
Date form received by agency: 03/01/2014
Site name: SORENSON ENGINEERING INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: D029
. Waste name: 1,1-DICHLOROETHYLENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

. Waste code: F007
. Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS.

Date form received by agency: 06/12/2012
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 171
. Waste name: Metal sludge (see 121)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 212
. Waste name: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 343
. Waste name: Unspecified organic liquid mixture

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 731
. Waste name: Liquids with polychlorinated biphenyls > 50 mg/l

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: 751
. Waste name: Solids or sludge with halogenated organic comp. > 1000 mg/kg

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: 792
. Waste name: Liquids with pH < 2 with metals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D029
. Waste name: 1,1-DICHLOROETHYLENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT

SORENSON ENGINEERING, INC. (Continued) **1000208532**

FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 01/21/2010
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: 135
. Waste name: Unspecified aqueous solution

. Waste code: 171
. Waste name: Metal sludge (see 121)

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 212
. Waste name: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)

. Waste code: 213
. Waste name: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)

. Waste code: 221
. Waste name: Waste oil and mixed oil

. Waste code: 223
. Waste name: Unspecified oil-containing waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 741
. Waste name: Liquids with halogenated organic compounds > 1000 mg/l

. Waste code: 751
. Waste name: Solids or sludge with halogenated organic comp. > 1000 mg/kg

. Waste code: 792
. Waste name: Liquids with pH < 2 with metals

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D006

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 01/29/2008
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 02/16/2006
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D040

SORENSON ENGINEERING, INC. (Continued) **1000208532**

. Waste name: TRICHLORETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

. Waste code: U159
. Waste name: 2-BUTANONE (I,T) (OR) METHYL ETHYL KETONE (MEK) (I,T)

Date form received by agency: 02/17/2004
Site name: SORENSEN ENGINEERING, INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLORETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE

SORENSON ENGINEERING, INC. (Continued) **1000208532**

SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F006
. Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS, EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC, AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.

Date form received by agency: 03/01/2002
Site name: SORENSON ENGINEERING INC
Classification: Large Quantity Generator

Date form received by agency: 10/12/2000
Site name: SORENSON ENGINEERING, INC.
Classification: Large Quantity Generator

Date form received by agency: 09/01/1996
Site name: SORENSON ENGINEERING INC
Classification: Large Quantity Generator

Date form received by agency: 06/24/1986
Site name: SORENSON ENGINEERING INC
Classification: Conditionally Exempt Small Quantity Generator

Biennial Reports:

Last Biennial Reporting Year: 2017

Annual Waste Handled:

Waste code: D001
Waste name: 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.
Amount (Lbs): 2885

Waste code: D002
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.
Amount (Lbs): 125466

Waste code: D008
Waste name: LEAD
Amount (Lbs): 2169

Waste code: D029
Waste name: 1,1-DICHLOROETHYLENE

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Amount (Lbs): 4671

Waste code: D039
Waste name: TETRACHLOROETHYLENE
Amount (Lbs): 4671

Waste code: D040
Waste name: TRICHLOROETHYLENE
Amount (Lbs): 7573

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 7423

Waste code: F003
Waste 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 F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 2870

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.
Amount (Lbs): 10385

Waste code: F007
Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS
Amount (Lbs): 18098

Waste code: F008
Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.
Amount (Lbs): 80

Violation Status: No violations found

LUST REG 8:
Region: 8

SORENSON ENGINEERING, INC. (Continued) **1000208532**

County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083603657T
Local Case Num:	2000001
Case Type:	Aquifer affected
Substance:	8006619, MTB
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	16TH ST
Enf Type:	NONE
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	Tank
Global ID:	T0607199171
How Stopped Date:	3/2/2000
Enter Date:	5/3/2000
Date Confirmation of Leak Began:	Not reported
Date Preliminary Assessment Began:	Not reported
Discover Date:	3/2/2000
Enforcement Date:	Not reported
Close Date:	5/4/2004
Date Prelim Assessment Workplan Submitted:	5/3/2000
Date Pollution Characterization Began:	Not reported
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	6/16/2000
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	5/3/2000
GW Qualifies:	Not reported
Soil Qualifies:	=
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.023141
Longitude:	-117.105568
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	1
Max MTBE Soil:	19
MTBE Fuel:	0
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	RS
Staff Initials:	CR2
Lead Agency:	Local Agency
Local Agency:	36000L
Hydr Basin #:	UPPER SANTA ANA VALL
Beneficial:	MUN
Priority:	A2
Cleanup Fund Id:	Not reported
Work Suspended:	No
Summary:	UNDER INVESTIGATION

SORENSON ENGINEERING, INC. (Continued) **1000208532**

SLIC REG 8:
Type: Groundwater
Facility Status: Additional Characterization Underway
Staff: MGC
Substance: SOLVENTS
Lead Agency: Regional Board
Location Code: Not reported
Thomas Bros Code: Not reported

ICIS:
Enforcement Action ID: CASCAA000006071CA21000048
FRS ID: 110000497971
Action Name: SORENSON ENGINEERING 06071CA21000048
Facility Name: SORENSON ENGINEERING
Facility Address: 32032 DUNLAP BLVD
YUCAIPA, CA 92399
Enforcement Action Type: Administrative Order
Facility County: SAN BERNARDINO
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Formal
EA Type Code: SCAAAO
Facility SIC Code: Not reported
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 34.023026
Longitude in Decimal Degrees: -117.105351
Permit Type Desc: Not reported
Program System Acronym: CASCA00006071CA210
Facility NAICS Code: 332721
Tribal Land Code: Not reported

Enforcement Action ID: CASCAA000006071CA21000047
FRS ID: 110000497971
Action Name: SORENSON ENGINEERING 06071CA21000047
Facility Name: SORENSON ENGINEERING
Facility Address: 32032 DUNLAP BLVD
YUCAIPA, CA 92399
Enforcement Action Type: Notice of Violation
Facility County: SAN BERNARDINO
Program System Acronym: AIR
Enforcement Action Forum Desc: Administrative - Informal
EA Type Code: NOV
Facility SIC Code: Not reported
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 34.023026
Longitude in Decimal Degrees: -117.105351
Permit Type Desc: Not reported
Program System Acronym: CASCA00006071CA210
Facility NAICS Code: 332721
Tribal Land Code: Not reported

Enforcement Action ID: 09-1998-0179
FRS ID: 110000497971
Action Name: SORENSON INC.
Facility Name: SORENSON ENGINEERING INCORPORATED
Facility Address: 32032 DUNLAP BLVD.
YUCAIPA, CA 923991706

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Enforcement Action Type: Civil Judicial Action
Facility County: SAN BERNARDINO
Program System Acronym: ICIS
Enforcement Action Forum Desc: Judicial
EA Type Code: CIV
Facility SIC Code: 3545
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 34.023334
Longitude in Decimal Degrees: -117.106305
Permit Type Desc: Not reported
Program System Acronym: 16807
Facility NAICS Code: Not reported
Tribal Land Code: Not reported

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Facility Name: SORENSON ENGINEERING INC
Address: 32032 DUNLAP BOULEVARD
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 3545

US AIRS (AFS):
Envid: 1000208532
Region Code: 09
County Code: CA071
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
D and B Number: Not reported
Facility Site Name: SORENSON ENGINEERING
Primary SIC Code: Not reported
NAICS Code: 332721
Default Air Classification Code: MAJ
Facility Type of Ownership Code: POF
Air CMS Category Code: TVM
HPV Status: Not reported

US AIRS (AFS):
Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: Not reported
Activity Status Date: 2014-05-09 00:00:00
Activity Group: Case File
Activity Type: Case File
Activity Status: Resolved

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:18:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:20:45
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:33:41
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:34:23
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2004-09-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2005-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2006-02-20 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2007-02-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2007-08-06 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2007-09-05 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-02-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-09-18 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2008-09-26 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-07-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-07-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2009-09-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-02-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-06-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-07-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-08-12 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-02-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-07-07 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2011-07-08 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-02-16 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-08-30 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2012-10-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-02-28 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-09-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2013-09-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-08-15 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-08-21 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2014-08-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-10-13 00:00:00
Activity Status Date: 2010-10-13 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Formal
Activity Status: Final Order Issued

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: State Implementation Plan for National Primary and Secondary Ambient Air Quality Standards
Activity Date: 2010-08-12 00:00:00
Activity Status Date: 2010-08-12 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal
Activity Status: Achieved

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: Not reported
Activity Status Date: 2014-05-09 00:00:00
Activity Group: Case File
Activity Type: Case File
Activity Status: Resolved

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2015-02-24 00:00:00
Activity Status Date: 2015-07-21 14:19:53
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:18:33
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2015-07-02 00:00:00
Activity Status Date: 2015-07-21 14:20:45
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2016-02-29 00:00:00
Activity Status Date: 2016-04-29 19:32:39
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:33:41
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2016-04-07 00:00:00
Activity Status Date: 2016-04-29 19:34:23
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Active

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2004-03-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2004-09-14 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2005-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2005-03-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2006-02-20 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2007-02-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2007-08-06 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2007-09-05 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-02-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-03-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-09-18 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2008-09-26 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-07-13 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-07-14 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2009-09-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-02-17 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-06-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-07-01 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-08-12 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-02-23 00:00:00

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-07-07 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2011-07-08 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2012-02-16 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2012-08-30 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2012-10-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2013-02-28 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2013-09-23 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2013-09-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-02-27 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-08-15 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-08-21 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2014-08-22 00:00:00
Activity Status Date: Not reported
Activity Group: Compliance Monitoring
Activity Type: Inspection/Evaluation
Activity Status: Not reported

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-10-13 00:00:00
Activity Status Date: 2010-10-13 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Formal
Activity Status: Final Order Issued

Region Code: 09
Programmatic ID: AIR CASCA00006071CA210
Facility Registry ID: 110000497971
Air Operating Status Code: OPR
Default Air Classification Code: MAJ
Air Program: Title V Permits
Activity Date: 2010-08-12 00:00:00
Activity Status Date: 2010-08-12 00:00:00
Activity Group: Enforcement Action
Activity Type: Administrative - Informal

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Activity Status: Achieved

FINDS:

Registry ID: 110000497971

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

AIR EMISSIONS CLASSIFICATION UNKNOWN

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

HAZARDOUS WASTE BIENNIAL REPORTER

STATE MASTER

AIR MAJOR

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance

SORENSON ENGINEERING, INC. (Continued) **1000208532**

information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000208532
Registry ID:	110000497971
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110000497971

CORTESE:

Region:	CORTESE
Envirostor Id:	Not reported
Site/Facility Type:	Not reported
Cleanup Status:	Not reported
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	CORTESE
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	8
WID Id:	8 362307N01
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Cease Desist Orders & Cleanup Abatement Orders

WDS:

Facility ID:	Santa Ana River 36I013373
Facility Type:	Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	8
Facility Telephone:	Not reported
Facility Contact:	Not reported
Agency Name:	SORENSON J FRANK
Agency Address:	Not reported

SORENSON ENGINEERING, INC. (Continued) **1000208532**

Agency City,St,Zip:	0
Agency Contact:	Not reported
Agency Telephone:	Not reported
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste Type:	Not reported
Primary Waste:	Not reported
Waste Type2:	Not reported
Waste2:	Not reported
Primary Waste Type:	Not reported
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.
Complexity:	Category C - Facilities having no waste treatment systems, such as 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.

J46 **GW INVESTIGATION** **ENF S105024263**
SE **32032 DUNLOP BOULEVARD** **HIST CORTESE N/A**
1/4-1/2 **YUCAIPA, CA 92399**
0.492 mi.
2599 ft. **Site 3 of 3 in cluster J**

Relative:
Higher

Actual:
2093 ft.

ENF:

Region:	8
Facility Id:	228568
Agency Name:	Sorenson Engineering
Place Type:	Manufacturing
Place Subtype:	Manufacturing NEC
Facility Type:	Industrial
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	4959
SIC Desc 1:	Sanitary Services, NEC
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

GW INVESTIGATION (Continued) **S105024263**

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:	UNREGS
Program Category1:	UNREGS
Program Category2:	UNREGS
# Of Programs:	1
WDID:	8 362307N01
Reg Measure Id:	158764
Reg Measure Type:	Unregulated
Region:	8
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes 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:	02/21/2013
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):	223918
Region:	8
Order / Resolution Number:	87-090
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	06/04/1987
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Active
Title:	Enforcement - 8 362307N01
Description:	GW INVESTIGATION
Program:	UNREGS
Latest Milestone Completion Date:	Not reported

GW INVESTIGATION (Continued) **S105024263**

# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

HIST CORTESE:

Region:	CORTESE
Facility County Code:	36
Reg By:	WBC&D
Reg Id:	8 362307N01

47
SE
1/2-1
0.701 mi.
3702 ft.

JORCO CHEMICAL COMPANY
32185 EAST OUTER HIGHWAY 10
REDLANDS, CA 92373

ENVIROSTOR **S109348600**
VCP **N/A**

Relative:
Lower

Actual:
2045 ft.

ENVIROSTOR:

Facility ID:	60000998
Status:	No Further Action
Status Date:	06/14/2012
Site Code:	401268
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	2
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Johnson Abraham
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	42
Senate:	23
Special Program:	Voluntary Cleanup Program
Restricted Use:	YES
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	34.02075
Longitude:	-117.1034
APN:	0301-15-47, 0301-16-09
Past Use:	ABOVE GROUND STORAGE TANKS, MANUFACTURING - CHEMICALS, UNDERGROUND STORAGE TANKS
Potential COC:	Freon 113 Ethyl acrylate Ethylbenzene n-Hexane Methanol Methyl acrylate Methyl methacrylate Styrene
Confirmed COC:	Ethyl acrylate Ethylbenzene n-Hexane Methyl methacrylate Methanol Styrene Methyl acrylate Freon 113
Potential Description:	SOIL
Alias Name:	0301-15-47
Alias Type:	APN
Alias Name:	0301-16-09
Alias Type:	APN
Alias Name:	T0607100271
Alias Type:	GeoTracker Global ID

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Alias Name: 401268
Alias Type: Project Code (Site Code)
Alias Name: 60000998
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/15/2010
Comments: DTSC signed the VCA Amendment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/25/2010
Comments: DTSC sent the letter to the Project Proponent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/16/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 09/18/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/18/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/05/2008
Comments: Voluntary Cleanup Agreement fully executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 09/19/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 03/07/2011

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 03/07/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 09/26/2011
Comments: DTSC conditionally approved the Workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 06/14/2012
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

VCP:
Facility ID: 60000998
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Site Mgmt. Req.: NONE SPECIFIED
Acres: 2
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Cleanup Program
Project Manager: Johnson Abraham
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Site Code: 401268
Assembly: 42
Senate: 23
Special Programs Code: Voluntary Cleanup Program
Status: No Further Action
Status Date: 06/14/2012
Restricted Use: YES
Funding: Responsible Party
Lat/Long: 34.02075 / -117.1034
APN: 0301-15-47, 0301-16-09
Past Use: ABOVE GROUND STORAGE TANKS, MANUFACTURING - CHEMICALS, UNDERGROUND STORAGE TANKS
Potential COC: 30012, 30271, 30272, 30322, 30364, 30372, 30389, 30525
Confirmed COC: 30271,30272,30322,30389,30364,30525,30372,30012

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Potential Description: SOIL
Alias Name: 0301-15-47
Alias Type: APN
Alias Name: 0301-16-09
Alias Type: APN
Alias Name: T0607100271
Alias Type: GeoTracker Global ID
Alias Name: 401268
Alias Type: Project Code (Site Code)
Alias Name: 60000998
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/15/2010
Comments: DTSC signed the VCA Amendment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/25/2010
Comments: DTSC sent the letter to the Project Proponent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/16/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 09/18/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/18/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/05/2008
Comments: Voluntary Cleanup Agreement fully executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Completed Date:	09/19/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Notice
Completed Date:	03/07/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	03/07/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	09/26/2011
Comments:	DTSC conditionally approved the Workplan.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	06/14/2012
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
REDLANDS	1008407740	EDISON/REDLANDS MGP	501-525 W REDLANDS AT KENDALL	92373	EDR MGP
YUCAIPA	1003878992	METH-LAB YUCAIPA	YUCAIPA	92399	SEMS-ARCHIVE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
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 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 66

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 04/30/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/22/2017
Date Data Arrived at EDR: 06/13/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 94

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/09/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 11/13/2017
Date Data Arrived at EDR: 11/27/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
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: 11/13/2017
Date Data Arrived at EDR: 11/27/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
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: 01/16/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/12/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 48

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/06/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 15
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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).

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 134

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

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: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
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.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/22/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 36
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 21
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30
Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 36
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 39

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/09/2018
Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/30/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

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: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: No Update Planned

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

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 02/02/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 01/19/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 16

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 16

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 02/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 27

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 11/30/2017
Date Data Arrived at EDR: 12/01/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Semi-Annually

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: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
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: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 02/15/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 02/20/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/16/2018
Next Scheduled EDR Contact: 05/28/2018
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: 01/11/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/08/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 05/21/2018
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: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 01/26/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 01/04/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 99
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 79

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 10/29/2017
Date Data Arrived at EDR: 11/28/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 45

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 92

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

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: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/01/2017
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 42

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
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: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 54

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 55

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/14/2018
Date Data Arrived at EDR: 02/16/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 46

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/08/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
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

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 28
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 31
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/29/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/14/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 29
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 12/04/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 42
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/05/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 35
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 12/14/2017
Date Data Arrived at EDR: 12/15/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 32
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 36
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/11/2018
Date Made Active in Reports: 02/22/2018
Number of Days to Update: 42

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 63

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 10

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/26/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/26/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 14

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/20/2017
Date Data Arrived at EDR: 11/29/2017
Date Made Active in Reports: 01/19/2018
Number of Days to Update: 51

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/05/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 40

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 12/04/2017
Date Data Arrived at EDR: 12/06/2017
Date Made Active in Reports: 12/27/2017
Number of Days to Update: 21

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
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: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 9

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/02/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 54

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
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: 11/14/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 28

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206
Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 56
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/16/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 29
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 10/09/2017
Number of Days to Update: 171
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 01/17/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 28
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/17/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
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: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/18/2018
Number of Days to Update: 13

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
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: 02/21/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 40

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 12

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/12/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 15

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/11/2018
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 20

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/20/2018
Next Scheduled EDR Contact: 06/04/2018
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: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
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: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 30

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/31/2018
Date Data Arrived at EDR: 02/01/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 41

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/07/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/08/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 50

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/15/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 50

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/18/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 56

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/18/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 64

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
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: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/05/2018
Number of Days to Update: 33

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 42

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017
Date Data Arrived at EDR: 11/03/2017
Date Made Active in Reports: 11/17/2017
Number of Days to Update: 14

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

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: 11/30/2017
Date Data Arrived at EDR: 12/01/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 46

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 05/21/2018
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: 12/04/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 37

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
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: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/07/2017
Date Made Active in Reports: 12/19/2017
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 02/01/2018
Number of Days to Update: 42
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/16/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/18/2017
Number of Days to Update: 31
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
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: 12/12/2017
Date Data Arrived at EDR: 12/14/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 28
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/11/2018
Number of Days to Update: 78
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28
Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 27
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22
Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/04/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 42

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
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: 12/14/2017
Date Data Arrived at EDR: 12/15/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 28

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 16

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 41

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
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: 01/04/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 28

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 37

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 29

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List

Cupa facilities

Date of Government Version: 01/26/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 09/28/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 18

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 50

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 48

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
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: 02/08/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 54

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
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: 02/28/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 16
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 01/19/2018
Number of Days to Update: 10
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/01/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/10/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/09/2018
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/08/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

23.84 ACRES
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

TARGET PROPERTY COORDINATES

Latitude (North):	34.028403 - 34° 1' 42.25''
Longitude (West):	117.114556 - 117° 6' 52.40''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	489424.3
UTM Y (Meters):	3765116.8
Elevation:	2092 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5630639 YUCAIPA, CA
Version Date:	2012
Northwest Map:	5630631 REDLANDS, CA
Version Date:	2012

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).

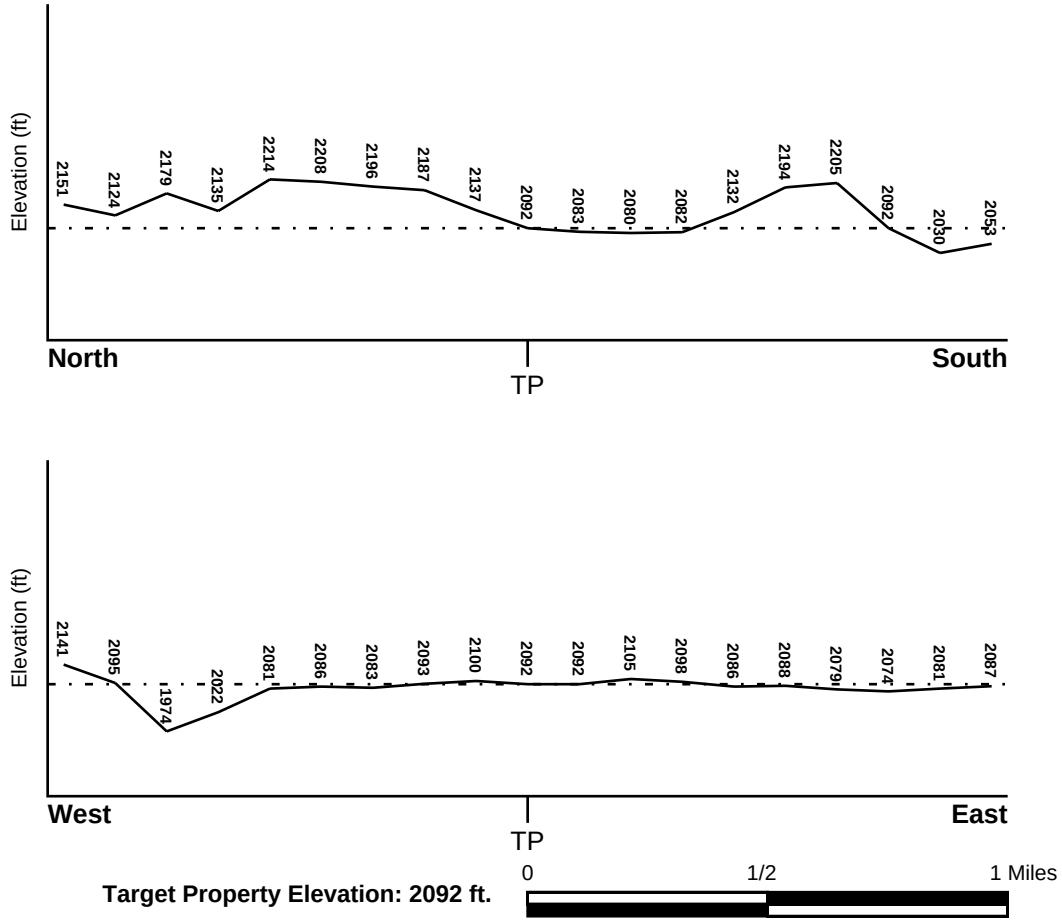
TOPOGRAPHIC INFORMATION

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 South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



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.

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

Flood Plain Panel at Target Property	FEMA Source Type
06071C8740H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06071C8717H	FEMA FIRM Flood data
06071C8719H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	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*:

Search Radius:	1.25 miles
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	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/8 - 1/4 Mile West	WSW
1G	1/8 - 1/4 Mile West	WSW

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

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 quickly 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

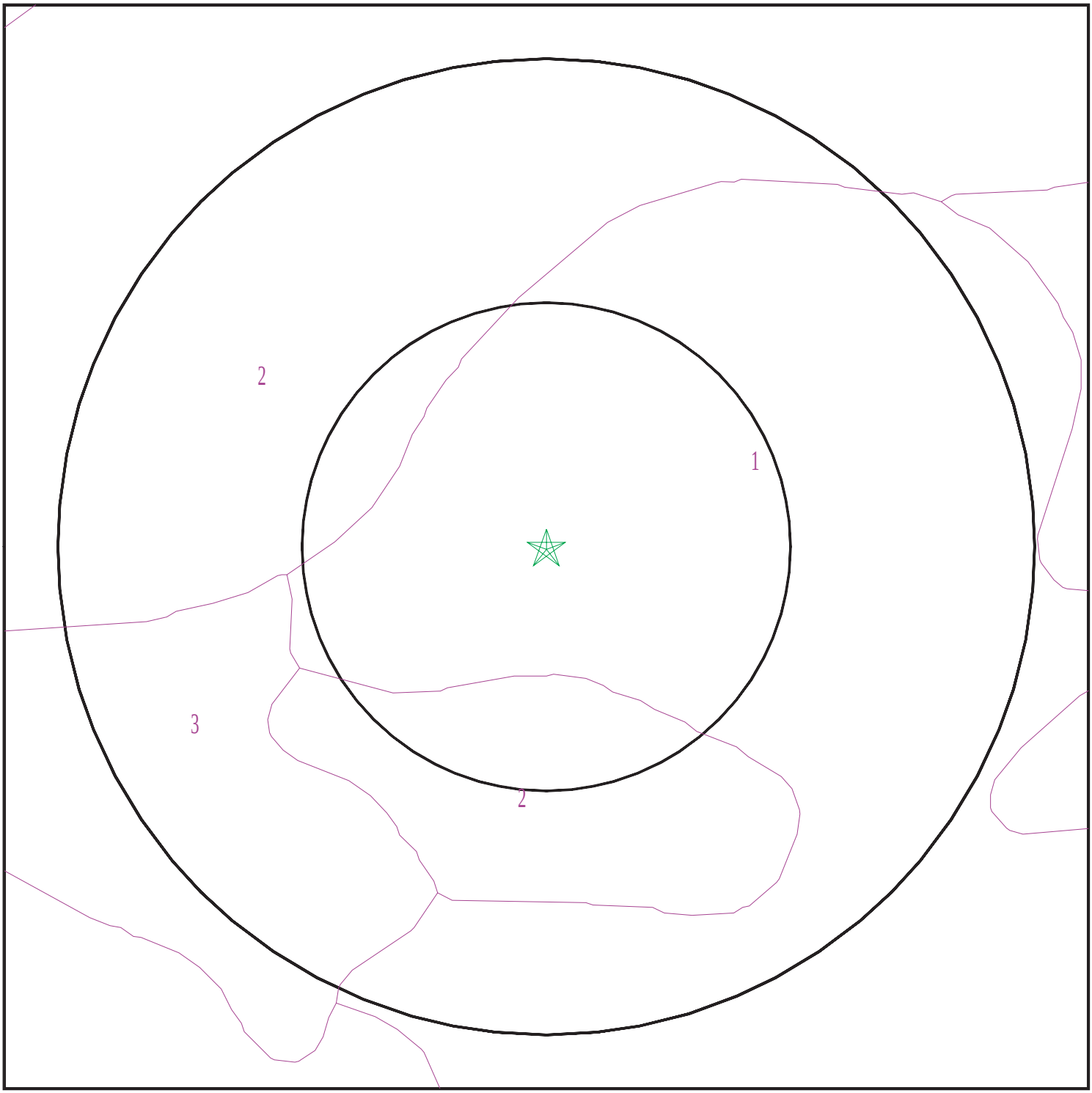
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

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).

SSURGO SOIL MAP - 5260584.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	23.84 Acres	CLIENT:	The Reynolds Group
ADDRESS:	SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT:	Rosanne Fischer
LAT/LONG:	34.028403 / 117.114556	INQUIRY #:	5260584.2s
		DATE:	April 16, 2018 4:13 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6.3 Min: 5.6
2	22 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.8 Min: 6.6
3	31 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
4	53 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.6

Soil Map ID: 2

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6.5 Min: 5.6
2	22 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	31 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6
4	53 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.6

Soil Map ID: 3

Soil Component Name: Hanford

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	11 inches	59 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6

LOCAL / REGIONAL WATER AGENCY RECORDS

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.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000139882	1/4 - 1/2 Mile ESE
3	USGS40000139964	1/2 - 1 Mile North
9	USGS40000139971	1/2 - 1 Mile NW
10	USGS40000139908	1/2 - 1 Mile East
11	USGS40000139993	1/2 - 1 Mile NNE
12	USGS40000139875	1/2 - 1 Mile East

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

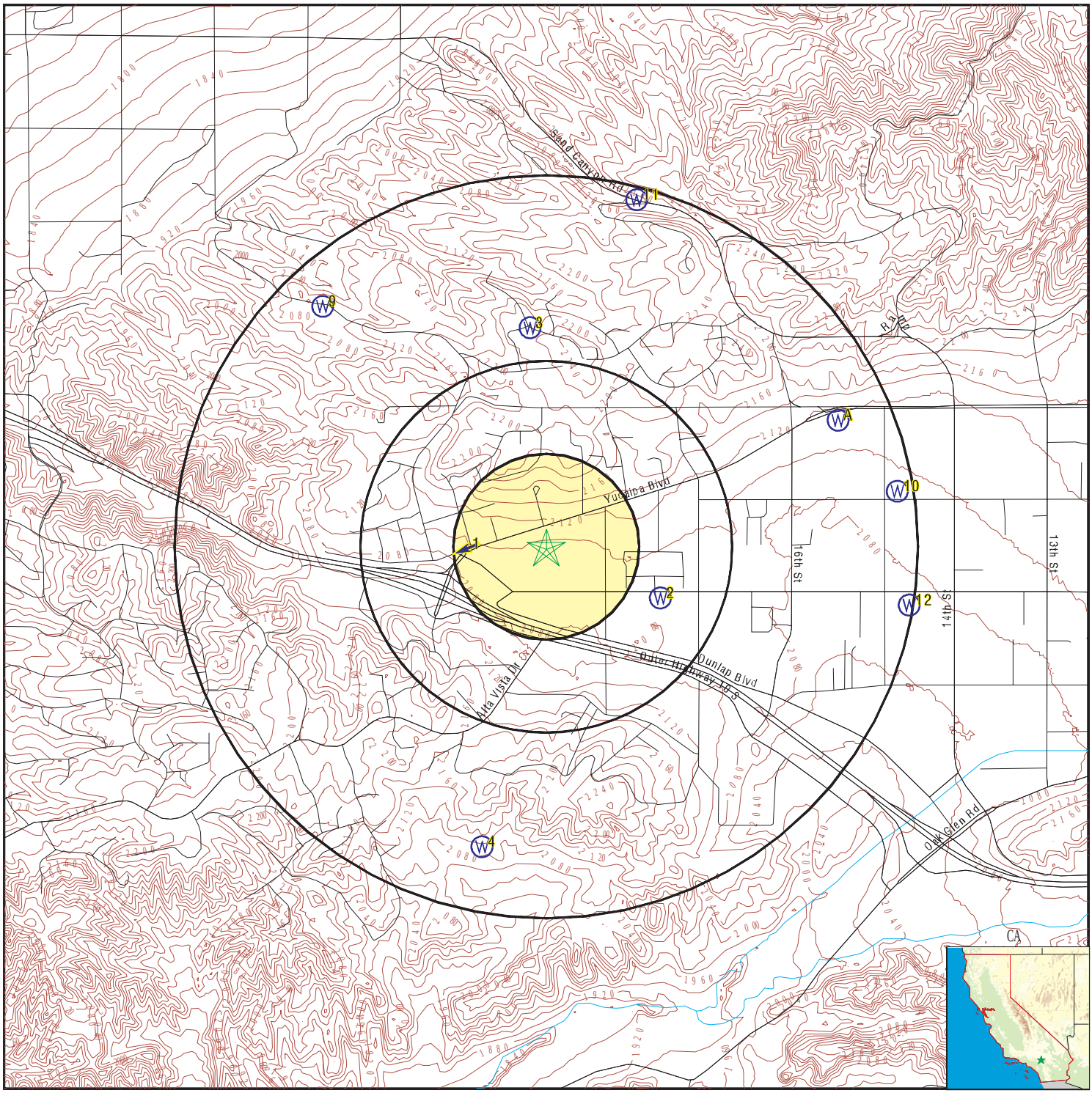
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
4	2400	1/2 - 1 Mile SSW
A5	2392	1/2 - 1 Mile ENE
A6	2393	1/2 - 1 Mile ENE
A7	2394	1/2 - 1 Mile ENE
A8	168	1/2 - 1 Mile ENE

PHYSICAL SETTING SOURCE MAP - 5260584.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	23.84 Acres	CLIENT:	The Reynolds Group
ADDRESS:	SEC of Yucaipa Blvd. and Avenue E Yucaipa CA 92399	CONTACT:	Rosanne Fischer
LAT/LONG:	34.028403 / 117.114556	INQUIRY #:	5260584.2s
		DATE:	April 16, 2018 4:13 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

			Database	EDR ID Number
1 **West** **1/8 - 1/4 Mile** **Higher**	Site ID:	083602839T	**AQUIFLOW**	**50239**
	Groundwater Flow:	WSW		
	Shallow Water Depth:	150		
	Deep Water Depth:	175		
	Average Water Depth:	Not Reported		
	Date:	09/04/1996		

2
ESE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000139882**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340135117063001		
Monloc name:	002S002W05K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0264034
Longitude:	-117.1092007	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		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	690
Welldepth units:	ft	Wellholedepth:	690
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

3
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000139964**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340213117065201		
Monloc name:	001S002W32P001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0369586
Longitude:	-117.1153123	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2216.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670101	Welldepth:	378
Welldepth units:	ft	Wellholedepth:	513
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

4
SSW **CA WELLS** **2400**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-05K01 S	User ID:	TAN
FRDS Number:	3610053009	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340100.0 1170700.0	Precision:	Undefined
Source Name:	WELL 10		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		
Sample Collected:	07-MAY-12	Findings:	510. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07-MAY-12	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	07-MAY-12	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07-MAY-12	Findings:	190. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07-MAY-12	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07-MAY-12	Findings:	49. MG/L
Chemical:	CALCIUM		
Sample Collected:	07-MAY-12	Findings:	8.3 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	07-MAY-12	Findings:	53. MG/L
Chemical:	SODIUM		

Sample Collected:	07-MAY-12	Findings:	2.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07-MAY-12	Findings:	20. MG/L
Chemical:	CHLORIDE		
Sample Collected:	07-MAY-12	Findings:	41. MG/L
Chemical:	SULFATE		
Sample Collected:	07-MAY-12	Findings:	0.49 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07-MAY-12	Findings:	6.4 UG/L
Chemical:	VANADIUM		
Sample Collected:	07-MAY-12	Findings:	330. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-MAY-12	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAY-12	Findings:	6000. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06-MAY-13	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-MAY-14	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAY-15	Findings:	520. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	26-MAY-15	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	26-MAY-15	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	26-MAY-15	Findings:	200. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	26-MAY-15	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	26-MAY-15	Findings:	48. MG/L
Chemical:	CALCIUM		
Sample Collected:	26-MAY-15	Findings:	7.6 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	26-MAY-15	Findings:	52. MG/L
Chemical:	SODIUM		
Sample Collected:	26-MAY-15	Findings:	2.7 MG/L
Chemical:	POTASSIUM		
Sample Collected:	26-MAY-15	Findings:	18. MG/L
Chemical:	CHLORIDE		
Sample Collected:	26-MAY-15	Findings:	44. MG/L
Chemical:	SULFATE		
Sample Collected:	26-MAY-15	Findings:	0.45 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		

Sample Collected:	26-MAY-15	Findings:	6.1 UG/L
Chemical:	VANADIUM		
Sample Collected:	26-MAY-15	Findings:	360. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	26-MAY-15	Findings:	29. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAY-15	Findings:	6600. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	25-JUL-16	Findings:	7.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	15-MAY-17	Findings:	7.1 MG/L
Chemical:	NITRATE (AS N)		

A5
ENE **CA WELLS 2392**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-04C01 S	User ID:	TAN
FRDS Number:	3610053001	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	Undefined
Source Name:	WELL 01 - INACTIVE		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		

A6
ENE **CA WELLS 2393**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-04G02 S	User ID:	TAN
FRDS Number:	3610053003	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	Undefined
Source Name:	WELL 03		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		

Sample Collected:	22-FEB-06	Findings:	1.4 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

A7
ENE **CA WELLS** **2394**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	02S/02W-04G03 S	User ID:	TAN
FRDS Number:	3610053002	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	Undefined
Source Name:	WELL 02-A		
System Number:	3610053		
System Name:	WESTERN HEIGHTS WATER COMPANY		
Organization That Operates System:			
	32352 AVENUE D YUCAIPA, CA 92399		
Pop Served:	5000	Connections:	2165
Area Served:	WESTERN HACAIDA VICINITY		
Sample Collected:	29-MAY-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-MAY-13	Findings:	530. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	13-MAY-13	Findings:	7.9
Chemical:	PH, LABORATORY		
Sample Collected:	13-MAY-13	Findings:	190. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	13-MAY-13	Findings:	230. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	13-MAY-13	Findings:	240. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	13-MAY-13	Findings:	71. MG/L
Chemical:	CALCIUM		
Sample Collected:	13-MAY-13	Findings:	15. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	13-MAY-13	Findings:	28. MG/L
Chemical:	SODIUM		
Sample Collected:	13-MAY-13	Findings:	2.2 MG/L
Chemical:	POTASSIUM		
Sample Collected:	13-MAY-13	Findings:	17. MG/L
Chemical:	CHLORIDE		
Sample Collected:	13-MAY-13	Findings:	43. MG/L
Chemical:	SULFATE		
Sample Collected:	13-MAY-13	Findings:	0.58 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		

Sample Collected:	13-MAY-13	Findings:	4.2 UG/L
Chemical:	VANADIUM		
Sample Collected:	13-MAY-13	Findings:	320. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	13-MAY-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-MAY-13	Findings:	4600. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	05-MAY-14	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-JUN-14	Findings:	1.3e-002 UG/L
Chemical:	DIBROMOCHLOROPROPANE (DBCP)		
Sample Collected:	22-SEP-14	Findings:	7. UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	26-MAY-15	Findings:	25. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-MAY-16	Findings:	530. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	16-MAY-16	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	16-MAY-16	Findings:	200. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	16-MAY-16	Findings:	240. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	16-MAY-16	Findings:	5.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-MAY-16	Findings:	220. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	16-MAY-16	Findings:	66. MG/L
Chemical:	CALCIUM		
Sample Collected:	16-MAY-16	Findings:	14. MG/L
Chemical:	MAGNESIUM		
Sample Collected:	16-MAY-16	Findings:	25. MG/L
Chemical:	SODIUM		
Sample Collected:	16-MAY-16	Findings:	1.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	16-MAY-16	Findings:	14. MG/L
Chemical:	CHLORIDE		
Sample Collected:	16-MAY-16	Findings:	42. MG/L
Chemical:	SULFATE		
Sample Collected:	16-MAY-16	Findings:	0.62 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	16-MAY-16	Findings:	4.8 UG/L
Chemical:	VANADIUM		

Sample Collected:	16-MAY-16	Findings:	330. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	16-MAY-16	Findings:	5.9 MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	01-MAY-17	Findings:	6.2 MG/L
Chemical:	NITRATE (AS N)		

A8
ENE **CA WELLS** **168**
1/2 - 1 Mile
Higher

Water System Information:

Prime Station Code:	01N/05E-36M02 S	User ID:	TAN
FRDS Number:	3610073008	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340200.0 1170600.0	Precision:	100 Feet (one Second)
Source Name:	WELL 12E		
System Number:	3610073		
System Name:	HI DESERT WD		
Organization That Operates System:			
	P O BOX 1210		
	YUCCA VALLEY, CA 92286-1210		
Pop Served:	28000	Connections:	8141
Area Served:	EAST YUCCA VALLEY		
Sample Collected:	03-NOV-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	10-NOV-16	Findings:	2.6 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	17-NOV-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	22-NOV-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	01-DEC-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	08-DEC-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	22-DEC-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	29-DEC-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	12-JAN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	12-JAN-17	Findings:	330. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	19-JAN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	25-JAN-17	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	02-FEB-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	09-FEB-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-FEB-17	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-FEB-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	02-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	09-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-MAR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-MAR-17	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	06-APR-17	Findings:	5.03 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	06-APR-17	Findings:	1.83 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	06-APR-17	Findings:	3.03 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	06-APR-17	Findings:	1.25 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	06-APR-17	Findings:	1.3 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	06-APR-17	Findings:	0.47 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	13-APR-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	20-APR-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	27-APR-17	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-MAY-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	11-MAY-17	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	18-MAY-17	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	25-MAY-17	Findings:	2.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	01-JUN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	15-JUN-17	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	29-JUN-17	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-JAN-12	Findings:	500. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04-JAN-12	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	04-JAN-12	Findings:	84. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	04-JAN-12	Findings:	100. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04-JAN-12	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	04-JAN-12	Findings:	45. MG/L
Chemical:	CALCIUM		
Sample Collected:	04-JAN-12	Findings:	9.2 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04-JAN-12	Findings:	35. MG/L
Chemical:	SODIUM		
Sample Collected:	04-JAN-12	Findings:	1.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04-JAN-12	Findings:	63. MG/L
Chemical:	CHLORIDE		
Sample Collected:	04-JAN-12	Findings:	35. MG/L
Chemical:	SULFATE		
Sample Collected:	04-JAN-12	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	04-JAN-12	Findings:	300. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04-JAN-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-JAN-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-JAN-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-JAN-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-JAN-12	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	02-FEB-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-FEB-12	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-FEB-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-FEB-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-MAR-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-MAR-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-APR-12	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-APR-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-APR-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-APR-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-MAY-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-MAY-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-MAY-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-MAY-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	31-MAY-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-JUN-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-JUN-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-JUN-12	Findings:	22. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-JUN-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	05-JUL-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-JUL-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-JUL-12	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-JUL-12	Findings:	250. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	26-JUL-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-AUG-12	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-AUG-12	Findings:	8.9 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-AUG-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-AUG-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-AUG-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-SEP-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-SEP-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-SEP-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-SEP-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-OCT-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-OCT-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-OCT-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-OCT-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-NOV-12	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-NOV-12	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-NOV-12	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-NOV-12	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	29-NOV-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-DEC-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-DEC-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-DEC-12	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-DEC-12	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JAN-13	Findings:	300. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	03-JAN-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-JAN-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-JAN-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-JAN-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	31-JAN-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-FEB-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-FEB-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-FEB-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-FEB-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAR-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-MAR-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-MAR-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-MAR-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-APR-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-APR-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-APR-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	25-APR-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-MAY-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-MAY-13	Findings:	21. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-MAY-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-MAY-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-MAY-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-JUN-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-JUN-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-JUN-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-JUN-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-JUL-13	Findings:	290. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	03-JUL-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-JUL-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-JUL-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-JUL-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-AUG-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-AUG-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-AUG-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-AUG-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-AUG-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-SEP-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-SEP-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	03-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	17-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-OCT-13	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	31-OCT-13	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-NOV-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-NOV-13	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-NOV-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-NOV-13	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-DEC-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-DEC-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-DEC-13	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-DEC-13	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-JAN-14	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-JAN-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-FEB-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-FEB-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-FEB-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-FEB-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-MAR-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-MAR-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-MAR-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	27-MAR-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-APR-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-APR-14	Findings:	20. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-APR-14	Findings:	1.55 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	10-APR-14	Findings:	1.52 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	17-APR-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-NOV-14	Findings:	300. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	20-NOV-14	Findings:	12. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-NOV-14	Findings:	1.2 UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	26-NOV-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-DEC-14	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-DEC-14	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-DEC-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-DEC-14	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-DEC-14	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-JAN-15	Findings:	480. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07-JAN-15	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	07-JAN-15	Findings:	97. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07-JAN-15	Findings:	120. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07-JAN-15	Findings:	160. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07-JAN-15	Findings:	46. MG/L
Chemical:	CALCIUM		
Sample Collected:	07-JAN-15	Findings:	9.6 MG/L
Chemical:	MAGNESIUM		

Sample Collected:	07-JAN-15	Findings:	37. MG/L
Chemical:	SODIUM		
Sample Collected:	07-JAN-15	Findings:	1.6 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07-JAN-15	Findings:	64. MG/L
Chemical:	CHLORIDE		
Sample Collected:	07-JAN-15	Findings:	36. MG/L
Chemical:	SULFATE		
Sample Collected:	07-JAN-15	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07-JAN-15	Findings:	290. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-JAN-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-JAN-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-JAN-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-JAN-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-FEB-15	Findings:	7.7
Chemical:	PH, LABORATORY		
Sample Collected:	05-FEB-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-FEB-15	Findings:	0.32 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	12-FEB-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-FEB-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-FEB-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-MAR-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-MAR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-MAR-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-APR-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-APR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	22-APR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-APR-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAY-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	14-MAY-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	21-MAY-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	28-MAY-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04-JUN-15	Findings:	19. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	11-JUN-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	18-JUN-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	25-JUN-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02-JUL-15	Findings:	250. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-JUL-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-JUL-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	16-JUL-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	23-JUL-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	30-JUL-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	06-AUG-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	13-AUG-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	20-AUG-15	Findings:	17. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	27-AUG-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-SEP-15	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-SEP-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	17-SEP-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	24-SEP-15	Findings:	18. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01-OCT-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08-OCT-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	15-OCT-15	Findings:	12. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	22-OCT-15	Findings:	13. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-OCT-15	Findings:	12. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-NOV-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	12-NOV-15	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	19-NOV-15	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	03-DEC-15	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	10-DEC-15	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	17-DEC-15	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-DEC-15	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-DEC-15	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JAN-16	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JAN-16	Findings:	370. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-JAN-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	14-JAN-16	Findings:	2.57 PCI/L
Chemical:	URANIUM (PCI/L)		
Sample Collected:	14-JAN-16	Findings:	1.07 PCI/L
Chemical:	URANIUM COUNTING ERROR		
Sample Collected:	14-JAN-16	Findings:	0.3 PCI/L
Chemical:	URANIUM MDA95		
Sample Collected:	21-JAN-16	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	28-JAN-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-FEB-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	24-MAR-16	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	31-MAR-16	Findings:	2.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-APR-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	21-APR-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	28-APR-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	05-MAY-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	12-MAY-16	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	19-MAY-16	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	26-MAY-16	Findings:	2.6 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	02-JUN-16	Findings:	3.5 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	09-JUN-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	16-JUN-16	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	23-JUN-16	Findings:	4. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	30-JUN-16	Findings:	3.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JUL-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	07-JUL-16	Findings:	340. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-JUL-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	28-JUL-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	04-AUG-16	Findings:	3.9 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	11-AUG-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		

Sample Collected:	18-AUG-16	Findings:	3.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	25-AUG-16	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	01-SEP-16	Findings:	3.4 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	08-SEP-16	Findings:	3.6 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	22-SEP-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	29-SEP-16	Findings:	3.2 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	06-OCT-16	Findings:	3. MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	13-OCT-16	Findings:	2.8 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	20-OCT-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	27-OCT-16	Findings:	3.1 MG/L
Chemical:	NITRATE (AS N)		

9
NW
1/2 - 1 Mile
Lower

FED USGS **USGS40000139971**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340216117072701		
Monloc name:	001S002W31R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0377919
Longitude:	-117.125035	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2040.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670101	Welldepth:	315
Welldepth units:	ft	Wellholedepth:	327
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

10
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000139908**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340150117055001		
Monloc name:	002S002W04C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0305698
Longitude:	-117.0980891	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:	2082
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	712
Welldepth units:	ft	Wellholedepth:	712
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

11
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000139993**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340231117063401		
Monloc name:	001S002W32G001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0419584
Longitude:	-117.1103122	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2132.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19520101	Welldepth:	212
Welldepth units:	ft	Wellholedepth:	250
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

12
East
1/2 - 1 Mile
Lower

FED USGS **USGS40000139875**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340134117054801		
Monloc name:	002S002W04L001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0261255
Longitude:	-117.0975334	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:	2074
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	530
Welldepth units:	ft	Wellholedepth:	537
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

1G
West
1/8 - 1/4 Mile
Lower

AQUIFLOW **50239**

Site ID:	083602839T
Groundwater Flow:	WSW
Shallow Water Depth:	150
Deep Water Depth:	175
Average Water Depth:	Not Reported
Date:	09/04/1996

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92399	13	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN BERNARDINO COUNTY, CA

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.678 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	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.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} 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. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
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 Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, 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 Public Health
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 Database 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 at 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 elevated 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 D

SANBORN MAP FINDINGS, CITY DIRECTORY SEARCH, AND ENVIRONMENTAL LIEN SEARCH

23.84 Acres

SEC of Yucaipa Blvd. and Avenue E

Yucaipa, CA 92399

Inquiry Number: 5260584.3

April 16, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/16/18

Site Name:

23.84 Acres
SEC of Yucaipa Blvd. and Aver
Yucaipa, CA 92399
EDR Inquiry # 5260584.3

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by The Reynolds Group were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 7F3A-4875-AC7C

PO # 8460

Project 8460 PSG Yucaipa

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.

Sanborn® Library search results

Certification #: 7F3A-4875-AC7C

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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23.84 Acres
SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Inquiry Number: 5260584.5
April 18, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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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 Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1985	☑	☑	Haines Criss-Cross Directory
1980	☑	☑	Haines Criss-Cross Directory
1975	☑	☑	Haines Criss-Cross Directory
1972	☑	☑	Polk's City Directory
1967	☑	☑	Luskey City Directory
1965	☑	☑	Luskey City Directory

FINDINGS

TARGET PROPERTY STREET

SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Year	*CD Image*	*Source*

YUCAIPA BLVD

2014	pg A2	EDR Digital Archive
2010	pg A4	EDR Digital Archive
2005	pg A6	EDR Digital Archive
2000	pg A9	EDR Digital Archive
1995	pg A11	EDR Digital Archive
1992	pg A13	EDR Digital Archive
1985	pg A15	Haines Criss-Cross Directory
1980	pg A17	Haines Criss-Cross Directory
1975	pg A19	Haines Criss-Cross Directory
1975	pg A20	Haines Criss-Cross Directory
1972	pg A22	Polk's City Directory
1967	pg A24	Luskey City Directory
1965	pg A26	Luskey City Directory
1965	pg A27	Luskey City Directory

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
AVENUE E		
2014	pg. A1	EDR Digital Archive
2010	pg. A3	EDR Digital Archive
2005	pg. A5	EDR Digital Archive
2000	pg. A8	EDR Digital Archive
1985	pg. A14	Haines Criss-Cross Directory
1980	pg. A16	Haines Criss-Cross Directory
1975	pg. A18	Haines Criss-Cross Directory
1972	pg. A21	Polk's City Directory
1967	pg. A23	Luskey City Directory
1965	pg. A25	Luskey City Directory
E AVE		
1995	pg. A10	EDR Digital Archive
1992	pg. A12	EDR Digital Archive

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2014

31453 BAKERS BURGERS INC
31535 DURBINS LAWN & TREE SERVICE
31560 DYNAMIC DIESEL
SUNDEN, DAVID S
WHITE, RENEE B
31624 DOUGHTY, KEVIN D
31635 CORDER, ELIZABETH A
31642 BROOKS, YMELDA G
DAVIES, GERI B
31658 BARRON, KENNETH J
31670 BUENA VISTA CNSTR SOLUTIONS
RUDDY, ANTHONY R
TOTAL MAINT CARE SOLUTIONS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2014

31340	ARCO AM PM
	YUCAIPA MART INC
31416	LOZANO, VALENTINE
31418	L A CUSTOM POOLS AND SPAS INC
31429	BURK JACK D
31440	PARTY SHOPPE
31462	CRAWFORD, CHRIS R
	HARDESTY INVESTMENTS
	HARDESTY, BRANDON
	HARDESTY, STEVE W
	HOAG, JULIA
	PULIDO, DAVID
	REGIMBAL, ROD
	TANGUAY, ELLEN
	WEBSTER, SHARON
31472	BOLINGER, KIMBERLY
	GUERRERO, MARIBEL
	TERAN, RUFINA
31484	HALLAWAY, JACK
31510	QUALITY POWER AUTOMOTIVE INC
31516	EUROPEAN AUTOMOTIVE
31558	RICHARD, A P
31582	CRILLY, RICHARD L
31594	ROGERS, RYAN N
31604	COLOR TRENZ
31608	LOPEZ, CARMEN
31614	FISHER, MOLLIE F
31642	HARDESTY, ANGELA
31710	EXA INC
	EXCLUSIVE AUTO
31724	OCCUPANT UNKNOWN,
31741	EVANS, RACHELLE
	U-STORE-IT MINI WAREHOUSE CO
31776	GIBSON & SON PROVISIONS
	J R M CONSTRUCTION
	NATIONAL FIREARMS ACADEMY
31785	MAMMEL, MARK T
	PRINCE PEACE LUTHERAN CHURCH
31786	QUALITY PIPING SYSTEMS
31810	KIMBERLYS HAIR DESIGN
	SHEAR HEAVEN
31828	MGJ TRANSPORT INC
	ORTIZ, JOHN N
31832	PARSONS, GREGORY K

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2010

31514 IRWIN, ARDIS L
31535 DURBINS LAWN & TREE SERVICE
31548 TOWER FOUNDATIONS INC
31560 DYNAMIC DIESEL
SUNDEN, DAVID S
WHITE, RENEE B
31624 OCCUPANT UNKNOWN,
31635 CORDER, ELIZABETH A
31642 CHAVEZ, GILBERT E
31658 BARRON, KENNETH J
31670 BUENA VISTA CNSTR SOLUTIONS
OCCUPANT UNKNOWN,
TONY RUDDY

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2010

31340	ARCO AM PM
	BP NORTH AMERICA
	YUCAIPA MART INC
31416	LOZANO, VALENTINE
31418	L A CUSTOM POOLS AND SPAS INC
31429	BURK JACK D
31440	PARTY SHOPPE
31462	BRACKEN, TROY S
	CRAWFORD, CHRIS R
	HARDESTY INVESTMENTS
	HARDESTY, STEVE W
	HICKS, PATRICK
	LEWIS, GEORGE E
	LOMBARDI, M
	WALLACE, KONARD
	WELLS, BERVELY
31472	UNDERWOOD, SHERRY D
31484	BIG VALLEY CORP
	HALLAWAY, JACK
31510	QUALITY POWER INC
31516	EUROPEAN AUTOMOTIVE
31558	KNOLL HAVEN ANTIQUES
	RICHARD, A P
31582	CRILLY, MEGAN
31594	ROGERS, RYAN N
31608	YUCAIPA STEREO
31614	E & E ORNAMENTAL IRON
	FISHER, MOLLIE F
31710	EXA INC
	EXCLUSIVE AUTO
31724	OCCUPANT UNKNOWN,
	OLSON CAROL AND ASSOCIATES
31730	ZIMMERMAN, KURT R
31738	QUALITY TRAVEL
31741	HOLMAN, EDWARD A
	SHEAHAN, DARREN
	U-STORE-IT MINI WAREHOUSE CO
31776	GIBSON & SON PROVISIONS
	VAN CAMPS INCORPORATED
31785	PRINCE PEACE LUTHERAN CHURCH
	WASKOW, SANDRA J
31786	QUALITY PIPING SYSTEMS
	SCP INSURANCE SERVICES
31810	BREWSTER HELEN SALON
	KIMBERLYS HAIR DESIGN
	MANE CREATIONS
	SHEAR HEAVEN
31828	OCCUPANT UNKNOWN,
31832	BELLYSIMO PHOTOGRAPHY
	PARSONS, GREGORY K

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2005

31514 IRWIN, ARDIS
31535 DURBINS LAWN & TREE SERVICE
31548 NETWORK SECURITY ALLIANCE INC
TOWER FOUNDATIONS INC
31635 CORDER, DALE E
31642 CHAVEZ, GILBERT E
31658 BARRON, KENNETH J
31670 RUDDY TONY
RUDDY, ANTHONY R

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2005

31340	ARCO AM/PM
	RS PAULENTERPRISES INC
	YUCAIPA MART INC
31412	YUCAIPA CHEVRON
31418	LA CUSTOM POOLS & SPAS
31440	PARTY SHOPPE
31462	ACEVES, EDUARDO
	ALFRED, DOUGLAS
	COPELAND, WALTER
	FISHER, AMY
	FRAINEE, CYNTHIA R
	GLASER, DOLORES A
	HARDESTY, STEVE W
	LOMBARDI, M
	STEWART, EVA M
	UGAPO, MELINA
	ZUNIGA, ROBERT
31472	LOPEZ, RAMONA
	MARISCAL, UBALDO B
31484	GATES TONY
31504	GATEWAY TIRE & SERVICE
31510	TEKNIDYNE INC
	WELLERS DRAPERIES
31516	EUROPEAN AUTOMOTIVE
31520	OCCUPANT UNKNOWN,
31558	KNOLL, HAVEN
31594	CRILLY, FERN L
31604	HILLWIG-GOODROW LLC
31614	E & E ORNAMENTAL IRON
	FISHER, MOLLIE F
31640	FUNITURE SERVICE
31710	EXCLUSIVE AUTO
31724	OLSON CAROL AND ASSOCIATES
	OLSON, LELAND P
31730	ZIMMERMAN, KURT R
31738	INLAND PACIFIC VENTURES LLC
	MOORE PACIFIC VENTURES LLC
	QUALITY TRAVEL
31741	U-STORE-IT MINI WAREHOUSE CO
31776	RAVE BODY GEAR
	VAN CAMPS INCORPORATED
	WOODS, JO A
31785	KOGLER, RICHARD
	PRINCE PEACE LUTHERAN CHURCH
31786	SEP INSURANCE SVCS INC
	STEVE PARKER INSURANCE
31810	KIMBERLYS HAIR DESIGN
	MANE CREATIONS
	SHEAR HEAVEN
31828	BURFORD, WALDO T

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2005 (Cont'd)

31832 PERRENOUD, NICHOLAS A

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

AVENUE E 2000

31548 HART, C
31560 KOSHAREK, EMILY
31616 SANCHEZ, C G
31635 CORDER, DALE E
31642 OCCUPANT UNKNOWN,
31670 RUDDY, TRACY L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 2000

31418 VALLEY TV
31440 PARTY SHOPPE
31462 ATKINSON, CHARLES
BRAY, TOBY
PINEDA, MARIA
SEPULVEDA, FERMINA
STEWART, EVA
VASQUEZ, LISA
31484 CUEVAS, JASMINE
31504 GATEWAY TIRE & SERVICE
31514 RODRIQUEZ JULIAN
TAX OFFICE-SENIOR ASSIST
31558 KNOLL HAVEN ANTIQUES
31582 CRILLY, CARL G
31594 CRILLY, B E
31604 DESHLERS SPECIALTIES INC
31614 E & E ORNAMENTAL IRON
FISHER, MOLLIE F
31640 FUNITURE SERVICE
31680 OCCUPANT UNKNOWN,
31710 COLLECTORS CLASSICS INTL
JOES AUTOMATIC TRANSM SVC
31724 OLSON CAROL AND ASSOCIATES
OLSON, LELAND P
31730 ZIMMERMAN, G C
31738 MOORE CHARLES
QUALITY TRAVEL
REAL SHOPPE INC
31741 OCCUPANT UNKNOWN,
U-STORE-IT MINI WAREHOUSE CO
31776 OCCUPANT UNKNOWN,
31785 PRINCE OF PACE LTHERAN CHURCH
31786 OCCUPANT UNKNOWN,
31810 OCCUPANT UNKNOWN,
SHEAR HEAVEN
31828 OCCUPANT UNKNOWN,
31838 ADAMS, JIM

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

E AVE 1995

31535	ERB, OTTO A
31548	OCCUPANT UNKNOWNN
31608	OCCUPANT UNKNOWNN
31622	OCCUPANT UNKNOWNN
31635	CORDER, DALE E
31658	OCCUPANT UNKNOWNN
31670	ASPRIL, J E

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 1995

31340 PETROMART INC
31412 YUCAIPA CHEVRON
31440 PARTY SHOPPE
31462 ATKINSON, CHARLES JR
MANASUK, GUY
NAVARRO, JOSE M
31472 GLASER, TONI
PALM AUTO DETAIL
31504 OCCUPANT UNKNOWNN
31510 COST GUARD CARPET
TEKNIDYNE
31512 VISIONS BEAUTY SALON
31516 ARYAFAR, BEHROUZ
BISH FULL SERVICE
31558 OCCUPANT UNKNOWNN
31582 CRILLY, CARL G
31594 OCCUPANT UNKNOWNN
31604 DESHLERS SPECIALTIES INC
31608 CONSERVATORY OF DANCE INC
OCCUPANT UNKNOWNN
31614 E & E ORNAMENTAL IRON
FISHER, RON
31629 ALL WESTERN TRMT & PEST CTRL
31640 FUNITURE SERVICE
31710 COLLECTORS CLASSICS INTL
JOES AUTOMATIC TRANSM SVC
31711 PEDAL CARS SOUTHERN CALIFORNIA
31724 OLSON CAROL AND ASSOCIATES
OLSON, LELAND P
31730 ZIMMERMAN, GIL C
31738 LEJA ENGINEERING INC
31741 ASSURED MINI STORAGE
OCCUPANT UNKNOWNN
31776 RICH, WILLIAM
31785 KOGLER, RICHARD
PRINCE PEACE LUTHERAN CHURCH
31810 BEVER, SHARON M
SHEAR HEAVEN
31816 GILMORE, MAXINE
31828 OCCUPANT UNKNOWNN
31838 ADAMS, JIM

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

E AVE 1992

31535 ERB, OTTO A
31548 SPILLMANN, ADOLPH C
31592 STUDLEY, WALTER A
31608 DAWSON, ROBERT
31622 ASPRIL, J E
31635 CORDER, DALE E
31682 DETTINGER, JOHN E

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

YUCAIPA BLVD 1992

31412	YUCAIPA CHEVRON
31440	PARTY SHOPPE
31462	ATKINSON, CHARLES JR
	CROWNOVER, MICHAEL
	GOULD, RAMONA S
31472	LOPEZ, G
31504	GATEWAY TIRE & SERVICE
31510	COST GUARD CARPET
31512	VISIONS BEAUTY SALON
31594	CRILLY, B E
31604	DESHLERS SPECIALTIES
31608	ACTION GRAPHICS AND OFF SUPS
31614	E & E ORNAMENTAL IRON
	FISHER, RON
31640	ZIMMERMAN FURNITURE SERVICE
31710	COLLECTORS CLASSICS INTL
	JOES AUTOMATIC TRANSM SVC
31724	OLSON CAROL AND ASSOCIATES
31730	ZIMMERMAN, G C
31738	LEJA ENGINEERING INC
31741	ASSURED MINI STORAGE
31785	KOGLER, RICHARD
	PRINCE PEACE LUTHERAN CHURCH
31816	GILMORE, MAXINE
31828	BURFORD, WALDO
31838	ADAMS, JIM
31850	HUGHES, LANCE
	JANE, LEIGH
	NEWMAN, RONALD
	TAYLOR, IRENE
31862	STEELE, PAUL

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

AVENUE E 1985

AVENUE E 92399 YUCAIPA

31535	ERB OTTO A	794-2954
31548	SPILLMANN ADOLPH C	794-3386
31592	STUDLEY W A	794-2974
31608	ORENDORFF S	794-4320 +5
31622	ASPRIL J E	794-4156
31635	CORDER DALE E	794-2785
	CORDER E L	794-2785

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

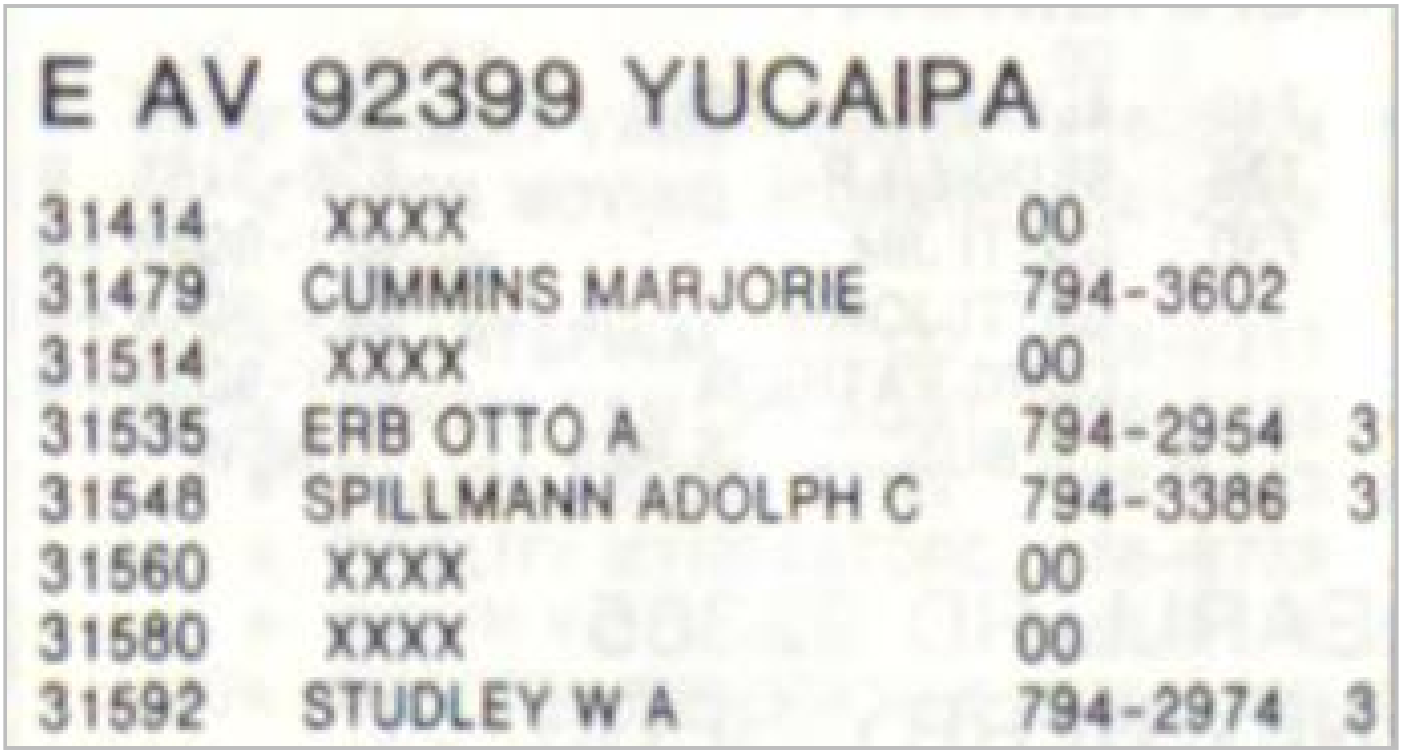
YUCAIPA BLVD 1985

YUCAIPA BLVD 92399
YUCAIPA

31340	CORNER CREATIONS	794-4011	0
31361	HUGHES CONCRTE PROD	794-7676	4
31375	WALKER SIGNS	794-5364	2
31396	XXXX	00	
31420	J J FURNITURE	794-4746	+5
31422	XXXX	00	
31429	XXXX	00	
31440	XXXX	00	
31459	XXXX	00	
31462	ATKINSON CHAS JR	794-5955	4
	WILDWOOD REALTY	794-1147	+5
31471	XXXX	00	
31472	ALVAREZ FERNANDO	794-7225	+5
	BOB EARLEYWINES ATO	794-3876	3
	CABRERA ROSARIO N	794-6554	+5
	RODRIQUEZ ANTONIO	794-2473	4
31484	XXXX	00	
31491	XXXX	00	
31497	XXXX	00	
31504	LOPEZ EMERITA	794-4792	+5
31506	XXXX	00	
31510	COST GUARD CARPETS	794-3014	
31512	ESPECIALLY FOR YOU	794-5725	+5
31514	XXXX	00	
31516	LAMASTER JOHN SERV	794-3332	8
31528	BOARD REC VEHICLE	794-1196	0
	KERRS TRLR&CMPR SPL	794-1196	
31533	XXXX	00	
31558	KNOLL HAVEN ANTQS	794-3810	
31580	XXXX	00	
31581	XXXX	00	
31594	CRILLY B E	794-3003	
31604	DESHLERS SPECIALTS	794-3543	0
31608	ACTION GRAPHICS	794-4426	+5
	ACTION INSTANT	794-4426	+5
	CLASSY CHASSY THE	794-5165	0
	CONSERVTRY OF DANCE	794-6485	1
	HAIR STYLING LARRY	794-2179	3
31614	E&E ORNAMENTAL IRON	794-5170	1
	FISHER VERN	794-3048	+5
31629	J&J MEDICAL SERV	794-6687	4
31640	ZIMMERMANS FURN SV	794-3418	4
31680	XXXX	00	
31689	XXXX	00	
31710	JOES AUTOMTC TRANS	794-1916	8
31724	C&L CUSTOM DESIGNS	794-1641	4
	OLSON LELAND P	794-2685	4
31730	ZIMMERMAN G C	794-3900	9
31738	MINNIEAR BILL INS	794-3595	8
31741	NIEMI WAYNE	794-7456	3
31785	PRINCE PEACE LUTH	794-2554	
	VANNORSTRAND R REV	794-2554	8
31786	XXXX	00	
31800	XXXX	00	
31810	AUSTIN WILMA F	794-6120	+5
31826	XXXX	00	
31828	BURFORD WALDO	794-4841	4

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

AVENUE E 1980



E AV 92399 YUCAIPA

31414	XXXX	00	
31479	CUMMINS MARJORIE	794-3602	
31514	XXXX	00	
31535	ERB OTTO A	794-2954	3
31548	SPILLMANN ADOLPH C	794-3386	3
31560	XXXX	00	
31580	XXXX	00	
31592	STUDLEY W A	794-2974	3

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

YUCAIPA BLVD 1980

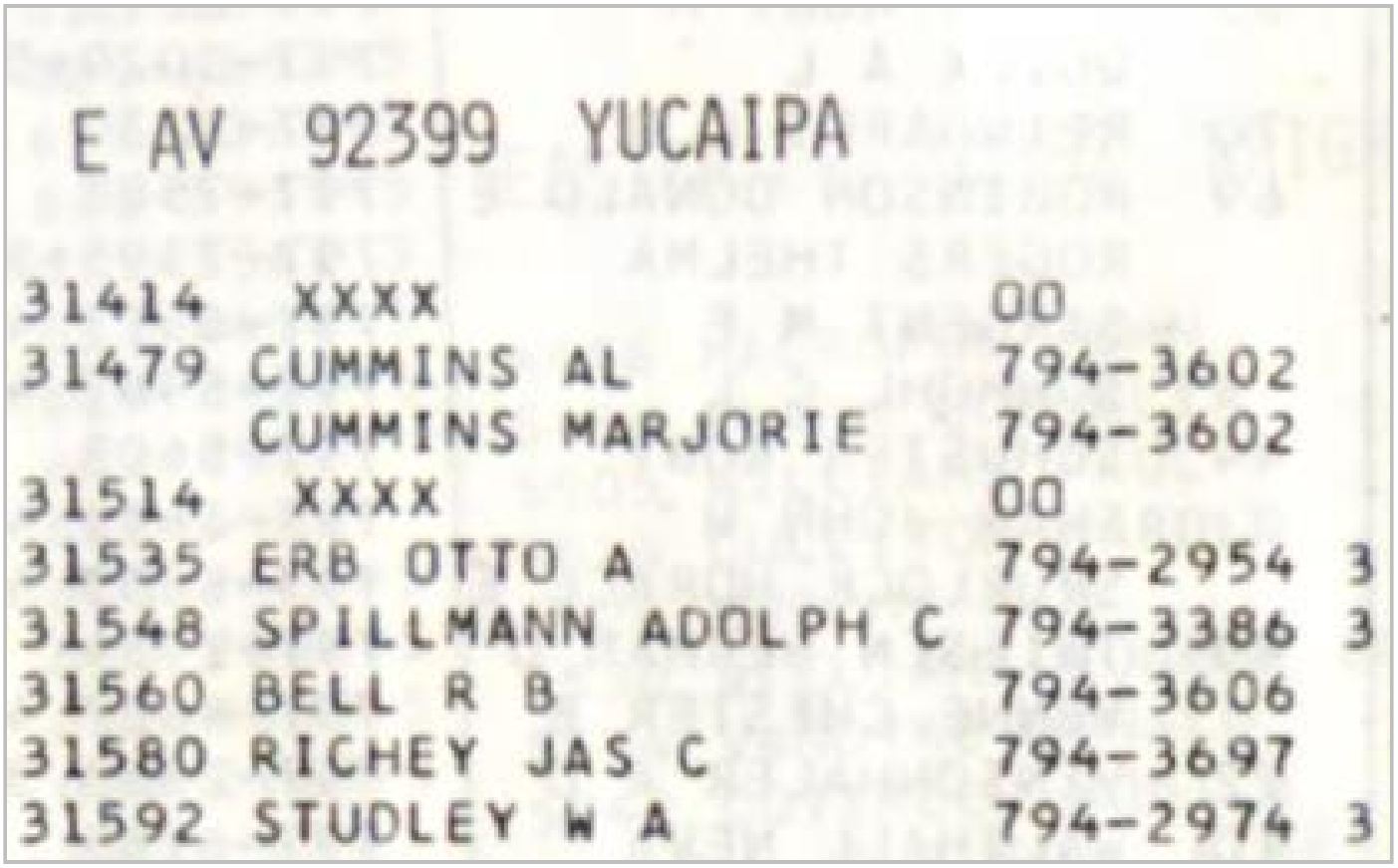


YUCAIPA BLVD 92399
YUCAIPA

31340★	CORNER CREATIONS	794-4011	+0
31361★	HUGHES CONCRETE PRD	794-3718	
31375★	FAILSAFE SOLAR CO	794-5705	+0
31396★	JOE MASON CHVRN SRV	794-3816	
31418½★	VITAL SIGNS	794-2215	8
31420★	ACTION INSTNT PRNTG	794-4426	+0
31429	XXXX	00	
31440★	ESPINOSA D P	794-4944	8
31442★	SUZIES HAIR HUT	794-3659	8
31459★	WOODLAND MINIATURES	794-4314	9
31462	MOUNTAIN VW LDG		
★	CENTURY 21 STONES	794-1147	+0
★	CENTURY 21 YUCAIPA	794-1147	+0
	FIKE KAYLA	794-4095	9
	HAMPTON BECKY	794-5569	+0
	HASTIN B	794-3241	+0
	KNAPPENBERGER R	794-2855	7
	PICCOLO ALBERT P	794-5241	9
	PIERCE PHILIP	794-1761	+0
★	STONES CENTURY 21	794-1147	6
	STONES CHAS	794-1147	8
31462			
31471★	TACO SHACK	794-3812	
31472	RAYMOND DENNIS	794-5609	+0
★	YUCAIPA AUTO SHOP	794-5716	+0
31484	XXXX	00	
31491★	LERNER OIL CO	794-9053	
31497	XXXX	00	
31506★	YUCAIPA DRAPRY STDO	794-4549	8
31510★	COST GUARD CARPETS	794-3014	5
31512★	FINISHING TOUCH BTY	794-5725	+0
31514	XXXX	00	
31516★	LAMASTER JOHN SERV	794-3332	8
31528★	BOARD REALTY	794-4010	9
★	BOARD REC VEHCL CT	794-1196	+0
★	KERRS TRLR&CMPR SPL	794-1196	4
31533★	HANSBERGER TEETERS	794-2118	9
★	HANSSERGER TEETERS	797-3711	+0
31555★	SHIRT SHOP THE	794-4285	9
31558★	KNOLL HAVN ANTIQUES	794-3810	
31580	XXXX	00	
31581★	KIVETT REALTORS INC	794-1191	9
★	KIVETT SCHL RL EST	794-2101	+0
31594	CRILLY B E	794-3003	
31604★	DESHLERS SPECIALTS	794-3543	+0
31608★	CLASSY CHASSY THE	794-5165	+0
★	FIVE STAR MOBILE HM	794-1143	+0
31614★	DEHART PAINTING	794-5250	9
	FISHER VERN	794-3048	
★	THREE D INVESTMENTS	794-5250	+0
31640★	AIRKEM ODOR SERVICE	794-3418	
★	ZIMMERMANS FURN SV	794-3418	
31680	OLSON LELAND P	794-2685	5
31689	XXXX	00	
31710★	JOES AUTOMTC TRANS	794-1916	8
31724	EARLEYWINE ROBERT	794-5326	9
31730	ZIMMERMAN G C	794-3900	9
31738★	MINNIEAR BILL INS	794-3595	8
31741★	NIEMIS CERAMICS	794-3566	
31785★	PRINCE OF PEACH CH	794-2554	
	VANNORSTRAND R REV	794-2554	8
31786	BURFORD WALDO	794-4841	7
31800	XXXX	00	
31810★	ADOBE REALTY	794-2138	5
	BOTH EDW G	794-2535	6
31826	XXXX	00	
31829	XXXX	00	

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

AVENUE E 1975

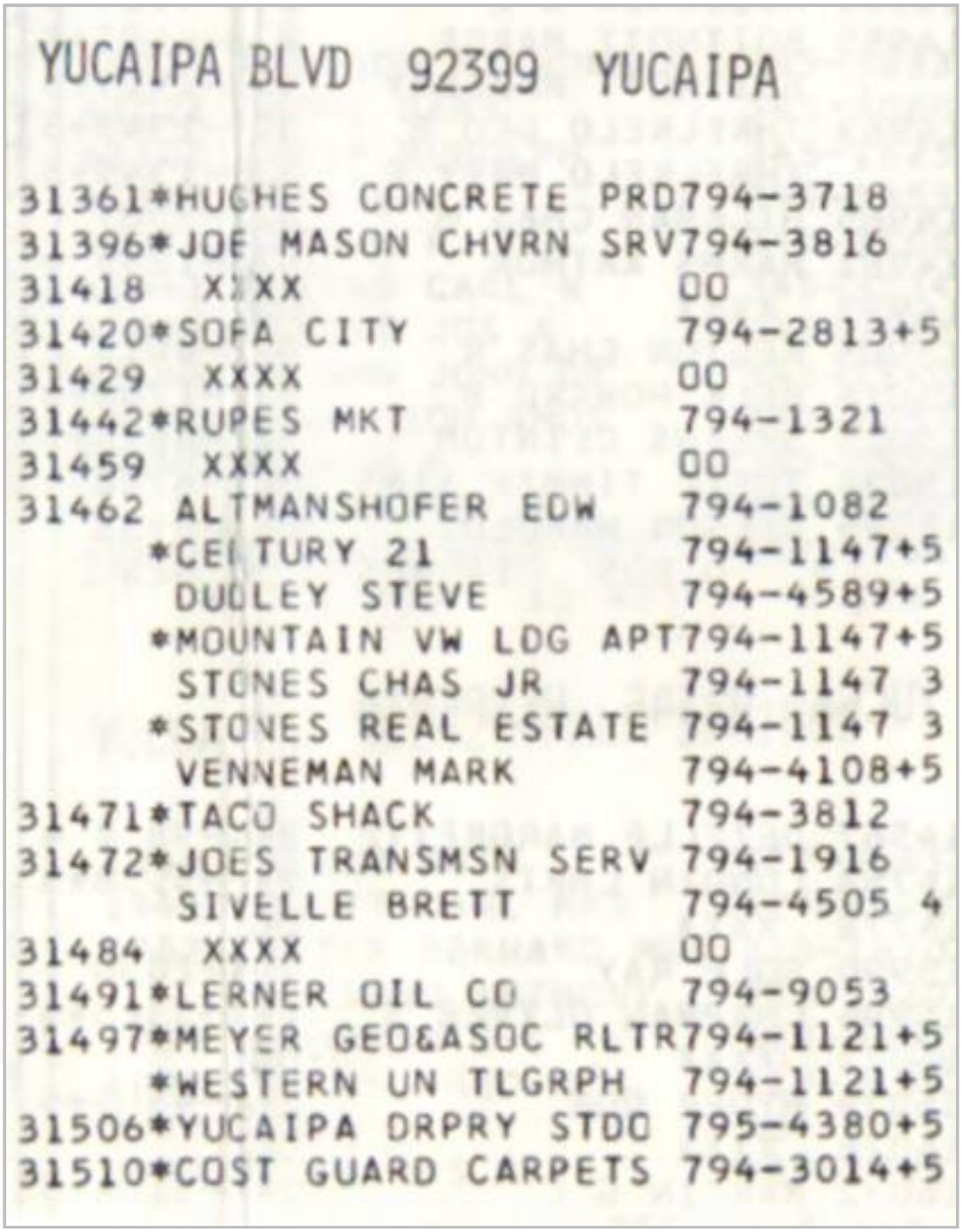


E AV 92399 YUCAIPA

31414	XXXX	00	
31479	CUMMINS AL	794-3602	
	CUMMINS MARJORIE	794-3602	
31514	XXXX	00	
31535	ERB OTTO A	794-2954	3
31548	SPILLMANN ADOLPH C	794-3386	3
31560	BELL R B	794-3606	
31580	RICHEY JAS C	794-3697	
31592	STUDLEY W A	794-2974	3

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

YUCAIPA BLVD 1975

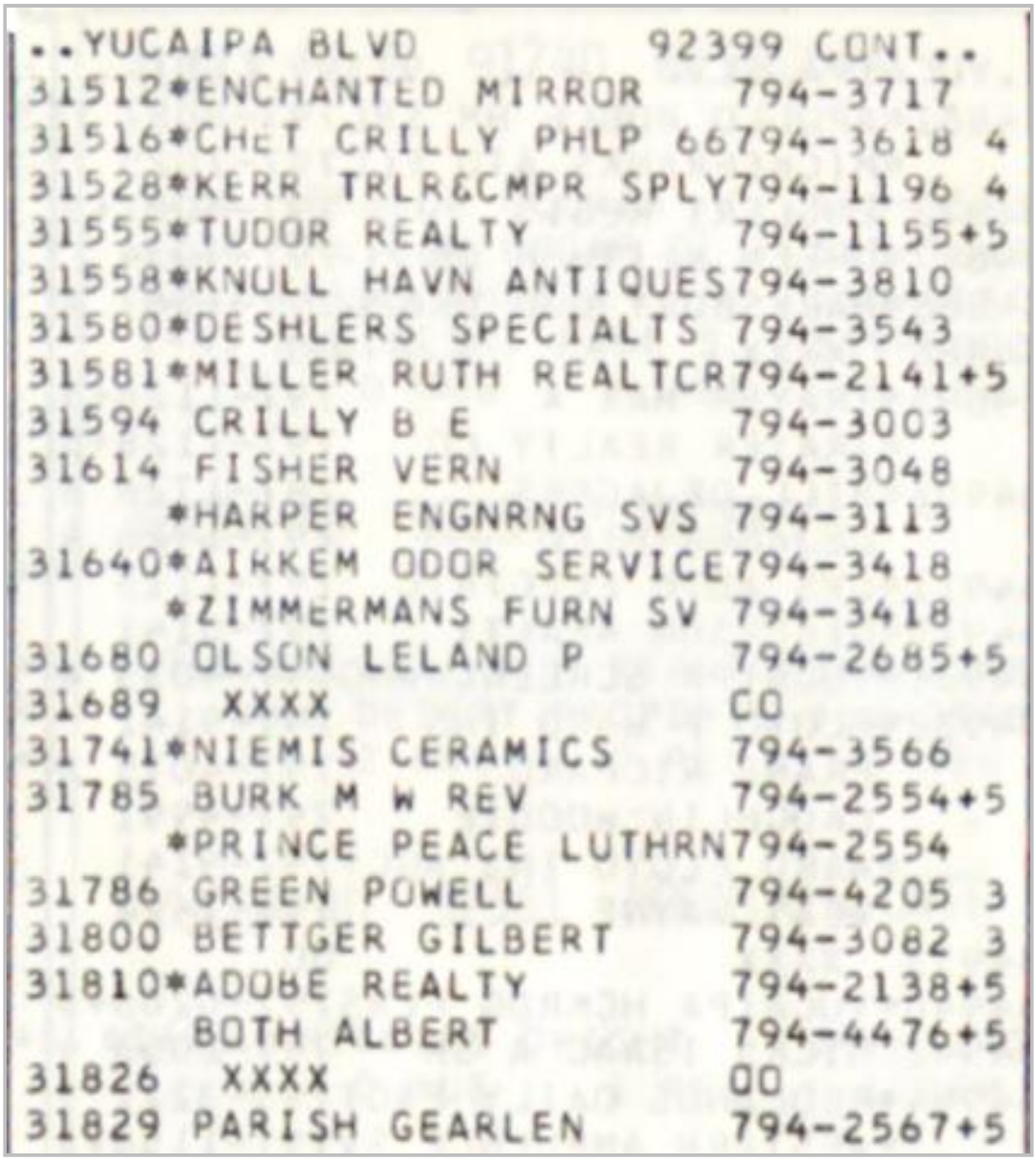


YUCAIPA BLVD 92399 YUCAIPA

31361*HUGHES CONCRETE PRD794-3718
31396*JOE MASON CHVRN SRV794-3816
31418 XXXX 00
31420*SOFA CITY 794-2813+5
31429 XXXX 00
31442*RUPES MKT 794-1321
31459 XXXX 00
31462 ALTMANSHOFER EDW 794-1082
*CENTURY 21 794-1147+5
DUDLEY STEVE 794-4589+5
*MOUNTAIN VW LDG APT794-1147+5
STONES CHAS JR 794-1147 3
*STONES REAL ESTATE 794-1147 3
VENNEMAN MARK 794-4108+5
31471*TACO SHACK 794-3812
31472*JOES TRANSMSN SERV 794-1916
SIVELLE BRETT 794-4505 4
31484 XXXX 00
31491*LERNER OIL CO 794-9053
31497*MEYER GEO&ASOC RLTR794-1121+5
*WESTERN UN TLGRPH 794-1121+5
31506*YUCAIPA DRPRY STDO 795-4380+5
31510*COST GUARD CARPETS 794-3014+5

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

YUCAIPA BLVD 1975



```
..YUCAIPA BLVD              92399 CONT..
31512*ENCHANTED MIRROR      794-3717
31516*CHET CRILLY PHLP 66   794-3618 4
31528*KERR TRLR&CMPR SPLY   794-1196 4
31555*TUDOR REALTY          794-1155+5
31558*KNULL HAVN ANTIQUES   794-3810
31580*DESHLERS SPECIALTS    794-3543
31581*MILLER RUTH REALTOR   794-2141+5
31594 CRILLY B E            794-3003
31614 FISHER VERN           794-3048
      *HARPER ENGNRNG SVS   794-3113
31640*AIRKEM ODOR SERVICE    794-3418
      *ZIMMERMANS FURN SV    794-3418
31680 OLSON LELAND P        794-2685+5
31689  XXXX                 CO
31741*NIEMIS CERAMICS        794-3566
31785 BURK M W REV          794-2554+5
      *PRINCE PEACE LUTHRN   794-2554
31786 GREEN POWELL          794-4205 3
31800 BETTGER GILBERT       794-3082 3
31810*ADOBE REALTY           794-2138+5
      BOTH ALBERT           794-4476+5
31826  XXXX                 OO
31829 PARISH GEARLEN        794-2567+5
```

Target Street	Cross Street	Source
-	✓	Polk's City Directory

AVENUE E 1972

AVENUE E 92399

31479	CUMMINS, MARJORIE	794-3602
31514	IRVIN, OR CHARLES E	794-3593
31535	ERB, OTTO A	794-2954
31548	SPILLMANN, ADOLPH C	794-3386
31560	BELL, R B	794-3606
31580	RICHEY, JAMES C	794-3697
31592	STUDLEY, W A	794-2974

Target Street	Cross Street	Source
✓	-	Polk's City Directory

YUCAIPA BLVD 1972

YUCAIPA	8L	92399
31361	◘HUGHES CONCRT PROOS	794-3718
31396	◘JOE MASON CHEVRN SVC	794-3816
31420	◘MAXONS FEED STORE	794-2814
31429	◘TOMS AUTO REPAIR	794-3818
31442	◘RUPES MARKET	794-1321
31462	APARTMENT	
1*	♦ KENNEDY, SUSAN	794-4434
8*	ALTMANSHOFER, EDW.	794-1082
9*	RETTSTATT, WENDELL P	794-3959
10*	♦ BEELER, TANCIE	794-3167
31471	◘TACO SHACK	794-3812
31472	APARTMENT	
31472	♦ BRYAN, GLEN	794-4372
31472	◘JOES TRANSMISSION	794-1916
1*	SMITH, N L	794-3092
2*	MC BRIDE, ALLEN	794-2841
31484	GARONER, DR VAUGHN C	794-3063
31491	◘LERNER OIL CO.	794-9053
31497	◘RANCHO REALTY	794-3112
31510	♦◘COST GUARD CARPETS	794-3013
31510	◘COST GUARD CARPETS	794-3014
31512	◘ENCHANTED MIRROR	794-3717
31516	♦◘C CRILLY PHILLIPS 66	794-3618
31555	♦◘MEYER GEORGE/ASSOCS	794-3715
31555	◘TILDEN REALTY	794-3214
31558	◘KNOLL HAVEN ANTIQUES	794-3810
31580	◘OESHLERS SPECIALTIES	794-3543
31581	◘RUTH MILLER INC RLTR	794-2141
31594	CRILLY, B E	794-3003
31614	FISHER, VERN	794-3048
31614	◘HARPER ENG/ELECTRONC	794-3113
31640	◘ZIMMERMANS FURNITURE	794-3418
31680	♦ OLSON, LELAND P	794-2685
31689	HUNTINGTON, FRANK O	794-3670
31738	HESLEP, LT BILLY	794-3132
31741	◘NIEMIS CERAMICS	794-3566
31785	◘PRINCE/PEACE LUTH CH	794-2554
31786	GREEN, POWELL	794-4205
31800	BETTGER, GILBERT	794-3082
31810	GREEN, DENNIS	794-2254
31826	KROLL JR, JOS.	794-2915
31829	♦ REA, L	794-2497

Target Street	Cross Street	Source
-	✓	Luskey City Directory

AVENUE E 1967

AVENUE E (YUC) – FROM 31400 YUCAIPA BL, EAST (92399)

Dunlap Bl Int's

31514	*Irvin CE 1	793-1693
31548	*Spillmann AC	792-4816
31580	Richey JC 3	792-3977
31592	Owens PS 2	793-5474
31622	Miller GL	792-8852
31640	Dettinger JE carp	792-6373
31640	*Dettinger JE 1	792-6373

Target Street	Cross Street	Source
✓	-	Luskey City Directory

YUCAIPA BLVD 1967

YUCAIPA BL (YUC) – FROM 496 U.S. 99 OUTER HIGHWAY, EAST (92399)

31340 Gateway Nursery 793–4649

Hampton Rd Ints

31361 Hughes Concrete Products ...792–5568
31396 Herman Keith Chevron Service 792–5786

Avenue E Ints

31420 Nonnie's Gateway to Beauty ..792–1598
31442 *Perez RR 2 792–8596
31459 Don's Washer & Dryer Reprs..793–5025
31462 Lash Coralie 792–9322
31462 Newman Clancy 792–4734
31462 Mountain View Lodge 792–2273
31462 *Stones Chas Jr 792–2273
31471 Taco Shack 792–3582
31472 Allred DH..... 792–0650
31472 Ellsworth LK 792–1140
31472 Apartments
3 Smith UM Mrs 792–2751
31484 Gardner VC 792–7043
31497 Strader's Real Estate 792–4145
31512 Enchanted Mirror beauty salon.793–3777
31516 Chet Crilly Service gas stn ..793–5808
31534 Mathews HA. 793–4527
31558 Knoll Haven Antiques 792–4200
31581 Miller Ruth M.....793–2401
31581 Miller Ruth M Real Estate.....793–2401
31614 Bob's Ornamental Iron.....792–8847
31614 *Fisher Vern 5 792–2028
31640 Airkem Odor Serv air cndtng..792–3627
31640 Furniture Service furn repr... 792–3627
31640 Zimmerson Furniture Service .792–3627
31640 Zimmerman GC 792–3627
31680 *Pataki Eugene 792–1057
31689 Huntington FD.....792–9570

18th St Ints

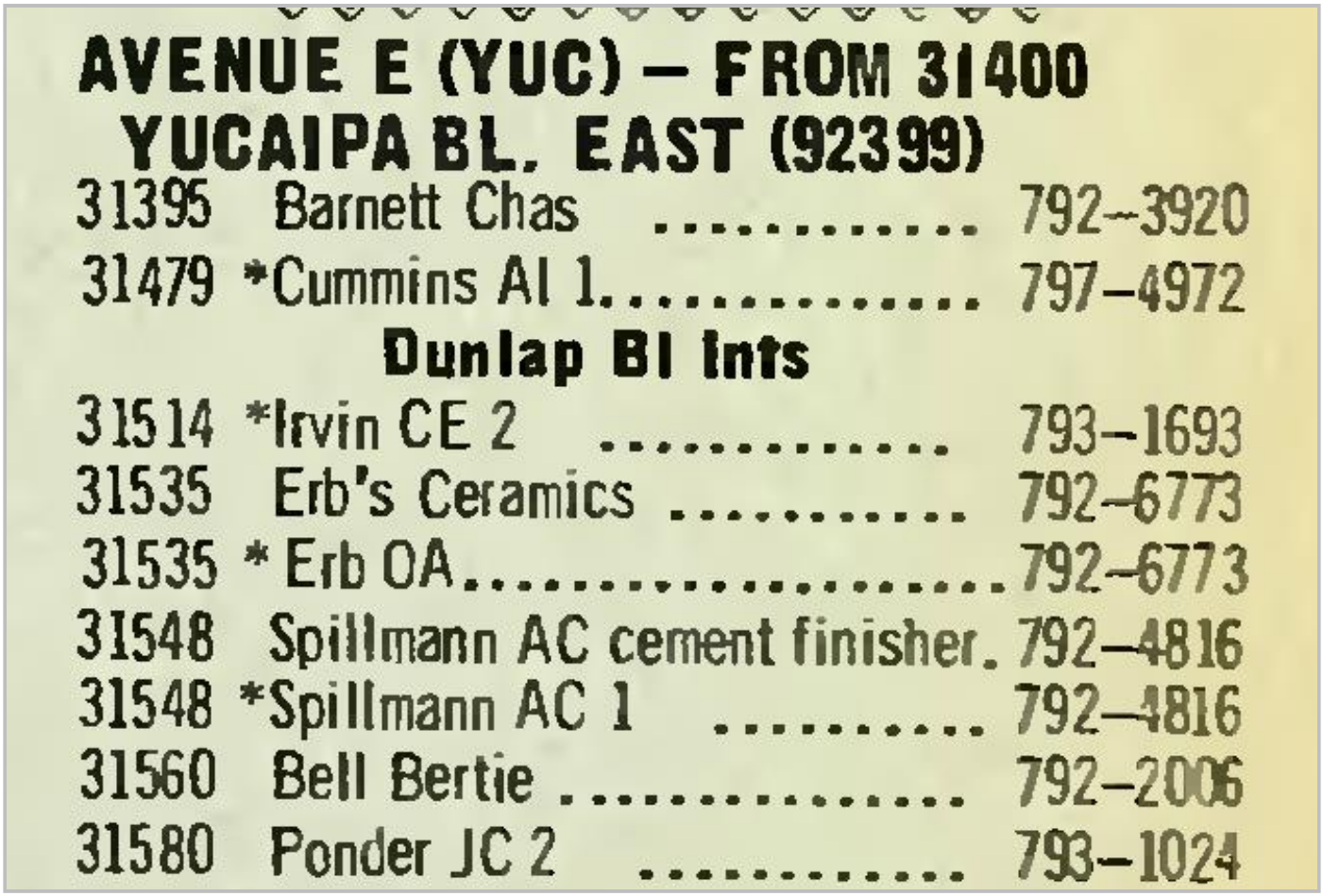
31738 Carrothers RA 792–8539
31741 Apartments
1 Estopinal GH 4 792–1694
31786 LaMay HC 792–1158
31800 *Bettger Gilbt 2.....792–6182
31810 GrazianoJoePntg&DecgContrs 793–4033
31826 *Moody AE 792–1153

17th St Ints

31910 Ewalt RC 797–1697
31924 *Untch FM.....797–8707

Target Street	Cross Street	Source
-	✓	Luskey City Directory

AVENUE E 1965



AVENUE E (YUC) – FROM 31400 YUCAIPA BL. EAST (92399)

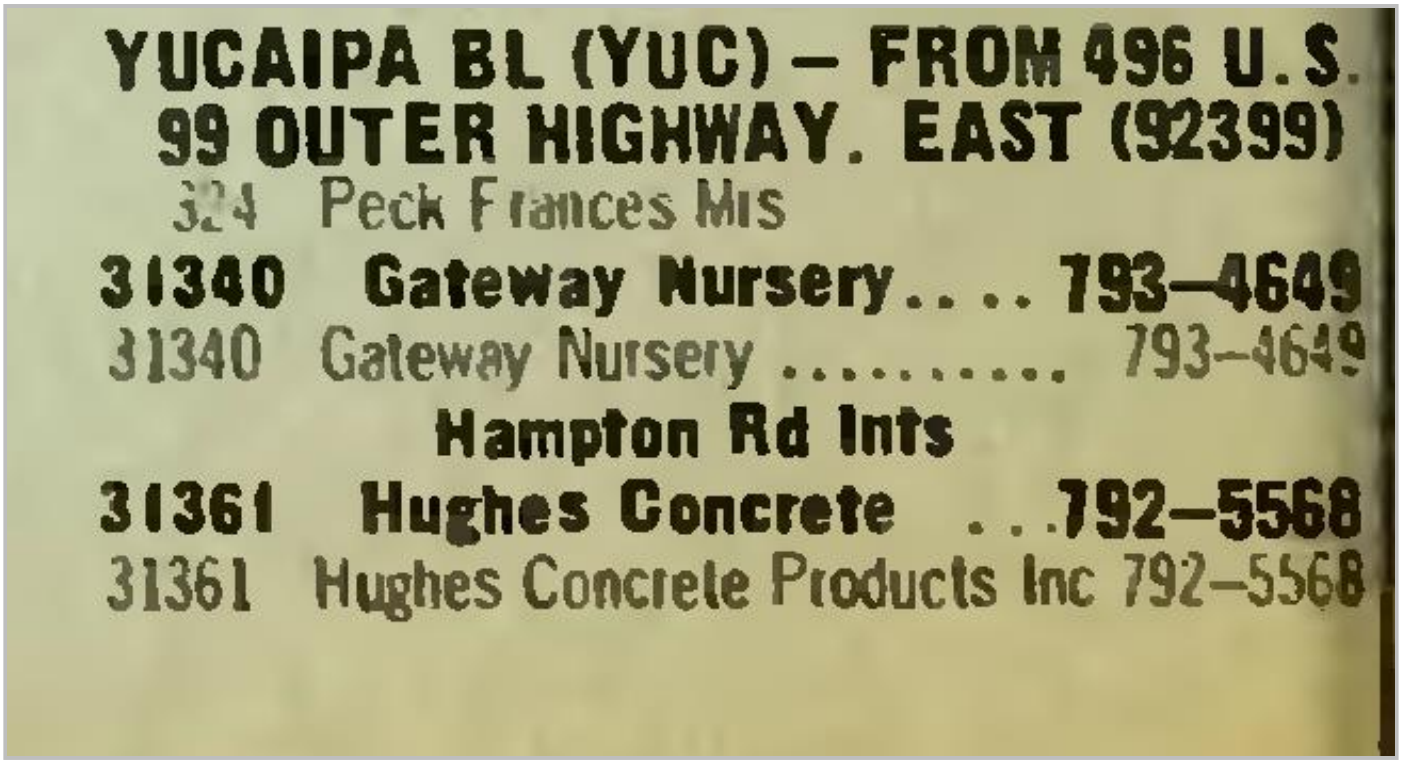
31395 Barnett Chas 792–3920
31479 *Cummins Al 1..... 797–4972

Dunlap Bl Ints

31514 *Irvin CE 2 793–1693
31535 Erb's Ceramics 792–6773
31535 * Erb OA..... 792–6773
31548 Spillmann AC cement finisher. 792–4816
31548 *Spillmann AC 1 792–4816
31560 Bell Bertie 792–2006
31580 Ponder JC 2 793–1024

Target Street	Cross Street	Source
✓	-	Luskey City Directory

YUCAIPA BLVD 1965



Target Street	Cross Street	Source
✓	-	Luskey City Directory

YUCAIPA BLVD 1965



YUCAIPA BL (CONT'D)

31375 Niles Poultry Breeding Farm..793–3251
31395 Barnett Chas 792–3920
31396 O'Neal Mike Chevron.....792–5786

Avenue E Ints

31418 Gateway Cleaners 792–7961
31420 Nonnie's Gateway To Beauty..792–1598
31420 Mathews MN Mrs..... 793–4527
31429 DevineEdSeasideServ 792–9922
31429 Devine EF Seaside Service... 792–9922
31442 Minit Market 792–8596
31442 *Perez RR 2 792–8596
1459 Tommy's Supply Co ..792–6390
1459 Tommy's Supply Co ..797–8905
1459 Tommy's Supply Co screens.. 792–6390
1462 Mountain View Lodge 792–2273
1462 *Stones Chas 792–2273
1471 Taco Shack The 792–3582
1472 Apartments
1 Maxwell Jerry
2 Heston Boyd 792–1639
3 *Melchert PR..... 793–5607
4 Shipman Troy
1484 Gardner VC 792–7043
1497 Stader Real Estate ..792–4145
1497 Stader's Real Estate 792–4145
1506 Sherman'sHomeShopfurnishings792–8952
1508 Ecco Lighting 792–8860
1508 Ecco Lighting fixtures..... 792–8860
1512 Mirror of Magic btys In793–3777
1512 Jerry's Enchanted Mirror btyshp793–3777
1516 Crilly Chet Service Station...792–9015
1520 *Crilley CL
1528 Kwake Paul 792–8076
1555 Bullock FE Bud Constr Co... 792–8972
1558 Knoll Haven Antiques 792–4200
1558 *Gazzo AR 792–4200
1581 Miller Ruth Realtor..... 793–2401
1582 *Crilly CG 3..... 792–5244
1594 *Crilly BE 1 792–2703
1614 Bob's Ornamental Iron 792–8847
1614 Fisher Vern..... 792–2028
1640 Airkem Odor Service..... 792–3627
1640 ZimmermanFurnServ .792–3627
1640 Zimmerman Furniture Serv .. 792–3627
1680 No Return
1689 Triple A TreeService 793–4784
1689 Wilson Chas 2 793–4784

18th St Ints

1724 Bryan PB 3
1738 Moseley CD
1741 Guizar Jesus 4
1741 *Estopinal GH 4..... 792–1694
1785 Vacant
1786 *LeMay HC 792–1158
1800 *Bettger Gilbert 2 792–6182
1810 Hightower LM Mrs 2
1826 *Moody AE..... 792–1153
1830 *Kahuda CH 792–1175

17th St Ints

23.84 Acres
SEC of Yucaipa Blvd. and Avenue E
Yucaipa, CA 92399

Inquiry Number: 5260584.7S
May 2, 2018

EDR Environmental Lien and AUL Search

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental LienSearch 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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EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

23.84 ACRES
SEC OF YUCAIPA BLVD. AND AVENUE E
YUCAIPA, CA 92399

RESEARCH SOURCE

Source 1: Recorder
San Bernardino County, California

Source 2: Assessor
San Bernardino County, California

PROPERTY INFORMATION

Deed 1:

Type of Deed: Grant Deed

Title is vested in: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Title received from: Yin Chi Chuang and Ching Chi Lin Chuang, husband and wife, as Joint Tenants

Deed Dated: 09/28/2012

Deed Recorded: 09/28/2012

Instrument: 2012-0402497

Legal Description: All that certain piece or parcel of land being a portion of Block 139 of Subdivision No. 3 of a portion of the Dunlap Ranch, as per map recorded in Book 20 of Maps, Page 71, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Property Identifiers: 0300-191-01-0000

Deed 2:

Type of Deed: Partnership Grant Deed

Title is vested in: Queen Investments, Inc., a California corporation

Title received from: Yucaipa Boulevard Limited Partnership, a California limited partnership

Deed Dated: 02/05/1990

Deed Recorded: 02/09/1990

Instrument: 90-054398

Legal Description: All that certain piece or parcel of land being Block 138 of Subdivision No. 3 of a portion of the Dunlap Ranch, as per map recorded in Book 20 of Maps, Page 71, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Queen Investments, Inc., a California corporation

Property Identifiers: 0300-191-02-0000

Deed 3:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Michael S. Murray and Karin E. Murray, husband and wife

Deed Dated: 08/09/1990

Deed Recorded: 08/14/1990

Instrument: 90-322323

Legal Description: All that certain piece or parcel of land being a portion of the East 82 feet of the West 248 feet of Block 6 of Subdivision No. 5 of a part of Dunlap Ranch, as per plat recorded in Book 23 of Maps, Pages 57 and 58, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-17-0000

Deed 4:

Type of Deed: Grant Deed

Title is vested in: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Title received from: Yin Chi Chuang and Ching Chi Lin Chuang, husband and wife, as Joint Tenants

Deed Dated: 09/28/2012

Deed Recorded: 09/28/2012

Instrument: 2012-0402497

Legal Description: All that certain piece or parcel of land being a portion of Block 6 of Subdivision No. 5 of a portion of the Dunlap Ranch, as per map recorded in Book 23 of Maps, Pages 57 and 58, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Jennifer Chi Chin Chuang, a single woman, and Amy Tingya Chuang, a single woman, as Joint Tenants

Property Identifiers: 0300-191-18-0000

Deed 5:

Type of Deed: Agreement to Merge

Title is vested in: Stater Bros. Markets

Title received from: Petrolane Properties, Inc.

Deed Dated: 03/29/1983

Deed Recorded: 03/31/1983

Instrument: 83-067976

Legal Description: All that certain piece or parcel of land being Parcel 1 of Parcel Map 5776, as per map filed in Book 58, at Page(s) 13-14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets

Property Identifiers: 0300-191-28-0000

Deed 6:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Charles E. Irvin III, Successor Trustee of The Charles E. Irvin Jr. and Ardis L. Irvin Trust Dated 01/05/1996

Deed Dated: 12/23/2010

Deed Recorded: 01/10/2011

Instrument: 2011-0010689

Legal Description: All that certain piece or parcel of land being Parcel 2 of Parcel Map 5776, as per map recorded in Book 58 of Parcel Maps, Pages 13 and 14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-29-0000

Deed 7:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Charles E. Irvin III, Successor Trustee of The Charles E. Irvin Jr. and Ardis L. Irvin Trust Dated 01/05/1996

Deed Dated: 12/23/2010

Deed Recorded: 01/10/2011

Instrument: 2011-0010689

Legal Description: All that certain piece or parcel of land being Parcel 3 of Parcel Map 5776, as per map recorded in Book 58 of Parcel Maps, Pages 13 and 14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-30-0000

Deed 8:

Type of Deed: Grant Deed

Title is vested in: Stater Bros. Markets, a California corporation

Title received from: Sherri Laffey-Long, a married woman as her sole and separate property (who acquired title as Sherri Laffey)

Deed Dated: 11/05/2013

Deed Recorded: 12/04/2013

Instrument: 2013-0521099

Legal Description: All that certain piece or parcel of land being Parcel 4 of Parcel Map 5776, as per map recorded in Book 58, Page(s) 13 and 14, situate and lying in the County of San Bernardino, State of California.

Legal Current Owner: Stater Bros. Markets, a California corporation

Property Identifiers: 0300-191-31-0000

EDR Environmental Lien and AUL Search

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

If found:

1st Party:

2nd Party:

Dated:

Recorded:

Book:

Page:

Docket:

Volume:

Instrument:

Comments:

Miscellaneous:

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found ☐ Not Found ☒

If found:

1st Party:

2nd Party:

Dated:

Recorded:

Book:

Page:

Docket:

Volume:

Instrument:

Comments:

Miscellaneous:

DEED EXHIBIT

Recorded in Official Records, County of San Bernardino

DENNIS DRAEGER
ASSESSOR – RECORDER – CLERK

9/28/2012
12:13 PM
NC

P Counter

Doc#: 2012–0402497

Titles: 1 **Pages: 2**

Fees	18.00
Taxes	1,921.15
Other	0.00
PAID	$1,939.15

RECORDING REQUESTED BY:

Yin Chi Chuang & Ching Chi Lin Chuang

WHEN RECORDED MAIL TO
AND MAIL TAX STATEMENTS TO:

NAME: **Jennifer Chi Chin Chuang &**
Amy TingYa Chuang
ADDRESS: **19313 Kerwin Ranch Ct.**
CITY: **Saratoga**
STATE & ZIP: **CA, 95070-5100**

SPACE ABOVE THIS LINE FOR RECORDER'S USE

APN NO. 0300-191-01-0000 and 0300-191-18-0000

GRANT DEED

The undersigned Grantors declare under penalty of perjury that the following is true and correct:

Documentary Transfer Tax is $1,921.15 +18.00
Computed on the full value of property conveyed in the unincorporated Area, City of Yucaipa

Chuang, Yin-Hao
Declarant or Agent Determining Tax

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
YIN CHI CHUANG AND CHING CHI LIN CHUANG, husband and wife, as Joint Tenants

hereby GRANT(s) to: **JENNIFER CHI CHIN CHUANG**, a single woman, and **AMY TINGYA CHUANG**, a single woman, as Joint Tenants

the real property in the **City of Yucaipa**, County of **San Bernardino**, State of California, described as:
Property is described on Exhibit A attached hereto and made a part hereof.

Dated: 9/28/12
Yin Chi Chuang
YIN CHI CHUANG

Dated: 9-28-12
Ching Chi Lin Chuang
CHING CHI LIN CHUANG

STATE OF CALIFORNIA
COUNTY OF Los Angeles } SS.

On September 28, 2012 before me, MICHAEL CHU, a Notary Public, personally appeared YIN CHI CHUANG and CHING CHI LIN CHUANG, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

Name MICHAEL CHU, NOTARY PUBLIC

MICHAEL CHU
Commission # 1811966
Notary Public - California
Los Angeles County
My Comm. Expires Sep 28, 2012

MAIL TAX STATEMENTS AS DIRECTED ABOVE

Exhibit A
Legal Description

PARCEL NO. 1:

Block 139 of Subdivision No. 3 of a portion of the Dunlap Ranch, in the City of Yucaipa, County of San Bernardino, State of California, as per map recorded in Book 20 of Maps, Page 71, in the office of the County Recorder of said County.

Except therefrom that portion as conveyed to the County of San Bernardino, a body corporate and politic, recorded July 31, 1952 in Book 2992, Page 551 of Official Records, described as follows:

Commencing at the Northeast corner of said Lot 139; thence South 72° 45' West 345.6 feet along the centerline of Yucaipa Boulevard to the Northwest corner of said Lot 139; thence South 36.65 feet along the West line of said Lot 139; thence North 72° 45' East 345.6 feet to a point on the East line of said Lot 139; thence North 36.65 feet along the said East line to the point of beginning and containing 0.0397 acres, more or less, exclusive of the present highway.

PARCEL NO. 2:

Block 6 of Subdivision No. 5 of a part of the Dunlap Ranch, in the City of Yucaipa, County of San Bernardino, State of California, as per map recorded in Book 23 of Maps, Pages 57 and 58, in the office of the County Recorder of said County.

Except therefrom the West 248.00 feet.

Also except therefrom the South 439.5 feet, measured from the center line of 60 foot wide Avenue "E".

Also except therefrom that portion conveyed to the County of San Bernardino for road purposes by deed recorded August 8, 1952 in Book 3000, Page 262 of Official Records.

Areas and distances of the above described property are computed to the center of all adjoining streets and roads, as shown on said map.

RECORDING REQUESTED BY

CHICAGO TITLE COMPANY

AND WHEN RECORDED MAIL THIS DEED AND, UNLESS OTHERWISE SHOWN BELOW, MAIL TAX STATEMENTS TO:

NAME QUEEN INVESTMENTS, INC.
STREET ADDRESS 416 ALAMOSA DRIVE
CITY, STATE, ZIP CLAIRMONT, CALIFORNIA 91711

Title Order No. 8921962-3 Escrow No. 3143

FEE	PAID	PAID	AMT
5	2	20	
5 SAV	537 OTT		607
	1540.—		D

90-054395
RECORDED IN OFFICIAL RECORDS
1990 FEB -9 PM 4 31
SAN BERNARDINO CO., CALIF.

This space for Recorder's use

PARTNERSHIP GRANT DEED

THE UNDERSIGNED GRANTOR(s) DECLARE(s)
DOCUMENTARY TRANSFER TAX is $ 1540 -
☐ ——unincorporated area ☒ City of Yucaipa
Parcel No. 0300-191-02
☑ computed on full value of property conveyed, or
☐ computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

YUCAIPA BOULEVARD LIMITED PARTNERSHIP, a California limited partnership

hereby GRANT(S) to

QUEEN INVESTMENTS INC., a California corporation

the following described real property in the City of Yucaipa
county of San Bernardino, state of California:

See Exhibit "A" attached hereto and made a part hereof by this reference.

Subject to all Easements, Rights-of-Way, Covenants and Restrictions of record.

Dated February 5, 1990

YUCAIPA BOULEVARD LIMITED PARTNERSHIP, a California limited partnership

By: Edward B. Djang
General Partner

STATE OF CALIFORNIA
COUNTY OF Orange } SS.

On this 5th day of February, in the year 1990, before me, the undersigned, a Notary Public in and for said County and State, personally appeared Edward B. Djang

_____, personally known to me (or proved to me on the basis of satisfactory evidence) to be one of the partners of the partnership that executed the within instrument, and acknowledged to me that such partnership executed the same.

Signature Patricia A. Bartley

PATRICIA A. BARTLEY
Name (Typed or Printed)
Notary Public in and for said County and State

OFFICIAL SEAL
PATRICIA A BARTLEY
NOTARY PUBLIC-CALIFORNIA
ORANGE COUNTY
MY COMM. EXP. OCT. 30, 1992

(Space above for official notarial seal)

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE

Name | Street Address | City & State

1 100 REV 6/83 PRINTCO

90-054398

EXHIBIT "A"

BLOCK 138 OF SUBDIVISION NO. 3 OF A PORTION OF THE DUNLAP RANCH, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 20 OF MAPS, PAGE 71, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

RECORDING REQUESTED BY
FIRST AMERICAN TITLE INSURANCE CO.

Order No. 980679-LCC
Escrow No. 62775-J
Loan No.

1FEE	2MSYS	3PCOR	4LNNT
4	1		
	12 DTT		SDL
1000	170.50		N

90-322323

RECORDED IN OFFICIAL RECORDS
AUG 14 1990 AT 8:00AM
SAN BERNARDINO COUNTY, CALIF.

WHEN RECORDED MAIL TO:

Stater Bros. Markets
21700 Barton Road
Colton, CA 92324
Attention: Vice President-Real Estate

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO:

SAME AS ABOVE.

DOCUMENTARY TRANSFER TAX $ 170.50
X Computed on the consideration or value of property conveyed; OR
..... Computed on the consideration or value less liens or encumbrances remaining at time of sale.
the undersigned grantor
Signature of Declarant or Agent determining tax — Firm Name

Assessors Parcel No. 300-191-17

GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
MICHAEL S. MURRAY AND KARIN E. MURRAY,
husband and wife

hereby GRANT(S) to
STATER BROS. MARKETS,
a California corporation

the real property in the City of
County of San Bernardino, State of California, described as

980679 LC

The East 82 feet of the West 248 feet of Block 6 of Subdivision No. 5 of a Part of Dunlap Ranch, in the County of San Bernardino, State of California, as per plat recorded in Book 23 of Maps, pages 57 and 58, records of said County.

Saving and excepting therefrom the South 439.5 feet thereof, said 439.5 feet being measured from the center line of 60 feet wide Avenue "E".

Also saving and excepting therefrom that portion conveyed to the County of San Bernardino for road purposes by Deed recorded August 6, 1952 as Instrument No. 394, in Book 3000, page 262, Official Records.

The areas and distances of the above described property computed to the center line of all adjoining streets and roads.

Dated August 9, 1990

Michael S. Murray
Karin E. Murray

STATE OF CALIFORNIA
COUNTY OF San Bernardino } ss.

On August 9, 1990

before me, the undersigned, a Notary Public in and for said State, personally appeared Michael S. Murray and Karin E. Murray

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same.

WITNESS my hand and official seal.

Signature Joan Galloway
Joan Galloway

(OFFICIAL SEAL)
JOAN GALLOWAY
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires Sept. 14, 1993

(This area for official notarial seal)

MAIL TAX STATEMENTS AS DIRECTED ABOVE

1002 (6/82)

WHEN RECORDED MAIL TO:
Stater Bros. Markets
21700 Barton Road
Colton, CA 92324
Attn: Larry M. Powell

RECORDED IN OFFICIAL RECORDS
MAR 31 1983 AT 8 A.M.
SAN BERNARDINO COUNTY, CALIF.

AT THE REQUEST OF
[illegible] INSURANCE CO.

83-067976

State of California

Office of

March Fong Eu

Secretary of State
SACRAMENTO

14.00
E

83-067976

I, MARCH FONG EU, *Secretary of State of the State of California, hereby certify:*

That on the 22nd *day of* March, *19* 83, *there was filed in this office a* Agreement to Merge *merging* PETROLANE PROPERTIES, INC. *a California corporation, into* STATER BROS. MARKETS, *a California corporation and the surviving corporation, by the terms of said agreement.*

Further, that according to our records said merged California corporation has ceased to exist as a separate corporate entity.

IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this 29th *day of* March, 1983.

March Fong Eu

Secretary of State

SEC/STATE FORM CE-103 (1-78)

A262345

548527
SURV

FILED
In the office of the Secretary of State
of the State of California
MAR 22 1983
MARCH FONG EU, Secretary of State
By Bill Hosler
Deputy

83-067976

AGREEMENT TO MERGE

PETROLANE PROPERTIES, INC.

with and into

STATER BROS. MARKETS

under the name of

"STATER BROS. MARKETS"

PETROLANE PROPERTIES, INC., a California corporation, hereinafter sometimes called "PPI", and STATER BROS. MARKETS, a California corporation, hereinafter sometimes called "SBM", agree as follows:

ARTICLE 1. RECITALS OF CONSTITUENT CORPORATIONS

Section 1.01. PPI is a corporation duly organized, validly existing, and in good standing under the laws of the State of California. PPI is authorized to issue 200,000 shares of common stock, with par value of One Dollar ($1.00) per share, 50,000 of which are outstanding on the date hereof.

Section 1.02. SBM is a corporation duly organized, validly existing, and in good standing under the laws of the State of California. SBM is authorized to issue 25,000 shares of common stock without par value, 1,000 of which are issued and outstanding on the date hereof. SBM is authorized to issue 250,000 shares of $11.00 Cumulative Preferred Stock without par value, none of which are outstanding on the date hereof.

Section 1.03. SBM is to be the surviving corporation, as that term is defined in the General Corporation Law of California, to the merger described in this agreement.

ARTICLE 2. MERGER

Section 2.01. PPI shall be merged into SBM under the laws of the State of California.

Section 2.02. The name of the surviving corporation shall be STATER BROS. MARKETS.

83-067976

ARTICLE 3. TERMS AND CONDITIONS

Section 3.01. Between the date of this agreement and the date on which the merger shall become effective, either constituent corporation shall not:

Except in the normal course of business and for adequate value, dispose of any of its assets.

Section 3.02. If at any time the surviving corporation shall consider or be advised that any further assignments or assurances in law are necessary to vest or to perfect or to confirm of record in the surviving corporation the title to any property or rights of PPI, or otherwise carry out the provisions hereof, the proper officers and directors of PPI, as of the effective date of the merger, shall execute and deliver all proper deeds, assignments, confirmations, and assurances in law, and do all acts proper to vest, perfect, and confirm title to such property or rights in the surviving corporation, and otherwise carry out the provisions hereof.

ARTICLE 4. BASIS OF CONVERTING SHARES

Section 4.01.

(a) At the effective date of the merger, each share of the common stock of the disappearing corporation with a par value of One Dollar ($1.00) (other than shares held by disappearing corporation as treasury shares) shall be converted into two-hundredths (.02) of a share of common stock without par value of the surviving corporation.

83-067975

(b) No fractional shares of the common stock of the surviving corporation will be issued to the holders of the common stock of the disappearing corporation, but holders who would otherwise be entitled to receive a fraction of a share of the common stock of the surviving corporation on the basis of the conversion provided for herein shall in lieu thereof receive a cash payment equal to the value of such fraction, based on the market value of the common stock of the disappearing corporation as of the effective date of the merger.

(c) Any shares of the disappearing corporation, common or preferred, held by the disappearing corporation in its treasury on the effective date of the merger shall be surrendered to the surviving corporation for cancellation.

Section 4.02. Each holder of the shares of the disappearing corporation shall surrender his shares, properly endorsed, to the surviving corporation or its agent, and shall thereupon receive in exchange therefor a certificate or certificates representing the number of shares of the surviving corporation into which the shares of the disappearing corporation have been converted.

Section 4.03. The presently outstanding 1,000 shares of common stock of SBM shall be cancelled and no shares of surviving corporation shall be issued in exchange therefor.

83-067975

ARTICLE 5. DIRECTORS

Section 5.01. The following named persons shall serve as the Board of Directors of the surviving corporation until the next annual meeting or until such time as their successors have been elected and have qualified:

JACK H. BROWN

JOESEPH E. DAVIS

BERNARD R. GARRETT

MARK A. RESNIK

L. DOUGLAS McKENZIE

ARTICLE 6. ARTICLES OF INCORPORATION

Section 6.01. The articles of SBM, as existing on the effective date of the merger, shall continue in full force as the articles of the surviving corporation until altered, amended as provided therein, or as provided by law.

ARTICLE 7. BY-LAWS

Section 7.01. The by-laws of SBM, as existing on the effective date of the merger, shall continue in full force as the bylaws of the surviving corporation until altered, amended, or repealed as provided therein or as provided by law.

ARTICLE 8. TERMINATION

Section 8.01. This agreement may be terminated and the merger herein provided for may be abandoned at any time prior to the effective date of the merger, whether before or after shareholder approval, at the election of the Board of Directors of SBM or PPI if the Closing under that certain AGREEMENT FOR THE PURCHASE AND SALE OF STOCK OF STATER BROS. MARKETS AND PETROLANE PROPERTIES, INC., dated the 4th day of March 1983 by and among PETROLANE INCORPORATED, HAMPSHIRE INVESTMENTS, INC., SBM, and PPI, as the term Closing is defined therein, does not occur within two (2) days of the date hereof.

83-067976

Section 8.02. In the event an election is made to terminate this agreement and abandon the merger provided for herein:

(a) The President or any Vice President of the constituent corporation whose Board of Directors has made such election shall give written notice thereof to the other constituent corporation.

(b) Upon the giving of such notice as provided in subsection (a), this agreement shall terminate and the proposed merger be abandoned and, except for payment of its own costs and expenses incident to this agreement, there shall be no liability on the part of either constituent corporation as a result of such termination and abandonment.

ARTICLE 9. INTERPRETATION AND ENFORCEMENT

Section 9.01. Any notice, request, demand, or other communication required or permitted hereunder shall be deemed to be properly given when deposited in the United States mail,

postage prepaid, certified, return receipt requested, or when deposited with a public telegraph company for transmittal, charges prepaid, addressed:

If to PPI:

PETROLANE PROPERTIES, INC.
8575 Higuera Street
Culver City, CA 90230

ATTN: Mark A. Resnik

With a copy to:

Grossman, Barr & Grant
8575 Higuera Street
Culver City, CA 90230

ATTN: Paul R. Grant

If to SBM:

STATER BROS. MARKETS
P. O. Box 150
21700 Barton Road
Colton, CA 92324

ATTN: President

With a copy to:

MARK A. RESNIK
8575 Higuera Street
Culver City, CA 90230

83-067976

Section 9.02. This agreement may be executed in any number of counterparts, each of which shall be deemed an original.

Section 9.03. The validity, interpretation, and performance of this agreement shall be controlled by and construed under the laws of the State of California, the state in which this agreement is being executed

Executed on March 22, 1983, at Los Angeles, California.

SBM:

ATTEST:

By: _____
MARK A. RESNIK
Its Secretary

STATER BROS. MARKETS

By: _____
JACK H. BROWN
Its President

PPI:

ATTEST:

By: _____
MARK A. RESNIK
Its Secretary

PETROLANE PROPERTIES, INC.

By: _____
JACK H. BROWN
Its President

83-067976

M/C/C016-008

CERTIFICATE OF MERGER

STATER BROS. MARKETS

A CALIFORNIA CORPORATION

JACK H. BROWN and MARK A. RESNIK certify:

1. They are the duly elected and acting President and Secretary, respectively, of STATER BROS. MARKETS, a California corporation.

2. This certificate is attached to the Agreement of Merger dated as of March, 22 1983, providing for the merger of this corporation with Petrolane Properties, Inc., a California corporation.

3. The Agreement of Merger in the form attached hereto has been approved by the board of directors of this corporation.

4. The principal terms of the Agreement of Merger in the form attached hereto were approved by this corporation by the vote of a number of shares of each class which equaled or exceeded the vote required, such classes, the total number of outstanding shares of each class entitled to vote on the merger and the percentage vote required of each class being as follows.

Name of Class or Class and Series	Total Number of Outstanding Shares Entitled To Vote	Percentage Vote Required
Common	1,000	More than 50% ~~50%~~ 66 2/3%
$11.00 Cumulative Preferred	None	

Dated: March 22, 1983

JACK H. BROWN, President

MARK A. RESNIK, Secretary

83-067976

The undersigned, Jack H. Brown and Mark A. Resnik, the President and Secretary, respectively, of Stater Bros. Markets, each declares under penalty of perjury that the matters set out in the foregoing Certificate are true and correct of his own knowledge.

Executed at Los Angeles, California, on 22nd day of March, 1983.

JACK H. BROWN

MARK A. RESNIK

83-0679

CERTIFICATE OF MERGER

PETROLANE PROPERTIES, INC.

A CALIFORNIA CORPORATION

JACK H. BROWN and MARK A. RESNIK certify:

1. They are the duly elected and acting President and Secretary, respectively, of PETROLANE PROPERITES, INC., a California corporation.

2. This certificate is attached to the Agreement of Merger dated as of March, 22 1983, providing for the merger of this corporation with Stater Bros. Markets, a California corporation.

3. The Agreement of Merger in the form attached hereto has been approved by the board of directors of this corporation.

4. The principal terms of the Agreement of Merger in the form attached hereto were approved by this corporation by the vote of a number of shares of each class which equaled or exceeded the vote required, such classes, the total number of outstanding shares of each class entitled to vote on the merger and the percentage vote required of each class being as follows.

Name of Class or Class and Series	Total Number of Outstanding Shares Entitled To Vote	Percentage Vote Required
Common	50,000	More than 50%

Dated: March 22, 1983

JACK H. BROWN, President

MARK A. RESNIK, Secretary

83-067975

The undersigned, Bernard R. Garrett and Mark A. Resnik, the President and Secretary, respectively, of Petrolane Properties, Inc., each declares under penalty of perjury that the matters set out in the foregoing Certificate is true and correct of his own knowledge.

Executed at Los Angeles, California, on 22nd day of March, 1983.

JACK H. BROWN

MARK A. RESNIK

83-067976

TRIAL VERSION

Recorded In Official Records, County of San Bernardino

1/10/2011
8:00 AM
MP

DENNIS DRAEGER
ASSESSOR – RECORDER – CLERK

771 Document Processing Solutions

Doc#: 2011–0010689

Titles: 1 **Pages: 2**

Fees	38.00
Taxes	** Conf **
Other	0.00
PAID	$38.00

RECORDING REQUESTED BY
First American Title Insurance Company National Commercial Services
Mail Tax bill to:
AND WHEN RECORDED MAIL DOCUMENT TO:
Stater Bros. Markets
301 S. Tippecanoe Aveune
San Bernardino, CA 92408

Space Above This Line for Recorder's Use Only

A.P.N.: 0300-191-29-0-000 and 0300-191-30-0-000

File No.: NCS-469219-ONT1 (jd)

GRANT DEED

The undersigned Grantor(s) declare(s) that Documentary Transfer Tax shall be shown on a separate Declaration or Statement of Tax Due and not of public record.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Charles E. Irvin III, Successor Trustee of The Charles E. Irvin Jr. and Ardis L. Irvin Trust Dated January 5, 1996**

hereby GRANTS to **Stater Bros. Markets, a California corporation**

the following described property in the City of **Yucaipa**, County of **San Bernardino**, State of **California**:

PARCELS 2 & 3 OF PARCEL MAP 5776 IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 58 OF PARCEL MAPS, PAGES 13 AND 14, RECORDS OF SAID COUNTY.

Mail Tax Statements To: **SAME AS ABOVE**

A.P.N.: 0300-191-29 and 0300-191-30

File No.: NCS-469219-ONT1 (jd)

Dated: **12/23/2010**

Charles E. Irvin III, Successor Trustee of The
Charles E. Irvin Jr. and Ardis L. Irvin Trust
Dated January 5, 1996

Charles E. Irvin III, Successor Trustee

Charles E. Irvin III, Successor Trustee

STATE OF California)SS
COUNTY OF San Bernardino)

On December 23rd, 2010, before me, April Williams, Notary Public, personally appeared Charles E. Irvin III, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

APRIL WILLIAMS
COMM. #1880425
Notary Public - California
San Bernardino County
My Comm. Expires Feb. 19, 2014

My Commission Expires: 2-19-14

This area for official notarial seal

Notary Name: April Williams
Notary Registration Number: 1880425

Notary Phone: none
County of Principal Place of Business: San Bernardino

Electronically Recorded in Official Records, County of San Bernardino

12/04/2013
09:05 AM
NC

DENNIS DRAEGER
ASSESSOR - RECORDER - CLERK
691 First American

Doc #: 2013-0521099

Titles: 1 Pages: 2

Fees	18.00
Taxes	** Conf **
Other	.00
PAID	18.00

RECORDING REQUESTED BY
First American Title Insurance Company National Commercial Services

MAIL TAX STATEMENTS TO
AND WHEN RECORDED MAIL DOCUMENT TO:
Varner & Brandt LLP
3750 University Avenue, Suite 610
Riverside, CA 92501
Attention: Sean S. Varner

Mail Tax Statements to:
Stater Bros. Markets
301 S. Tippecanoe Avenue
San Bernardino, CA 92408
Attn: Vice President – Real Estate

Space Above This Line for Recorder's Use Only

NCS-627002-DH

A.P.N.: 0300-191-31-0000

File No.: NCS-627002-ONT1 (jd)

GRANT DEED

DTT: NOT OF PUBLIC RECORD

The undersigned Grantor(s) declare(s) that Documentary Transfer ~~Tax shall~~ be shown on a separate Declaration or ~~Statement of Tax~~ Due and not of public record pursuant to revenue & taxation code 11932-11933.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **Sherri Laffey-Long, a married woman as her sole and separate property (who acquired title as Sherri Laffey)** does hereby **GRANT** to **Stater Bros. Markets, a California corporation** the following described property in the City of **Yucaipa**, County of **San Bernardino**, State of **California**:

PARCEL 4 OF PARCEL MAP 5776, IN THE CITY OF YUCAIPA, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 58, PAGE(S) 13 AND 14 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY

IN WITNESS WHEREOF, the undersigned has executed this Grant Deed dated as of November 5, 2013

By: _____
Sherri ~~Laffey~~-Long

mail tax statements to: same as above

STATE OF CALIFORNIA)SS
COUNTY OF SAN BERNARDINO)

On NOVEMBER 5, 2013, before me, JANETTE DELAP, Notary Public, personally appeared SHERRI LAFFEY-LONG, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

My Commission Expires: MAY 2, 2014

Notary Name: JANETTE DELAP
Notary Registration Number: 1885126

JANETTE DELAP
COMM. # 1885126
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
COMM. EXPIRES MAY 2, 2014

This area for official notarial seal

Notary Phone: (909) 510-6206
County of Principal Place of Business: S. B

APPENDIX E

SELECT FILE REVIEW DOCUMENTATION

(909) 797-2489
EXT. 261

CITY OF Yucaipa

BENJAMIN J. MATLOCK
Associate Planner

34272 YUCAIPA BLVD. - YUCAIPA, CA 92399-9950
FAX (909) 790-9203 email: bmatlock@yucaipa.org
Recycled Paper

5-3-18 STOPPED BY OFFICE
NO RECORDS PER BEN. R.L.

Send Result Report

MFP

CS 6551ci

Firmware Version 2N2_2000.E06.902 2018.01.10

05/14/2018 16:46

[2N2_1000.006.001] [2N4_1100.001.002] [2N4_7000.006.209]

Job No.: 076959 Total Time: 0°00'39" Page: 001

5-21-18 NO RESPONSE

R.V.

Complete

Document: **doc07695920180514164523**

385 N Arrowhead Ave. 2nd Floor, San Bernardino, CA 92415 | Phone: 800.442.2283 - Fax: 909.387.4323

www.SBCounty.gov

www.SBCounty.gov/dph/dehs

SAN BERNARDINO COUNTY | Public Health
Environmental Health Services

REQUEST TO INSPECT/REPRODUCE PUBLIC RECORDS

Return to any of the following offices:
385 N. Arrowhead Ave. 2nd Floor, San Bernardino 92415-0160
15900 Smoke Tree St., Ste. 131, Hesperia 92345
8575 Haven Ave., Ste. 130, Rancho Cucamonga 91730

TO BE COMPLETED BY REQUESTER

INFORMATION FOR RECORDS REQUESTED

Facility Name: (Business or Apartment Complex name) 23.84 Undeveloped Acres			
Location Address: Adjoining South of Yucaipa Blvd., Bryn Avenue E and 15th Street	**City:** Yucaipa	**State:** CA	**Zip:** 92399
Case/File Number: (If known)	**Inspector:** (If known)		

Indicate time frame of information requested: (month/year or date of inspection)

From: 1/1980 To: 4/2018 From: To: From: To:

Specific information requested:
(File, inspection report, complain: etc.)

I am performing a Phase I Environmental Site Assessment at the property and am interested in any files related to any environmental complaints, inspections, or cleanups. I have separately contacted the San Bernardino County Fire Department.

Eight adjoining parcels #0300-191-01, -02, -17, -18, -28, -29, -30, -31

NOTE: EACH REQUESTER AND/OR FILE MUST HAVE A SEPARATE FORM COMPLETED. FOR A LIST REQUEST, PLEASE CALL (800) 442-2283.

FEES

Copy Fee: $.10 Per Page

Certified Copies: Additional $.22 Per Page

REQUESTER INFORMATION

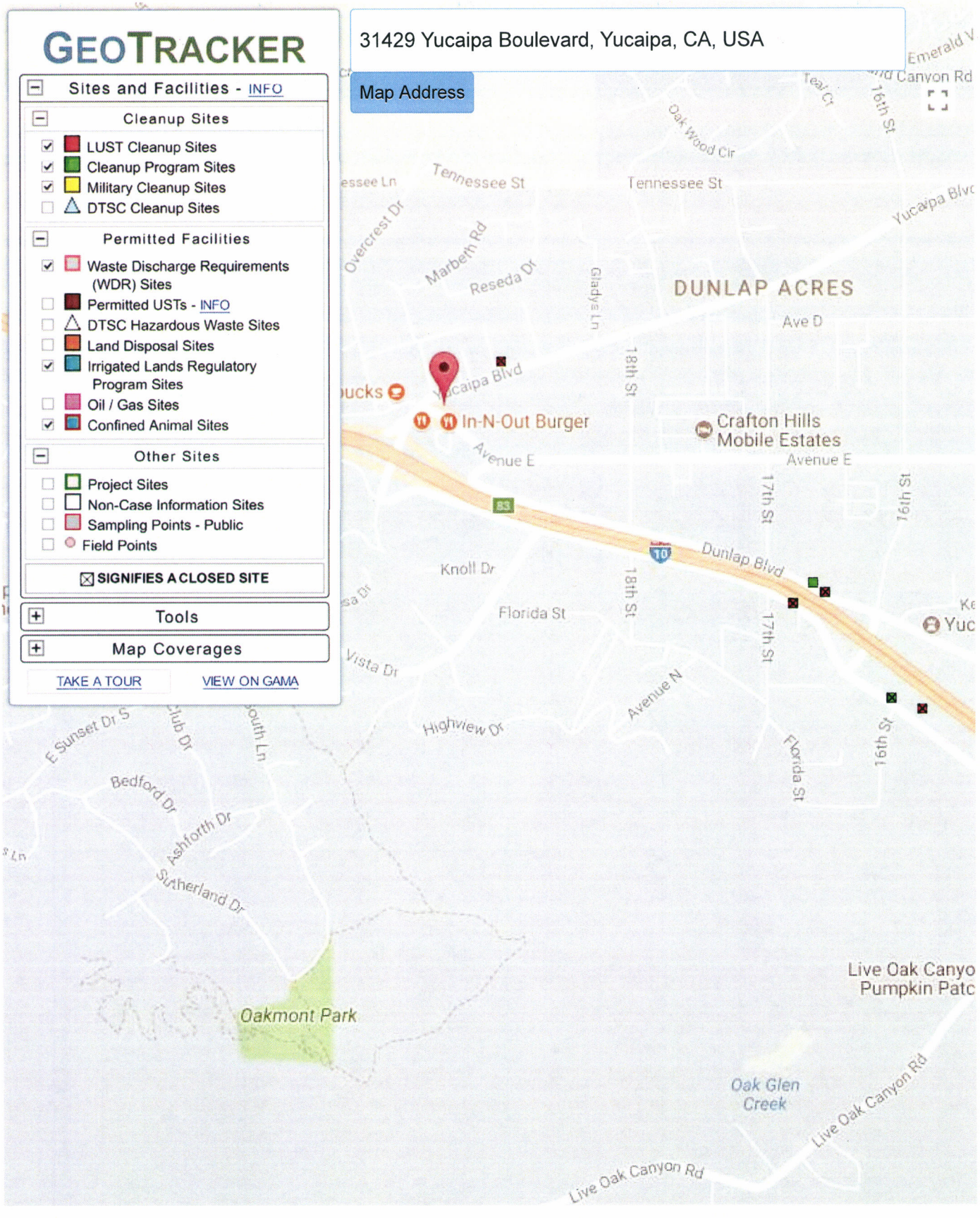
Requester Name: Rusanne Fischer @ The Reynolds Group (Include affiliation, i.e. business name, law office, owner, private citizen, employee, etc.)			
Requester Address: 520 W. First Street	**City:** Tustin	**State:** CA	**Zip:** 92780
E-mail Address: (Preferred method of delivery) fischer@reynolds-group.com			
Phone Number: (To notify when copies/files are ready) 714-730-5397 Ext. 123			

OFFICE USE ONLY

PROGRAM	**DATE**
PAID $	**# PGS**
RECEIPT #	**REC'D BY**

Page 1 of 1 Rev. 09/2015

No.	Date and Time	Destination	Times	Type	Result	Resolution/ECM
001	05/14/18 16:45	**19093874323**	0°00'39"	FAX	OK	200x100 Normal/Off



SITES CURRENTLY VISIBLE ON MAP

CUPA
San Bernardino County Fire Department • Hazardous Materials Division
620 S. E St., San Bernardino, CA 92415-0153 • (909) 386-8468 FAX (909) 386-8460

REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT

The main focus of a REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT is to determine whether there exists in San Bernardino County Fire Department (County Fire) files any record relating to contamination or reports of spills at a particular site. A Certified Hazardous Materials Records Search Finding Report should reveal whether there are any facilities at the site that are subject to current or past regulatory activity by County Fire, such as underground storage tanks, hazardous material handlers, hazardous waste generators, and EPCRA or CalARP facilities, as well as any reports of spills, incidents, complaints, or cleanup activity, that can be a useful tool in providing a history of compliance or non-compliance.

Once County Fire has completed its records search, a Certified Hazardous Materials Records Search Finding Report will be prepared and issued, which will detail all County Fire records associated with a particular site by type, date, location, and status where applicable. (Any files identified in a Certified Hazardous Materials Records Search Finding Report can be made available for copies and/or review upon request.)

If the completed records search reveals no County Fire record of hazardous material activity at the site, a Certified Hazardous Materials Records Search Finding Report will be issued, noting that "no records" were identified.

Please provide a specific site address or location description. If a situs address does not exist or cannot be found, list another type of location identifier such as Assessor Parcel Number (preferable), cross streets or intersections (e.g., NWC 5th Ave. & Main St.), and/or legal description, and if possible attach a map to this request form.

SITE INFORMATION		
Property Owner or Business Name	Location (Site Address and/or Assessor Parcel No.)	City/Community
Undeveloped Land	Adj APNs 0300-191-01, -02, -17, -18, -28, -29, -30, -31	Yucaipa

Please provide your name, the company you represent, and contact information below.

REQUESTOR INFORMATION				
NAME	TITLE (*If individual, leave blank*)	COMPANY (*If individual, leave blank*)		
Rosanne Fischer	Environmental Assessor	The Reynolds Group		
MAILING ADDRESS	CITY		STATE	ZIP CODE
520 W. First Street	Tustin		CA	92780
TELEPHONE	FAX	EMAIL ADDRESS		
714-730-5397 Ext. 123	714-730-6476	fischer@reynolds-group.com		

So that we may provide better service, please check one or more of the boxes below which best describe how the findings of the Certified Hazardous Materials Records Search will be used and/or your relationship to the property in question.

PURPOSE OR RELATIONSHIP TO PROPERTY

- ☑ 1. Phase I site assessment or due diligence **AT THE SITE**
- ☐ 2. Environmental professional involved with remediation **AT THE SITE**
- ☐ 3. Phase I site assessment or due diligence **NEARBY**
- ☐ 4. Environmental professional involved with remediation **NEARBY**
- ☐ 5. Proposed School Site (1/4 mi. search for AHM)
- ☐ 6. Proposed Drinking Water Well
- ☐ 7. Owner or operator of the facility or property
- ☐ 8. Potential buyer
- ☐ 9. Real Estate Agent, Lender, Appraiser
- ☐ 10. Pending escrow
- ☐ 11. Proposed redevelopment
- ☐ 12. Legal or other reason: _____

AGENCY USE	
Certified Record Search Finding Report issued: ___/___/___	Reference No:
Certified No Record Finding Report issued: ___/___/___	Amount Paid:
	Receipt No.:
	Date:

** IMPORTANT –THIS PAGE MUST BE SIGNED PRIOR TO SUBMITTAL **

DISCLAIMER: While all attempts are made to provide accurate, current, and reliable information, County Fire recognizes the possibility of human error. Therefore, County Fire, its officers, employees, agents and volunteers, make no representations as to the accuracy, completeness or suitability of a Certified Hazardous Materials Records Search Finding Report and provides a Certified Hazardous Materials Records Search Finding Report "as is", with no warranties, express or implied, including the implied warranty of fitness for a particular purpose. In no event shall County Fire be liable for any damages of any nature whatsoever, arising out of the issuance of a Certified Hazardous Materials Records Search Finding Report. County Fire therefore assumes no liability for damages incurred directly or indirectly as a result of any errors, omissions or discrepancies in a Certified Hazardous Materials Records Search Finding Report.

RELEASE AND INDEMNIFICATION: In consideration for the issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby release and forever discharge County Fire, its officers, employees, agents and volunteers from any and all claims, actions, losses, damages and/or liability in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, including, but not limited to, claims that may arise due to the active or passive negligence of County Fire, its officers, employees, agents and volunteers.

I am familiar with the provisions of California Civil Code Section 1542, which provides as follows:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

I hereby expressly waive any and all rights that I may have there under. I understand and acknowledge the significance and consequence of this specific waiver of California Civil Code Section 1542 and assume full responsibility for any injuries, damages, losses or liabilities that I may hereafter discover as possibly resulting from County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report.

In further consideration for County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report, I hereby agree, for myself, my heirs, administrators, executors and assigns, that I shall indemnify, defend (with counsel approved by County) and hold harmless County Fire, its officers, employees, agents and volunteers from any and all claims, demands, actions or suits arising out of or in connection with County Fire's issuance of a Certified Hazardous Materials Records Search Finding Report brought by any third party.

* * *

I have read the above terms and conditions, including the paragraphs entitled "DISCLAIMER" and "RELEASE AND INDEMNIFICATION", and by my signature below, I affirm that I understand these terms and conditions and accept them as part of my REQUEST FOR A CERTIFIED HAZARDOUS MATERIALS RECORDS SEARCH FINDING REPORT.

I hereby request a Certified Hazardous Materials Records Search Finding Report for the location described on Page 1 of this application.

- ☐ **I am including payment of the initial fee of $130.00, for the first hour of research, by check or money order, payable to San Bernardino County Fire Dept. I understand that research exceeding one hour will be billed at the rate of $130.00 for each additional hour spent by County Fire in completing this request.**
- ☒ **I have faxed or emailed this request and will forward payment along with the original request form within 48 hours.**

REQUESTOR'S SIGNATURE	
SIGNATURE OF REQUESTOR	DATE
	May 3, 2018

Rev. 2/13/2014

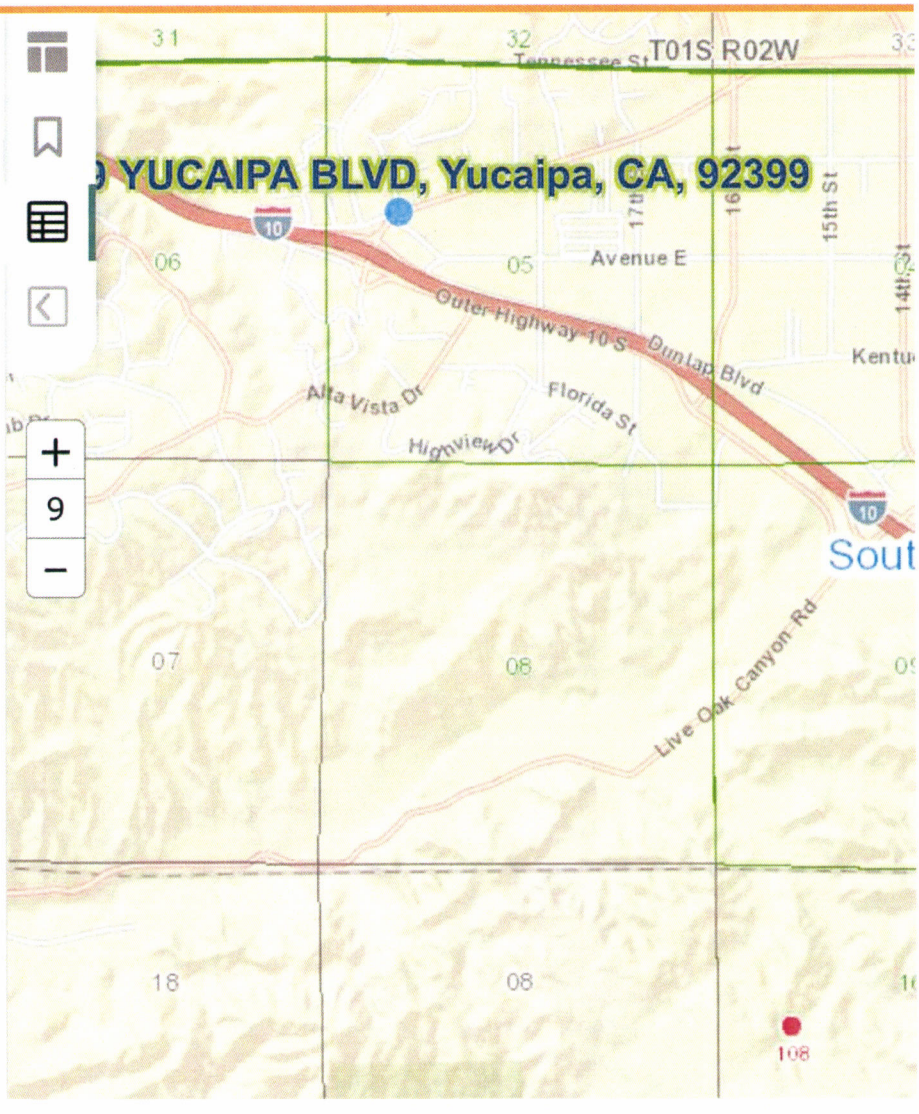

8 Adjoining Undeveloped Parcels
APNs 0300-191-01, -+02, -17, -18, -28, -29, -30, and -31
Legend
SITE
31429 Yucaipa Blvd
Google Earth
© 2018 Google
900 ft
N

Department of Conservation

Division of Oil, Gas & Geothermal Resources - Well Finder

Data Grid:

API #	Operator
06500108	Midway Oil Syndicate



Remove / Select All / Save As 1

1km
0.6mi

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SOUTH COAST AQMD

Facility INformation Detail (FIND)

Facility INformation Detail provides consolidated access to public information about facilities in the AQMD basin. If you have a Facility ID, Application Number, Notice Number and/or Case Number, you can access detail information directly, OR you can utilize the Facility Search feature as your facility information gateway. Regularly scheduled updates are made to this data at least once per week.

Click here for a detailed map search.

Search

◉ Find a Facility

Facility Name:

Street Name: Yucaipa and Avenue E

City: Yucaipa

Zip Code: 92399

○ Select Facility ID:

○ Select Application Nbr:

○ Select NOV or NC:

○ Select Hearing Board Case: -

☐ RECLAIM
☐ TITLE V

There are no facilities that match your search criteria. If you think this result is incorrect, call the number below.

Search Reset

If you are having trouble finding a facility, please Click Here for Instructions

For further information or if you have any questions about the data returned by FIND, email: webinquiry@aqmd.gov

V1.54

APPENDIX F

PHASE II SOIL VAPOR SAMPLING REPORT
DATED MAY 15, 2018

May 15, 2018
(TRG 8460)

Mr. Leonard Fifer
FORCE ENVIRONMENTAL
41870 Kalmia Street, Suite 115
Murrieta, CA 92562

THE
REYNOLDS GROUP
a California corporation

SITE: **23.84 UNDEVELOPED ACRES**
SOUTHEAST CORNER OF YUCAIPA & AVENUE E
YUCAIPA, CALIFORNIA

SUBJECT: **LIMITED PHASE II SOIL VAPOR SAMPLING REPORT**

Dear Mr. Fifer,

This report summarizes soil vapor sampling performed in May 2018 at the 23.84 undeveloped acres adjoining south of Yucaipa Boulevard, between Avenue E to the West and 18th Street to the east in Yucaipa, California (the Site, see **Figure 1** – Site Location Map). The purpose of the work was to confirm that nearby gasoline service stations and auto repair facilities have not impacted shallow soils beneath the subject Site.

1.0 EXECUTIVE SUMMARY

On May 3, 2018, TRG collected 12 soil vapor samples (SV-1 through SV-12) from depths between 4 and 5 feet below ground surface (ft bgs) at various locations throughout the Site, particularly near the adjoining northwest gas station at 31429 Yucaipa Boulevard (see **Figure 2** – Site Plan with Soil Vapor and Soil Boring Locations).

No volatile organic compounds (VOCs) were detected in any of the 12 soil vapor samples collected. As such, it appears no vapor intrusion health risk exists at the Site.

2.0 FIELDWORK

Prior to beginning the fieldwork, Dig-Alert was contacted for underground utility clearance and all interested parties were notified in advance of the project schedule.

2.1 Soil Vapor Sampling

On March 3, 2018, TRG in conjunction with Optimal Technology of Thousand Oaks, California, collected 12 soil vapor samples (SV-1 through SV-12) and one duplicate sample (SV-12-DUP) from depths of 4 or 5 ft bgs at locations shown on **Figure 2**. The soil vapor sampling followed the July 2015 DTSC/LARWQCB *Advisory - Active Soil Gas Investigations* (the *Advisory).*

Soil Vapor Probe Installation

The placement of the temporary soil vapor probes was performed by hydraulically pushing one-inch diameter stainless steel soil vapor probes to the desired depth. Once the probes were installed, hydrated bentonite chips were placed around the probes at the ground surface to ensure proper seal of the probes, and soil vapor samples were directly sampled through the probes. Soil vapor was first purged and then collected. Clean gas probes were used for each sampling location.

Soil Vapor Sampling

Soil vapor samples were collected from the termination of each probe at a constant low flow rate measuring 200 milliliters per minute (ml/min) as shown by an in-line vacuum gauge to limit stripping (ie. enhanced compound partitioning from impacted soil or groundwater), to prevent ambient air intrusion and increase the likelihood of representative samples. The default three

volume purge was used for the soil vapor sampling. One purge volume is defined as the total volume of air space which is the summation of the sample volume, internal sampling equipment volume and annular space around the probe tip. New tubing was used at each sampling point to prevent cross contamination.

Leak testing was conducted at every soil vapor probe location. Isobutane, found in common shaving cream, was used as the tracer gas. The tracer gas compound was applied to the soil vapor probes at each point of connection in which ambient air could enter the sampling system, including the top of the sampling probe where the tubing meets the probe connection and the surface bentonite seals. A detection of the tracer compound in the subsurface soil vapor sample indicates that ambient air intrusion occurred. No leaks were determined to have occurred during the sampling activities.

Vapor samples were obtained in SGE gas-tight syringes by drawing the sample through a luer-lock connection which connects the sampling probe and vacuum pump. Samples were immediately injected into the gas chromatograph/purge and trap after collection.

After sampling, the soil probe locations were backfilled with hydrated bentonite chips and the surfaces repaired with quick setting concrete. No field wastes were generated during the soil vapor work.

3.0 LABORATORY ANALYSES AND RESULTS

All soil vapor samples (SV-1 through SV-26) were immediately analyzed on-Site by Optimal Technology for VOCs using EPA Method 8260B. A copy of Optimal Technology's report is included as **Attachment A**.

Soil vapor samples collected in all 12 locations (SV-1 through SV-12) were non-detect for VOCs.

4.0 CONCLUSIONS

Based on the limited soil vapor sampling performed at the Site, vapor intrusion health risk to occupants of the Site from nearby gas stations and auto repair facilities does not appear to be an issue of concern at the Site.

5.0 REGISTERED PROFESSIONAL STATEMENT

All work on this project was performed under the responsible charge of a California Registered Civil Engineer. The licensed professional whose signature and seal appears at the end of this report supervised and/or conducted all work associated with the project.

Please contact Rosanne Fischer, our Project Manager for this case with any questions. She can be reached directly at 714-730-5397 Ext. 123 or by email to fischer@reynolds-group.com.

Sincerely,

THE REYNOLDS GROUP
California corporation by:



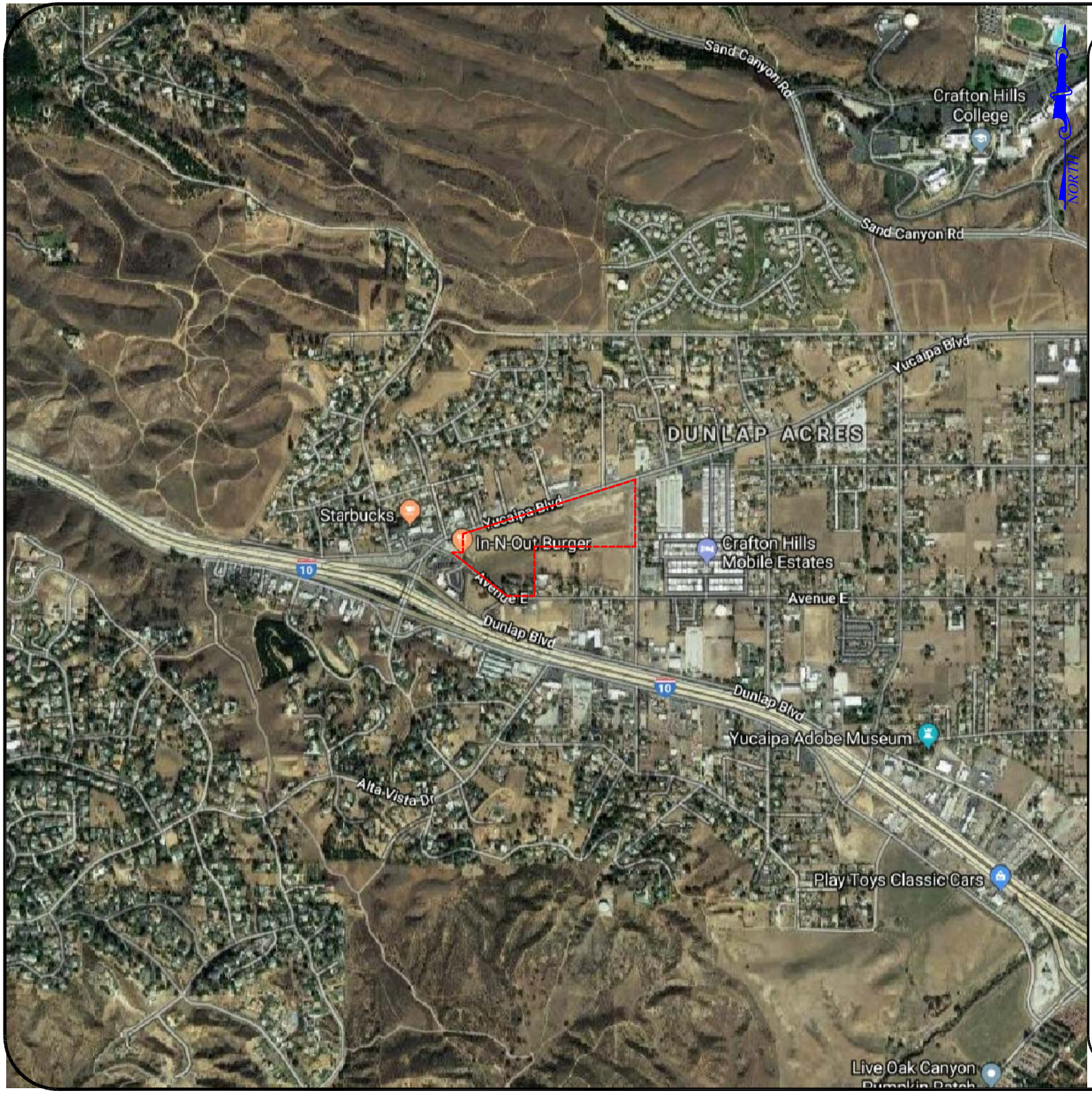
F. Edward Reynolds, Jr.
California Registered Civil Engineer #38677

Rosanne Fischer
Project Manager

Attachments:

Figure 1 -	Site Location Map
Figure 2 -	Site Plan with Soil Vapor Sample Locations
Attachment A -	Optimal Analytical Report

FIGURES



General Notes

- Approximate Property Boundary

Project Details

Name
23 +/- Undeveloped Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460

Figure Details

SITE LOCATION MAP

Figure #
Figure 1

Revise Date
May 2018

*Not To Scale

Scale

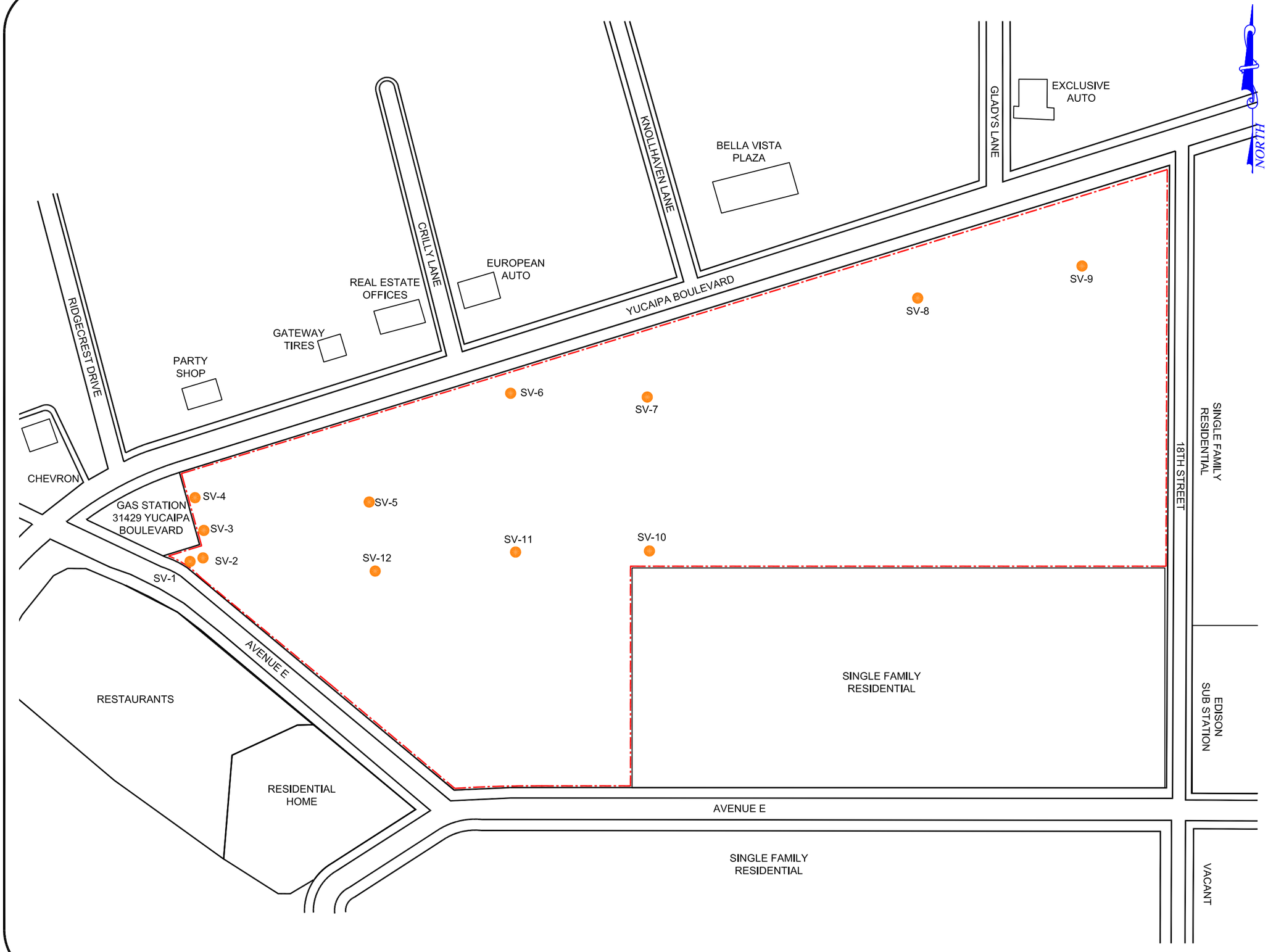
Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES



General Notes

- Property Boundary

SV-1 - Soil Vapor Survey Locations

Project Details

Name
23 +/- Undeveloped Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460

Figure Details

SITE PLAN WITH
SOIL VAPOR SURVEY LOCATIONS

Figure #
Figure 2

Revise Date
May 2018

0' 180'
Approximate Scale

Scale
1"=180'

Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES

ATTACHMENT A

OPTIMAL ANALYTICAL REPORT

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

May 3, 2018

Mr. Joshua Hudekoff
The Reynolds Group
520 W. 1st St.
Tustin, CA 92780

Dear Mr. Hudekoff:

This letter presents the results of the soil vapor investigation conducted by Optimal Technology (Optimal), for The Reynolds Group on May 3, 2018. The study was performed at 31429 Yucaipa Blvd., Yucaipa, California.

Optimal was contracted to perform a soil vapor survey at this site to screen for possible chlorinated solvents and aromatic hydrocarbons. The primary objective of this soil vapor investigation was to determine if soil vapor contamination is present in the subsurface soil.

Gas Sampling Method

Gas sampling was performed by hydraulically pushing soil gas probes to a depth of 4.0-5.0 feet below ground surface (bgs). An electric rotary hammer drill was used to drill a 1.0-inch diameter hole through the overlying surface to allow probe placement when required. The same electric hammer drill was used to push probes in areas of resistance during placement.

At each sampling location, an electric vacuum pump set to draw 0.2 liters per minute (L/min) of soil vapor was attached to the probe and purged prior to sample collection. Vapor samples were obtained in SGE gas-tight syringes by drawing the sample through a luer-lock connection which connects the sampling probe and the vacuum pump. Samples were immediately injected into the gas chromatograph/purge and trap after collection. New tubing was used at each sampling point to prevent cross contamination.

All analyses were performed on a laboratory grade Agilent model 6890N gas chromatograph equipped with an Agilent model 5973N Mass Spectra Detector and Tekmar LSC 3100 Purge and Trap. A Restek column using helium as the carrier gas was used to perform all analysis. All results were collected on a personal computer utilizing Agilent's MS and chromatographic data collection and handling system.

Quality Assurance

5-Point Calibration
The initial five-point calibration consisted of 20, 50, 100, 200 and 500 ul injections of the calibration standard. A calibration factor on each analyte was generated using a best fit line method using the Agilent data system. If the r^2 factor generated from this line was not greater than 0.990, an additional five-point calibration would have been performed. Method reporting limits were calculated to be 0.004-1.0 micrograms per Liter (ug/L) for the individual compounds.

A daily calibration check was performed using a pre-mixed standard supplied by Scotty Analyzed Gases. The standard contained common halogenated solvents and aromatic hydrocarbons (see Table 1). The individual compound concentrations in the standards ranged between 0.025 nanograms per microliter (ng/ul) and 0.25 ng/ul.

TABLE 1

Dichlorodifluoromethane	Carbon Tetrachloride	Chloroethane
Trichlorofluoromethane	1,2-Dichloroethane	Benzene
1,1-Dichloroethene	Trichloroethene	Toluene
Methylene Chloride	1,1,2-Trichloroethane	Ethylbenzene
trans-1,2-Dichloroethene	Tetrachloroethene	m-/p-Xylene
1,1-Dichloroethane	Chloroform	o-Xylene
cis-1,2-Dichloroethene	1,1,1,2-Tetrachloroethane	Vinyl Chloride
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	Freon 113
4-Methyl-2-Pentanone	Cyclohexane	Acetone
Chlorobenzene	2-Butanone	Isobutane

Sample Replicates
A replicate analysis (duplicate) was run to evaluate the reproducibility of the sampling system and instrument. The difference between samples did not vary more than 20%.

Equipment Blanks
Blanks were run at the beginning of each workday and after calibrations. The blanks were collected using an ambient air sample. These blanks checked the septum, syringe, GC column, GC detector and the ambient air. Contamination was not found in any of the blanks analyzed during this investigation. Blank results are given along with the sample results.

Tracer Gas Leak Test
A tracer gas was applied to the soil gas probes at each point of connection in which ambient air could enter the sampling system. These points include the top of the sampling probe where the tubing meets the probe connection and the surface bentonite seals. Isobutane was used as the tracer gas. No Isobutane was found in any of the samples collected.

Purge Volume
The standard purge volume of three volumes was purged in accordance with the July 2015 DTSC/RWQCB Advisory for Active Soil Gas Investigations.

Shut-in Test
A shut-in test was conducted prior to purging or sampling each location to check for leaks in the above-ground sampling system. The system was evaluated to a minimum measured vacuum of 100 inches of water. The vacuum gauge was calibrated and sensitive enough to indicate a water pressure change of at least 0.5 inches.

Scope of Work

To achieve the objective of this investigation a total of 13 vapor samples were collected from 12 locations at the site. Sampling depths, vacuum readings, purge volume and sampling volumes are given on the analytical results page. All the collected vapor samples were analyzed on-site using Optimal's mobile laboratory.

Subsurface Conditions

Subsurface soil conditions at this site offered sampling flows at 0" water vacuum. Depth to groundwater was unknown at the time of the investigation.

Results

During this vapor investigation, none of the compounds listed in Table 1 above were detected above the listed reporting limits. A complete table of analytical results is included with this report.

Disclaimer

All conclusions presented in this letter are based solely on the information collected by the soil vapor survey conducted by Optimal Technology. Soil vapor testing is only a subsurface screening tool and does not represent actual contaminant concentrations in either the soil and/or groundwater. We enjoyed working with you on this project and look forward to future projects. If you have any questions, please contact me at (877) 764-5427.

Sincerely,

John Rice
Project Manager

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

SOIL VAPOR RESULTS

Site Name: 31429 Yucaipa Blvd, Yucaipa, CA
Lab Name: Optimal Technology
Date: 5/3/18
Analyst: J. Rice **Collector:** J. Rice
Inst. ID: Agilent 6890N
Method: Modified EPA 8260B
Detector: Agilent 5973N Mass Spectrometer

SAMPLE ID	BLANK-1	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7
Sampling Depth (Ft.)	N/A	5.0	5.0	5.0	5.0	4.0	4.0	4.0
Purge Volume (ml)	N/A	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Vacuum (in. of Water)	N/A	0	0	0	0	0	0	0
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Dilution Factor	1	1	1	1	1	1	1	1

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.06	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.03	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = Below Listed Reporting Limit

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

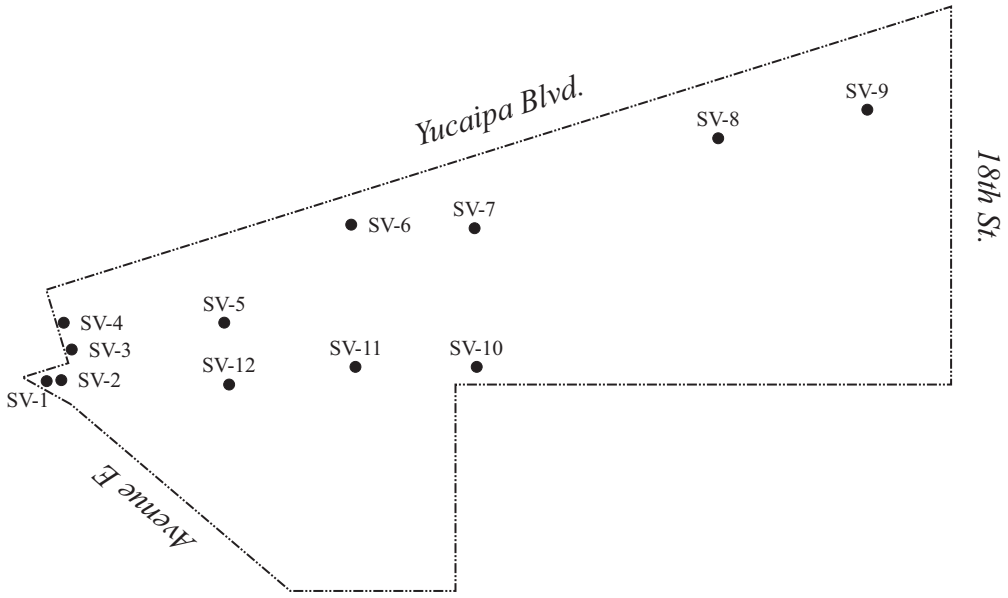
SOIL VAPOR RESULTS

Site Name: 31429 Yucaipa Blvd, Yucaipa, CA
Lab Name: Optimal Technology
Date: 5/3/18
Analyst: J. Rice **Collector:** J. Rice
Inst. ID: Agilent 6890N
Method: Modified EPA 8260B
Detector: Agilent 5973N Mass Spectrometer
Page: 2 of 2

SAMPLE ID	SV-8	SV-9	SV-10	SV-11	SV-12	SV-12 Dup		
Sampling Depth (Ft.)	4.0	4.0	5.0	4.0	5.0	5.0		
Purge Volume (ml)	1,500	1,500	1,500	1,500	1,500	1,500		
Vacuum (in. of Water)	0	0	0	0	0	0		
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000		
Dilution Factor	1	1	1	1	1	1		

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)		
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND		
Chloroethane	1.00	ND	ND	ND	ND	ND	ND		
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND		
Freon 113	1.00	ND	ND	ND	ND	ND	ND		
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND		
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND		
Chloroform	0.06	ND	ND	ND	ND	ND	ND		
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	ND		
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND		
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND		
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND		
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND		
Tetrachloroethene (PCE)	0.10	ND	ND	ND	ND	ND	ND		
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND		
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND		
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND		
Acetone	1.00	ND	ND	ND	ND	ND	ND		
1,1-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND		
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND		
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND		
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND		
Benzene	0.03	ND	ND	ND	ND	ND	ND		
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND		
Toluene	1.00	ND	ND	ND	ND	ND	ND		
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND		
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND		
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND		
o-Xylene	1.00	ND	ND	ND	ND	ND	ND		
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND		

Note: ND = Below Listed Reporting Limit



N

0 190 380

Approximate Scale

Legend

SV-1 - Soil Vapor Sample Number

● - Soil Vapor Sample Location

Optimal Technology
1667 Cross Bridge Place
Thousand Oaks, CA 91362
Toll-free (877) SOIL GAS
*Tel: (818) 734-6230 * Fax: (818) 734-6235*

DATE: May 3, 2018

COMPANY: The Reynolds Group

APPROXIMATE SCALE: 1" = 380'

TITLE: Soil Vapor Sampling Location Map
31429 Yucaipa Blvd., Yucaipa, CA

FIGURE

1

FORCE ENVIRONMENTAL

License # 867264

PHASE I Site Assessment Report

Prepared for:
VantageOne Real Estate Investments, LLC
4 Corporate Plaza, Suite 210
Newport Beach, CA 92660

For the Project
located at:

Residential Property
31479 Avenue E
Yucaipa, California

12288 Rancho Heights Road, Pala, CA 92059 Phone: (951) 299-9393 Fax (951) 848-9467

PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT



August 31, 2018

Residential Property
31479 Avenue E
Yucaipa, California

TRG Project #8475-C

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31479 Avenue E
Yucaipa, California

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PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT

Residential Property
31479 Avenue E
Yucaipa, California

1.0 EXECUTIVE SUMMARY

In August 2018, a Phase I Environmental Site Assessment (Phase I ESA), consistent with American Society for Testing Materials (ASTM) Standard E1527-13, was performed for the residential parcels located at 31479 Avenue E in Yucaipa, California (the Property, see **Figure 1** – Property Location Map).

Identified as adjoining County of San Bernardino Assessor Parcel Numbers (APNs) 0300-192-07 and -08, the 1.84 +/- acre Property currently exists with a single-family residential home at the north boundary, a small gravel covered parking lot at the northwest corner, and undeveloped land at the east, center, and south areas. According to historical research performed during this investigation, it appears that the Property has remained generally the same as today (undeveloped and residential) since at least 1949, preceded by entirely undeveloped land dating back to 1938 (the oldest documentation available to TRG).

On August 15, 2018, The Reynolds Group (TRG) conducted an inspection of the Property and vicinity and took photographs. No adverse environmental conditions were observed during the inspection, nor were any discovered in historical research of the Property.

The Property lies in a mixed commercial and residential area of Yucaipa. A few sites in the general area are listed in the historical environmental database report, however, they are not considered environmental concerns to the Property for reasons detailed in Section 7.3 of this report, including distance from the Property and regulatory closure.

Although not on the subject Property, agricultural use was prevalent in the immediate area during the 1930s and 1940s, including at the adjacent south parcel, south of Dunlop Boulevard. Therefore, as a precaution, TRG collected one shallow soil sample from the Property (Sample ID: "Avenue E") and had the sample analyzed for pesticides and herbicides to assess if adjacent former agricultural use may have impacted shallow soils at the subject Property. The soil sample was "non-detect" for pesticides and herbicides. The laboratory analytical report and chain-of-custody documentation are provided in **Appendix F**.

Based on historical research, the Property reconnaissance, and limited soil sampling, no recognized environmental conditions (RECs) were identified at the Property. It is the opinion of TRG that no further environmental investigation of the Property is warranted at this time.

2.0 INTRODUCTION

2.1 Purpose

TRG was contracted by Force Environmental, Inc. (the Client) to perform the Phase I ESA at the Property as due diligence for a possible real estate transaction.

The purpose of the Phase I ESA was to identify any RECs at the Property. The Phase I ESA was performed using generally accepted Phase I ESA industry standards in accordance with ASTM E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. In this report, and as defined by the ASTM, a REC is "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment or under conditions that pose a material threat of future release. De minimis conditions are not recognized environmental conditions."

2.2 Scope of Work

The following scope of work was performed to accomplish the Phase I ESA objectives:

- Visual Reconnaissance – A visual evaluation of the Property was conducted in readily accessible areas to identify RECs. Additionally, visual observations of adjoining properties were made from the vantage point of the subject Property as well as from public right-of-ways to determine the potential impact of these sites on the subject Property.
- Interviews – Verbal or written interviews with individuals knowledgeable and familiar with the Property.
- Records Review – Available environmental reports, agency records, appropriate permits, and historical aerial photographs of the subject Property and surrounding areas were reviewed.
- Agency Document Review – Appropriate regulatory agencies were contacted for information regarding any hazardous materials use, storage, and/or releases at the Property.
- Published Database Review – Reviewed published governmental agency databases to identify sites within ASTM-specified radii of the subject Property with a reported environmental concern or incident. TRG subcontracts the government agency database search to Environmental Data Resources, Inc. (EDR).
- Report Preparation – Prepare a summary report of the Phase I ESA work.
- Environmental Professional – All work associated with the project was performed by an environmental professional or under the supervision of an environmental professional.

2.3 Limitations and Exceptions

Topics not explicitly discussed within this document should not be assumed to have been investigated, such as physical testing, other than any specifically detailed in this report. The work performed in conjunction with this study and data developed are intended as a description of available information on the dates and at the locations described. This report does not warrant against future operations or conditions, nor does it warrant against:

- Operations that are not in evidence from visual observations or search of published agency records, or facts that were concealed, withheld, or not fully disclosed at the time the reconnaissance was conducted.
- Conditions that could only be determined by physical sampling or intrusive testing.
- Conditions or locations other than the Client-provided subject Property address and/or legal parcel description(s).

This report summarizes Phase I ESA work conducted by TRG in August 2018 at the subject Property. Although conditions at neighboring sites may impact the subject Property and, to the extent they were identified and included in the subject Property evaluation, this report does not serve as an assessment of sites other than the subject Property.

The conclusions and opinions presented are based on the scope of work outlined in this report. Evaluation of potential issues such as geotechnical soil conditions, air quality, flood plains, seismic conditions, asbestos-containing materials, mold, radon, lead-based paint, lead in drinking water and wetlands are not required by ASTM E1527-13 standards and, thus, were not included in the scope of services. TRG makes no warranties or guarantees as to the accuracy or completeness of information obtained from or compiled by others. Information may exist beyond the scope of this investigation. Additional information not found/available to TRG at the time of report writing may result in modifications of the conclusions presented. This report is not a legal opinion.

2.4 Reliance

The Phase I ESA was performed for the exclusive use of the Client and its investors, assignees, designees, and successors (collectively "Authorized Parties"). These Authorized Parties intend to rely upon this report as an assessment of the existing environmental condition of the subject Property. TRG recommends that any Authorized Party intending to rely upon the report independently determine whether the scope of services meets their expectations.

TRG's professional services were performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental professionals. No other warranty, expressed or implied, is made as to the professional opinions described in this report. TRG is not responsible or liable for any claims that are associated with the interpretation of the available information. Additionally, TRG is not responsible for any claims from third parties not associated with the Client, unless this report is assigned in its entirety to a party acceptable to TRG.

TRG exercised usual and customary professional care in its efforts to assess property environmental law/code/regulation compliance. However, due to the existence of literally thousands of laws, codes, and regulations pertaining to the environment, TRG cannot provide a definitive opinion concerning compliance with all laws/codes/regulations.

2.5 Proprietary Notice

This document and its contents are privileged and confidential information and should not be duplicated or copied under any circumstances without the expressed permission of TRG. Any unauthorized reuse of TRG reports or data will be at the unauthorized user's sole risk and liability.

3.0 USER PROVIDED INFORMATION

3.1 Reason for Performing the Phase I ESA

According to Tom Robinson, Managing Member of VantageOne Real Estate Investments, LLC (potential new owner of the Property), the work was performed as due diligence for a potential Property purchase (see **Appendix B** – Owner Response to Interview Questions).

3.2 Title Records and Property Use Limitations

The Client elected to have TRG perform the ASTM-required environmental lien search. As such, TRG obtained deed related information from Environmental Data Resources (EDR) as part of the Environmental Lien Search (see **Appendix D**), based on the property APNs. Lien Search results show no Property use limitations, and the current Property owner as follows:

APN	Current Owner	Previous Owner	Deed Date
0300-192-07, -08	Gudrun G. Strong Trust, dated July 31, 2006	Gudrun G. Strong, A Widow	6-31-06

3.3 Value Reduction for Environmental Issues

With reference to the sale price versus fair market value of the subject Property, according to Mr. Robinson, representing the potential buyer, the sale price of the Property is reasonable and not notably discounted due to potential environmental issues (see **Appendix B**).

4.0 PROPERTY AND ADJOINING SITE CHARACTERISTICS

Figure 1 shows the Property location, **Figure 2** is a plot plan of the Property, **Figure 3** includes historical topographic maps of the area, and **Figure 4** consists of historical aerial photographs of the vicinity. Photographs of the Property and the immediate area by the Consultant in August 2018 are included in **Appendix A** of this report.

4.1 Location

The Property is located in a mixed commercial and residential area of Yucaipa, at the southwest corner of Avenue E and Dunlap Boulevard. Area landmarks include Interstate 10 approximately 100 feet to the south, the San Bernardino Mountains one-mile further south, and Crafton Hills College and Library 1.5 miles to the northeast.

4.2 Property Description

The Property currently exists as primarily undeveloped land, except one 1,400 +/- square foot (sf) single-family home at the north-center area of the Property and a roughly 11,000 graded and gaveled parking area at the northwest corner. Chain link fencing surrounds the Property on all sides with limited access from driveways off Avenue E to the parking area and to the house. The home appears to be constructed with wood framing, brick walls, and a tile roof. Interior improvements include wood beamed ceilings, lathe and plaster walls, and carpet and linoleum flooring. The Property's legal description is provided in the Environmental Lien Search portion of **Appendix D.**

Potable water and sewer services for the Property are provided by Yucaipa Valley Water District. Natural gas is supplied by Southern California Gas Company, and electrical service by Southern California Edison.

4.3 Adjacent Sites

The subject Property sits in a mixed commercial and residential area of Yucaipa. Adjoining north of the Property, north of Avenue E, is a single-family home and a large undeveloped area extending north to Yucaipa Boulevard and east to 18th Street. An access road to adjacent west restaurants binds the Property at the south, followed by Interstate 10 running east-west approximately 100 feet south of the Property. East of the Property, east of Dunlap Boulevard, is another older single-family house, and to the west are two newer restaurants with associated parking areas.

5.0 ENVIRONMENTAL SETTING

According to information obtained from Geotracker at sites in Yucaipa (geotracker.swrcb.ca.gov, Global ID T0607100543 and T0607100136), sediments beneath the Property vicinity consist of Quaternary-aged alluvial fan deposits. Drilling logs at these nearby Sites indicate soils containing

primarily sand and silty sand with occasional thin layers of sandy silt or clayey silt to 180 feet below ground surface (ft bgs, the deepest depth explored at the nearby site), and groundwater was not encountered. Groundwater is reported in Yucaipa at depths greater than 200 ft bgs. Groundwater flow direction beneath the Site is likely to the south, in the direction of local topography.

6.0 PROPERTY RECONNAISSANCE

6.1 Property Inspection Observations

On August 15, a representative of TRG conducted an inspection of the Property. Weather conditions were sunny and hot. Property photographs are included in **Appendix A**. The inspection was performed from the northeast corner moving in a clockwise direction. The subject Property is described in detail in Section 4.2 of this report.

No hazardous chemical use or storage was noted during the Property inspection.

No hazardous dumping or disposal was observed on the Property.

No evidence of wells, underground storage tanks, hydraulic lifts, or other potentially hazardous anomalies were observed on the Property.

No environmentally hazardous leaks or spills were observed during the inspection.

Numerous pole-mounted electrical transformers were observed adjoining the north and east sides of the Property. All appeared in satisfactory condition with no obvious leaks or staining on or around the transformer poles. Maintenance and repair of the transformers is the responsibility of Edison Company.

No pungent or noxious air emissions were noted during the Property inspection.

No pits, ponds, lagoons, other standing water or wetlands were observed on the Property during the inspection.

6.2 Adjacent Site and Vicinity Observations

Adjacent sites are described in Section 4.3 of this report. No obvious issues of environmental concern were noted during the adjacent site inspections, as viewed from public right of ways. A few sites further out from the Property are listed in the Environmental Radius Map Report (see Section 7.1 and **Appendix C**), however, none are considered issues of concern to the Property for reasons including distance and direction from the Property and regulatory closure of the cases.

6.3 Interviews

Lists of standard due diligence questions was provided to TRG's contact for response from the current Property owners, however, the questionnaire was returned having been completed by a representative of the prospective buyer of the Property. Mr. Tom Robinson, Managing Member of VantageOne Real Estate Investments, LLC, (the potential Property owner) indicated in his responses that he was unaware of any existing or historical environmental hazards at the Property, and that the Property has been used only for residential purposes to the best of his knowledge. The complete questionnaire executed by Tom Robinson is provided as **Appendix B** of this report.

7.0 REGULATORY AGENCY DATABASE REVIEW

TRG retained EDR to provide a list of facilities within the Property vicinity that are currently under review, management, or notification by a regulatory agency as indicated in an EDR Radius Map with GeoCheck Report (see **Appendix C**). The following presents the regulatory files reviewed. The results of the subject Property and surrounding site listings are summarized in Sections 7.2 and 7.3.

Depending on the database, and in compliance with ASTM Standards, the approximate search distance includes only the subject Property or between 0.25 and 1.0 miles from the subject Property.

7.1 Government Databases Searched

The United States Environmental Protection Agency (EPA) National Priority List (NPL) and Delisted NPLs: The NPL is the EPA's database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site, to be included on the NPL, must either meet or surpass a predetermined hazard ranking system score, or be chosen as a state's top-priority site, or meet all three criteria of: 1) the US Department of Health and Human Services issues a health advisory recommending that people be removed from the site to avoid exposure; 2) EPA determines that the site represents a significant threat, and 3) EPA determines that the remedial action is more cost-effective. Delisted NPLs are those sites that may be deleted from the NPL where no further response is appropriate as determined by the EPA. The required minimum search distance is one mile from the Property for NPLs and ½ mile for Delisted NPLs.

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) and CERCLIS No Further Remedial Action Planned (NFRAP): The CERCLIS database contains information on potentially hazardous waste sites that have been reported to the US EPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the CERCLA. CERCLIS contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. CERCLIS NFRAP contains information pertaining to facilities that have been removed from the CERCLIS database due to the absence of contamination following further investigation, sufficient remedial action of any contamination, or where contamination is not serious enough to warrant federal Superfund action or NPL consideration. The required minimum search distance for both CERCLIS and CERCLIS NFRAP is ½ mile from the subject Property.

Resource Conservation and Recovery Act (RCRIS): is a database which includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The list is developed and maintained by the EPA. The purpose of this listing is to summarize registration information and does not imply that contamination has occurred on the property, but does identify potential sources of contamination. The RCRIS database is divided into small quantity generator (SQG) sites, large quantity generator (LQG) sites, and transfer, storage and disposal (TSD) sites. The required minimum search distance for RCRIS SQG and LQG is limited to the subject Property and adjoining sites, and is ½ mile for RCRIS TSD sites.

Institutional and Engineering Controls (IECs): IECs 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 the Property. Deed restrictions are generally required as part of the institutional controls and 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 affect human health. The search includes only the subject Property.

Emergency Response Notification System (ERNS): This listing is a database of incident notification information regarding incidents of reported releases of oil and hazardous substances. The search includes only the subject Property.

Consent: This database lists addresses involved in major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund). It is release periodically by the United States District Courts after settlement by the parties to the litigation matters. The search includes only the subject Property.

Records of Decision (RODs): RODs documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup. The required minimum search radius for RODs is one mile from the subject Property.

Mines: The Mines database is a record of mine locations maintained by the U.S. Department of Labor, Mine Safety, and Health Administration. The required minimum search radius is ¼ mile from the subject Property.

State Hazardous Waste Sites (SHWS): The SHWS database is maintained by the DTSC and is the State's equivalent to CERCLIS. The required minimum search distance from the subject Property is one mile.

Groundwater Contamination Inventory (GWCI): The GWCI is an inventory of all groundwater contamination cases. The required minimum search radius for this database is ½ mile from the Property.

Solid Waste Facilities/Landfills (SWF/LF): This is a database that is maintained by the Integrated Waste Management Board and identifies permitted solid waste facilities or landfills. These facilities may be active, inactive, or closed facilities, or open dumps that failed to meet RCRA criteria for solid waste landfills or disposal facilities. The required minimum search distance for the SWF/LF database is ½ mile from the Property.

Underground Storage Tanks (USTs) and Tribal USTs: is a list of registered underground storage tanks and those on Indian Land. The database is maintained by local agencies, most notably the fire departments, and contains a comprehensive listing of all registered USTs. The required minimum search distance is limited to the subject Property and adjacent sites for both USTs and Tribal USTs.

Leaking Underground Storage Tanks (LUST) and Tribal LUST: This is a list that compiles the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB)

identified facilities that have had unauthorized releases from USTs and those on Indian Land. The required minimum search distance for both LUST and Tribal LUST cases is ½ mile from the subject Property.

Above Ground Storage Tanks (ASTs): The AST database is maintained by the RWQCB and contains listings of registered ASTs. The required search distance for this database is limited to the subject Property and adjacent sites.

Spill, Leaks, Investigations, and Clean-Ups (SLIC) is a database showing cases impacted by environmental incidents other than USTs. The required minimum search radius for the SLIC database is ½ mile from the subject Property.

Land Use Controls (AUL): This database lists sites in California that have institutional controls or engineering controls in place. The search requirement includes the subject Property only.

Voluntary Cleanup Program (VCP): The VCP is a listing of facilities and/or sites registered on the voluntary cleanup program database. Upon completion of the negotiated work in the VCP contract agreed upon by the DTSC and the non-responsible party, the non-responsible party received State Superfund liability protection. The required minimum search distance from the Property is ½ mile.

Dry Cleaners is a database listing dry cleaning facilities that have EPA ID numbers. The Dry Cleaning Facility Restoration Fund database is used to access, prioritize, and clean up contaminated registered dry-cleaning sites. The minimum required search distance for this database is ¼ mile from the subject Property.

Brownfields: The Brownfields is a component of the VCP, which allows a non-responsible party to acquire a contaminated property with State Superfund liability protection for existing contamination by agreeing to perform an environmental assessment and/or remediation. The required minimum search radius for the Brownfields database is ½ mile from the Property.

National Pollutant Discharge Elimination System (NPDES): The NPDES database maintains a database of waste water treatment facility locations. The EDR search radius for this database is limited to the subject Property. The required minimum search distance is limited to the subject Property.

Airs: This is a database listing permitted air facilities. The required minimum search distance is limited to the subject Property.

The aforementioned databases and search distances include those that are required by ASTM standards. Other supplemental database information is available in the full environmental disclosure report provided in **Appendix C**.

7.2 Subject Property Database Summary

There are no listings in the EDR database report for the Property.

7.3 Adjacent and Nearby Sites Database Summary

The following summary includes sites adjacent to or near the subject Property within the ASTM E1527-13 search radii. Where available, information from the EDR database report was updated using the State's Geotracker website (geotracker.swrcb.ca.gov). A review of the EDR database report by TRG is summarized below.

Database	Business Name/Address	Association with Listing	Concern to Property?
NPDES CIWQS	• NTC Yucapa Dunlap – 31470 Dunlap Blvd.	Former waste water discharge and/or stormwater runoff	No. Permit has been terminated. Appears to be related to former new construction adjacent west of Site (restaurants)
RCRA-SQG	• Chevron – 31412 Yucaipa	Generator of small quantities of hazardous waste	No. No violations reported.
ENVIROSTOR	• Sorenson Engineering – 32032 Dunlap • Jorco Chemical Co. – 32185 E. Outer Hwy 10	Under investigation or evaluation by the DTSC.	No. According to Geotracker, both cases have been "closed" since at least 2012.
LUST HIST CORTESE	• European Auto – 31516 Yucaipa	Former leaking USTs	No. The case has received regulatory closure for having sufficiently cleaned impacted soil and/or groundwater.
UST	• Circle Service – 31491 Yucaipa • Mobil – 31429 Yucaipa (adjoining northwest) • Chevron – 31412 Yucaipa • Arco AM/PM – 31340 Yucaipa • Yucaipa Gas Mart – 31340 Hampton • GK Market – 31583 E. Outer Hwy 10	Currently registered USTs	No, not at this time. None are shown to have experienced a leak or spill (LUST/SLIC) and, therefore, are not a concern at this time.
EDR HIST CLEANERS	• Steamers Dry Cleaner – 31364 Hampton	Former Dry Cleaning Facility	No. Not shown in SLIC database above as having experienced a leak or spill.

8.0 PROPERTY HISTORY/LAND USE REVIEW

8.1 Historical Topographic Maps

Historical topographic maps provided by EDR were also reviewed. Maps were available periodically from 1899 to 2012. The topographic gradient on all maps, where visible, is shown to vary, sloping in a southerly direction north of the Site from the Crafton Hills and in a northerly direction south of the Site from the San Bernardino Mountains. The Property is shown at the most westerly side of the Yucaipa Valley at approximately 2,100 feet above mean sea level (amsl).

Yucaipa Creek approximately one mile south of the Property is the main water feature on all maps. Agricultural use on the Property and two small structures (likely residential/farm housing) appear on the 1954 map. Two or more structures appear on the Property, primarily along Yucaipa Boulevard at the north side, on the 1967 through 1996 maps. No structures appear on the Property in the most recent 2012 topographic map. Based on the size of the structures (small) and the lack of evidence indicating commercial use from other research performed during this investigation, the markings shown on the Property are likely residential use.

8.2 Historical Aerial Photographs

Aerial photographs of the Property and vicinity, as provided by EDR, were reviewed in order to ascertain historical land uses that may have been responsible for the generation/or storage of potentially hazardous materials at and near the Property. Copies of the aerial photographs are provided as **Figure 4** of this report.

1938

The Property appears as undeveloped land, as do adjoining north, east and west parcels. Adjacent south, south of Dunlap Boulevard, and further out to the east are myriad agricultural plots.

1949, and 1953

The subject Property has been developed with what appears to be a residential home at the approximately center of the Site with a driveway providing access from Dunlap Boulevard. Residential homes have also been developed adjacent east of the Property, east of newly constructed Avenue E, and to the south, south of Dunlap Boulevard. The general vicinity can be characterized as mixed residential and agricultural use.

1959

There are no visible changes to the subject Property or adjacent Sites. Interstate 10 has been developed south of the Property.

1968, 1975, and 1978

The subject Property remains the same as previous photographs. Residential use continues adjacent north, east and west. Commercial construction (larger buildings) now appears along Yucaipa Boulevard, approximately 400 feet to the north and northwest. Residential neighborhoods dominate the area south of the Property, south of Interstate 10.

1985, 1989, 1995, 2006, 2009, and 2012

There are no visible changes to the Property, except that driveway access has been moved from Dunlap Boulevard at the south to Avenue E adjoining north of the Property. One single family residence occupies the north-center area surrounded by a few trees. Adjacent north are single family residences (at the northwest corner of Avenue E and Dunap) and a very large undeveloped parcel extending north to Yucaipa Boulevard and east to 18th Street. Adjacent south is the Yucaipa Boulevard offramp of Interstate 10. Adjacent east is a residential home, followed further east by mixed undeveloped and residential parcels. The parcel adjoining west of the Property also appears to be residential use, followed further west by commercial businesses along Yucaipa Boulevard. Overall, the area is mixed residential, commercial (along Interstate 10 and Yucaipa Boulevard), and undeveloped land.

8.3 Sanborn Fire Insurance Maps

No Sanborn Fire Insurance Maps were available for the subject Property addresses through EDR (see **Appendix D**).

8.4 City Directory Search

TRG also retained EDR to perform a City Directory Search. The complete City Directory as provided by EDR is included in **Appendix D** of this report. The Property is shown with personal names from 1965 to 2005, first Marjorie and/or Al Cummins from 1965 to 1980, then Gudren Strong from 1995 to 2005. There is no listing for the Property in the most recent directory (2010). Nearby addresses are also primarily shown with personal names indicating residential use from 1965 to 2005. Business listings such as a veterinarian, and music academy, and insurance business, and an electrical contractor are shown in the 2010 directory. A business called Dynamic Diesel is shown at 31560 Dunlap Boulevard, approximately 300 feet east-southeast of the Property in the 2010 directory only. It is not considered an issue of concern since no auto/truck repair appears to operate at the site currently, and the site is roughly 300 feet downgradient of the subject Property.

8.5 Environmental Lien Search

A search for environmental liens was performed for the Property location using assessor parcel numbers associated with the Property. No environmental liens or activity and use limitations currently exist for the subject Property (see **Appendix D**). Lien Search results show the current Property owners as identified in Section 3.2 of this report. The Property's legal description is included in the Lien Search provided in **Appendix D**.

8.6 Vapor Encroachment Screen

A search for vapor encroachment at the Property was performed by EDR in accordance with ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600-10). This screening assist parties seeking to meet the search requirements in Real Estate Transactions. The Property is not listed in vapor screen related federal or state databases, nor are any adjacent sites, suggesting no vapor intrusion risk at the Property.

8.7 Agency Records Review

Agency file review findings are summarized below. Select file review documentation is provided in **Appendix E**.

- *City of Yucaipa Building and Planning Department* – TRG visited the Yucaipa Building and Planning Departments on August 15, 2018, to investigate any records related to the Site. According to the counter clerk at the Planning Department, no records exist with the City for the subject Property address (ref: 909-797-2489 / bmatlock@yucaipa.org).

- *San Bernardino County Department Fire Department (SBCOFD)* – TRG submitted a public information request for the Property to the SBCOFD. The SBCOFD responded with a letter dated July 13, 2018, that no records exist for the Property with the SBCOFD.

- *Santa Ana Regional Water Quality Control Board (SARWQCB)* – A request for file review was submitted by TRG to the SARWQCB (filereview8@waterboards.ca.gov) for the subject Property address on August 27, 2018. In an emailed response dated August 28, 2018, the SARWQCB indicated that no files exist with the agency for the subject Property.

- *State Water Resources Control Board Geotracker Web Site (geotracker.waterboards.ca.gov)* – The subject Property location is not shown as a case on the Geotracker website. A few former leaking underground storage tank (LUST) sites are shown north of the Property along Yucaipa Boulevard, however, the cases have all received regulatory closure for having sufficiently cleaned any impact to soil and/or groundwater from former USTs. As such, they are not considered an issue of concern to the Property.

- *Division of Oil, Gas, and Geothermal Resources (DOGGR, www.conservation.ca.gov/doggr/wellfinder)* – TRG accessed the DOGGR web site to research oil well information at the Property. The map shows no oil wells on or near the Property. The nearest well (API 06500108) is located roughly 3.5 miles south-southeast of the Property and, due to its distance, is not considered an issue to the Property.

- *South Coast Air Quality Management District (SCAQMD)* – TRG accessed the SCAQMD online public records portal at http://www3.aqmd.gov/webappl/fim/prog/search. No information related to the Property address exists on the SCAQMD database.

8.8 Synopsis of Previous Environmental Investigations

No known previous environmental investigations have been performed at the Property.

Although not on the subject Property, agricultural use was prevalent in the immediate area during the 1930s and 1940s, including at the adjacent south parcel, south of Dunlap Boulevard. Therefore, as a precaution, TRG collected one shallow soil sample from the Property (Sample ID: Avenue E) and had the sample analyzed for pesticides and herbicides to assess if adjacent former agricultural use may have impacted shallow soils at the subject Property.

The soil sample was collected near the northeast corner of the Property at approximately 6-inches below ground surface (ft bgs), using a hand-auger sampling device into a glass jar. The jar was immediately sealed and uniquely identified with the sample location and date, and placed in an ice-cooled chest for transportation to Orange Coast Analytical, a state-certified laboratory (ELAP #2576) in Tustin, California.

The soil sample was "non-detect" for pesticides and herbicides. The laboratory analytical report and chain-of-custody documentation are provided in **Appendix F**.

9.0 CONCLUSIONS & OPINIONS

In August 2018, a Phase I Environmental Site Assessment (Phase I ESA), consistent with American Society for Testing Materials (ASTM) Standard E1527-13, was performed for the two adjoining parcels at 31479 Avenue E in Yucaipa, California (APNs: 0300-192-07 and -08).

Based on historical research, the Property reconnaissance, and limited soil sampling, no recognized environmental conditions (RECs) were identified at the Property or in the immediate vicinity. It is the opinion of TRG that no further environmental investigation of the Property is warranted at this time.

10.0 PROFESSIONAL CREDENTIALS

All work associated with this Environmental Site Assessment was performed by or under the direct supervision of F. Edward Reynolds, Jr. Mr. Reynolds has worked in the environmental industry for more than 25 years and holds several credentials including those of a Registered Environmental Property Assessor (#963067) and California Registered Civil Engineer (No. 38677). Mr. Reynolds meets the certification, licensing, education, and experience required under EPA's 40 CFR Part 312 for "Environmental Professionals". TRG, established in 1989, provides environmental consulting and contracting services.

Rosanne Fischer has worked in the environmental industry for more than 20 years. Ms. Fischer is a Registered Environmental Property Assessor (REPA No. 419564) and performs numerous Phase I Environmental Site Assessments each year. Ms. Fischer meets the certification, licensing, education, and experience required under EPA's 40 CFR Part 312 for "Environmental Professionals".

THE REYNOLDS GROUP
a California corporation by:





F. Edward Reynolds, Jr.
California Registered Civil Engineer #38677

Rosanne Fischer, REPA #419564
Project Manager

11.0 REFERENCES

1. Environmental Data Resources, Inc., 6 Armstrong Road, 4th Floor, Shelton, Connecticut.

2. State Water Resources Control Board Geotracker Web Site at http://geotracker.waterboards.ca.gov.

3. Yucaipa Building & Planning Department – 34272 Yucaipa Blvd., Yucaipa, CA.

4. San Bernardino County Fire Department – 385 N. Arrowhead Avenue, San Bernardino, CA.

5. Santa Ana Regional Water Quality Control Board –filereview8@waterboards.ca.gov

6. Division of Oil, Gas, and Geothermal Resources – www.conservation.ca.gov

7. South Coast Air Quality Management District – publicrecordsrequests@aqmd.gov



General Notes

- - - - - Approximate Site Boundary

Project Details

Name
Residential Property

Address
31479 Avenue E
Yucaipa, CA

Number
8475

Figure Details

PROPERTY LOCATION
MAP

Figure #
Figure 1

Revise Date
September 2018

*Not To Scale

Scale

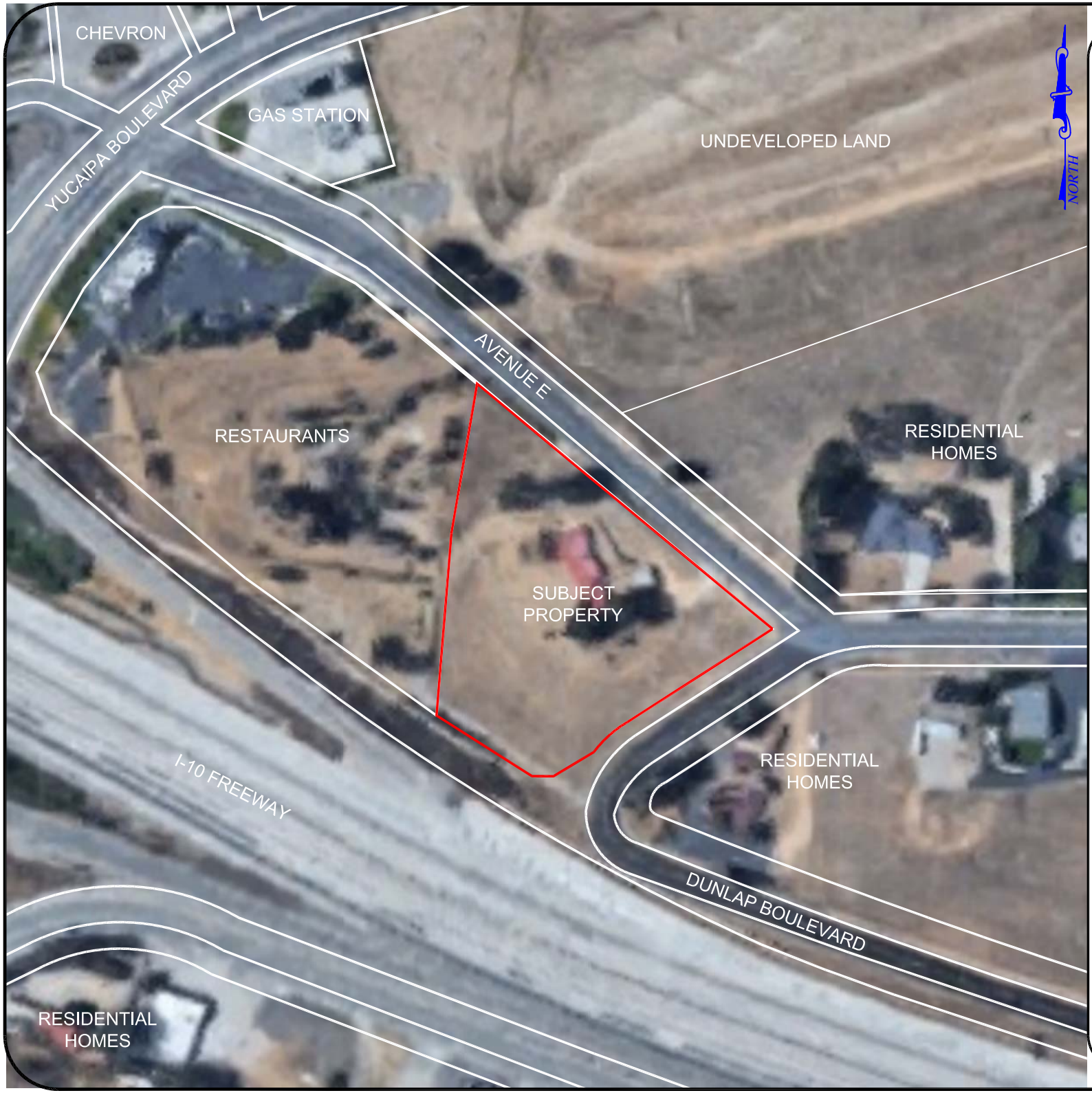
Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES



General Notes

- Approximate Site Boundary

Project Details

Name
Residential Property

Address
31479 Avenue E
Yucaipa, CA

Number
8475

Figure Details

PROPERTY AND AREA MAP

Figure #
Figure 2

Revise Date
September 2018

0' 70' 140'
Approximate Scale

Scale
1" = 140'

Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES

Residential Property

31479 Avenue E

Yucaipa, CA 92399

Inquiry Number: 5347105.23

June 27, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FIGURE 3

EDR Historical Topo Map Report

06/27/18

Site Name:

Residential Property
31479 Avenue E
Yucaipa, CA 92399
EDR Inquiry # 5347105.23

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by The Reynolds Group were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 8475-A

Project: 8475-A 31479 Avenue E

Coordinates:

Latitude:	34.026709 34° 1' 36" North
Longitude:	-117.116993 -117° 7' 1" West
UTM Zone:	Zone 11 North
UTM X Meters:	489199.33
UTM Y Meters:	3765123.60
Elevation:	2083.00' above sea level

Maps Provided:

2012	1899
1996	
1988	
1980	
1973	
1967	
1954	
1901	

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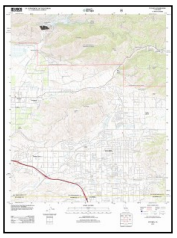
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Redlands
2012
7.5-minute, 24000

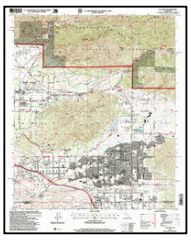


Yucaipa
2012
7.5-minute, 24000

1996 Source Sheets

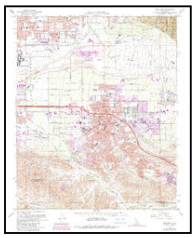


Redlands
1996
7.5-minute, 24000
Aerial Photo Revised 1994

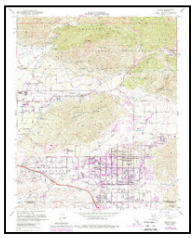


Yucaipa
1996
7.5-minute, 24000
Aerial Photo Revised 1994

1988 Source Sheets



Redlands
1988
7.5-minute, 24000
Aerial Photo Revised 1985



Yucaipa
1988
7.5-minute, 24000
Aerial Photo Revised 1985

1980 Source Sheets



Yucaipa
1980
7.5-minute, 24000
Aerial Photo Revised 1978

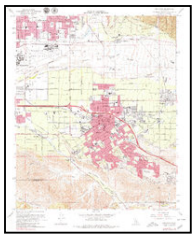


Redlands
1980
7.5-minute, 24000
Aerial Photo Revised 1978

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1973 Source Sheets

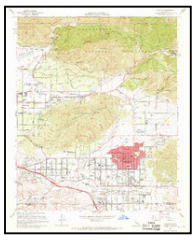


Redlands
1973
7.5-minute, 24000
Aerial Photo Revised 1973

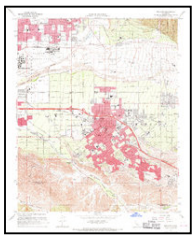


Yucaipa
1973
7.5-minute, 24000
Aerial Photo Revised 1973

1967 Source Sheets

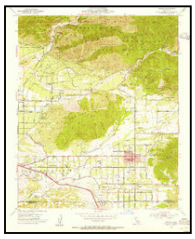


Yucaipa
1967
7.5-minute, 24000
Aerial Photo Revised 1966



Redlands
1967
7.5-minute, 24000
Aerial Photo Revised 1966

1954 Source Sheets



Yucaipa
1954
7.5-minute, 24000
Aerial Photo Revised 1952



Redlands
1954
7.5-minute, 24000
Aerial Photo Revised 1952

1901 Source Sheets



Redlands
1901
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

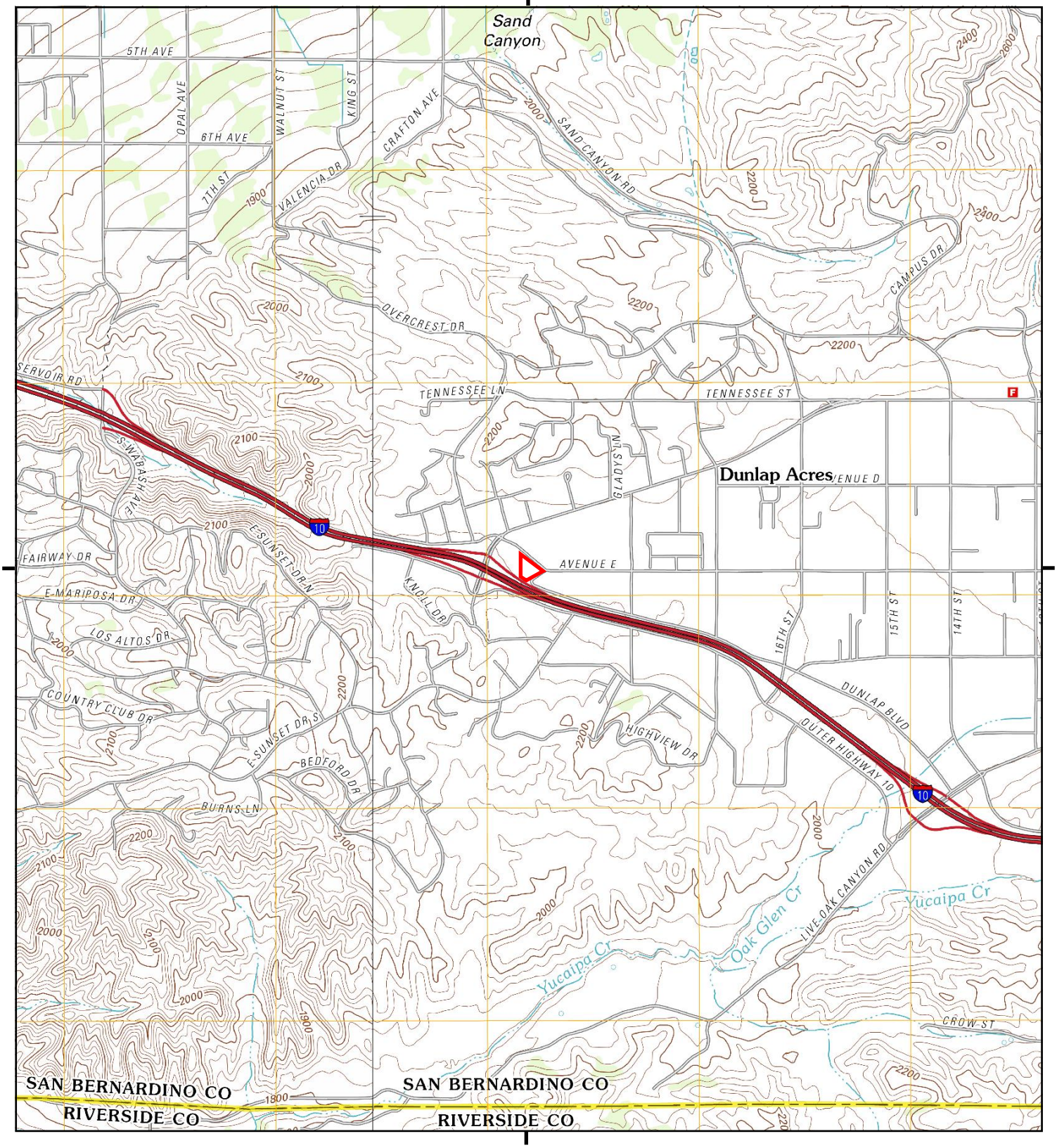
1899 Source Sheets



Redlands
1899
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

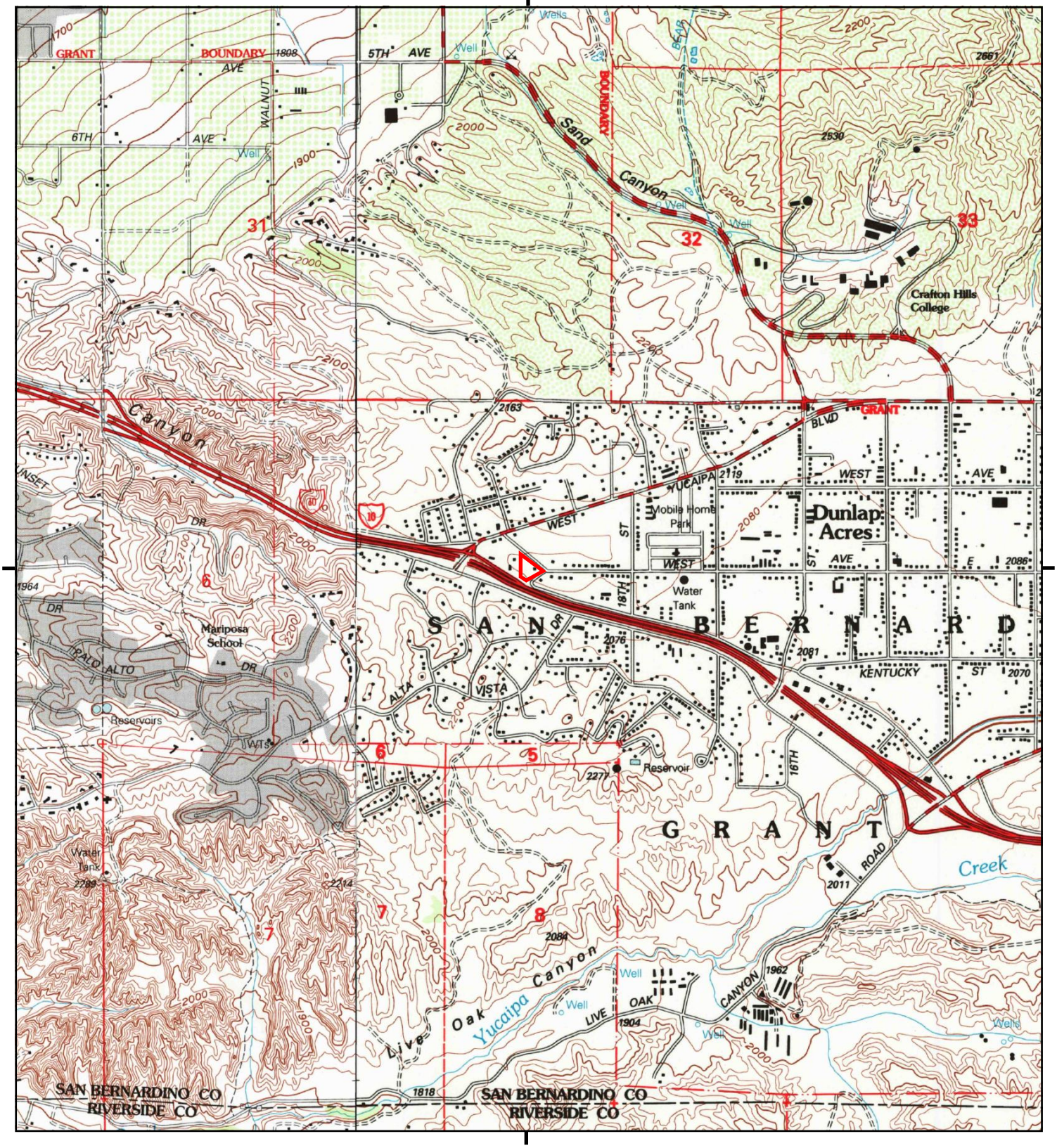
TP, Yucaipa, 2012, 7.5-minute
NW, Redlands, 2012, 7.5-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1996



This report includes information from the following map sheet(s).

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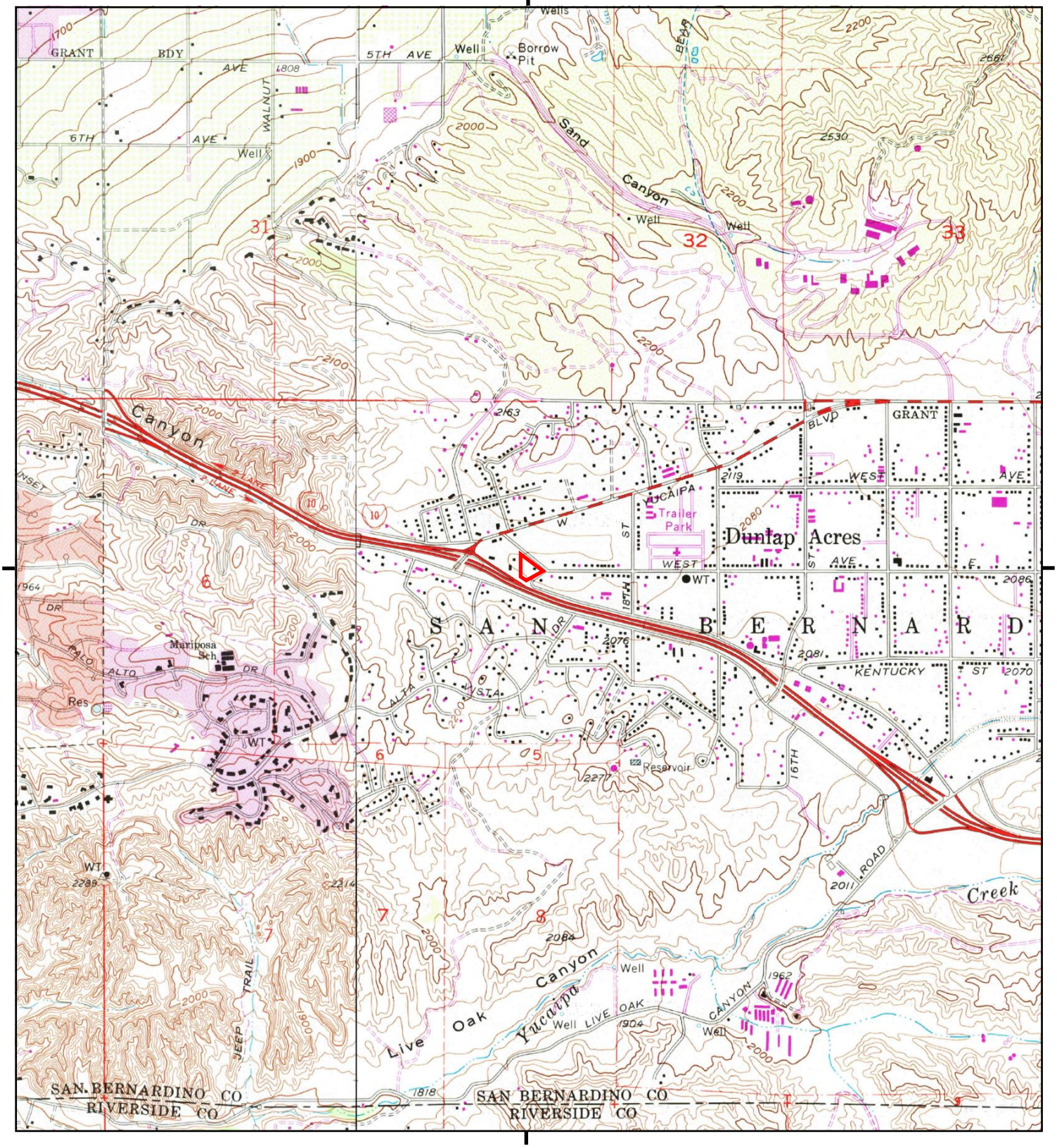
NW N NE
W E
SW S SE

TP, Yucaipa, 1996, 7.5-minute
NW, Redlands, 1996, 7.5-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

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NW N NE
W E
SW S SE

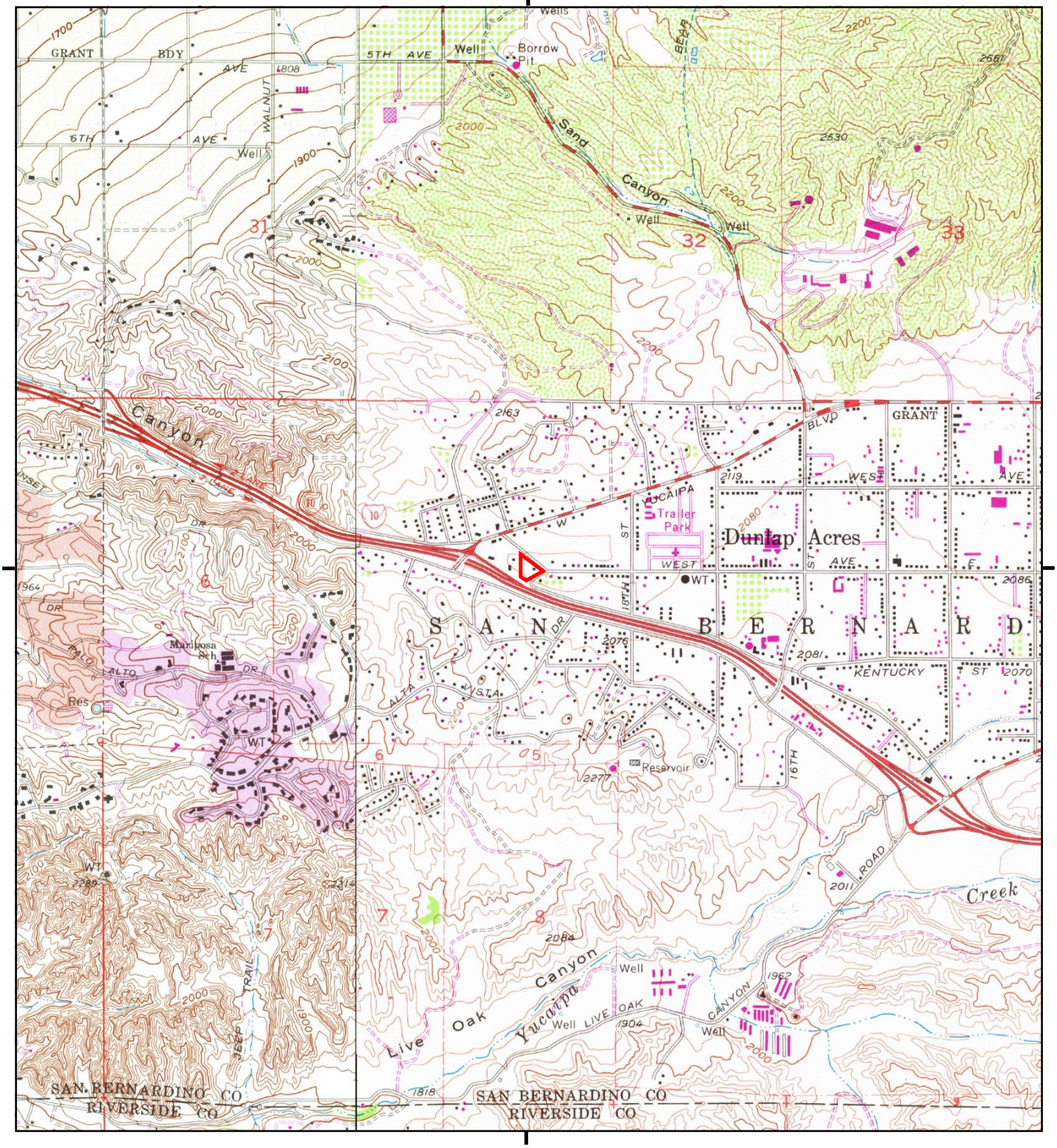
TP, Yucaipa, 1988, 7.5-minute
NW, Redlands, 1988, 7.5-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1980



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NW N NE
W E
SW S SE

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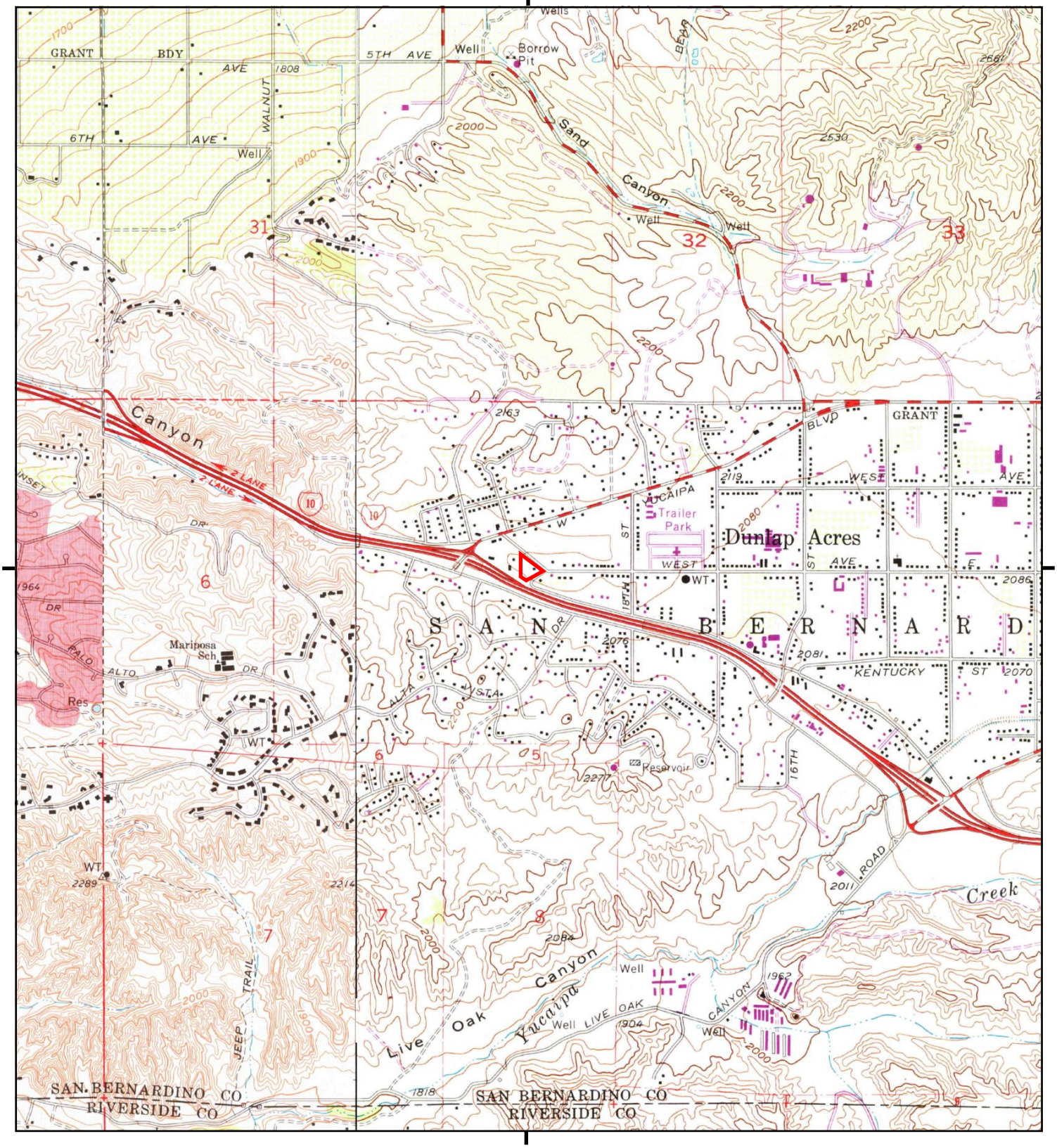
NW, Redlands, 1980, 7.5-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



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0 Miles 0.25 0.5 1 1.5

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W E
SW S SE

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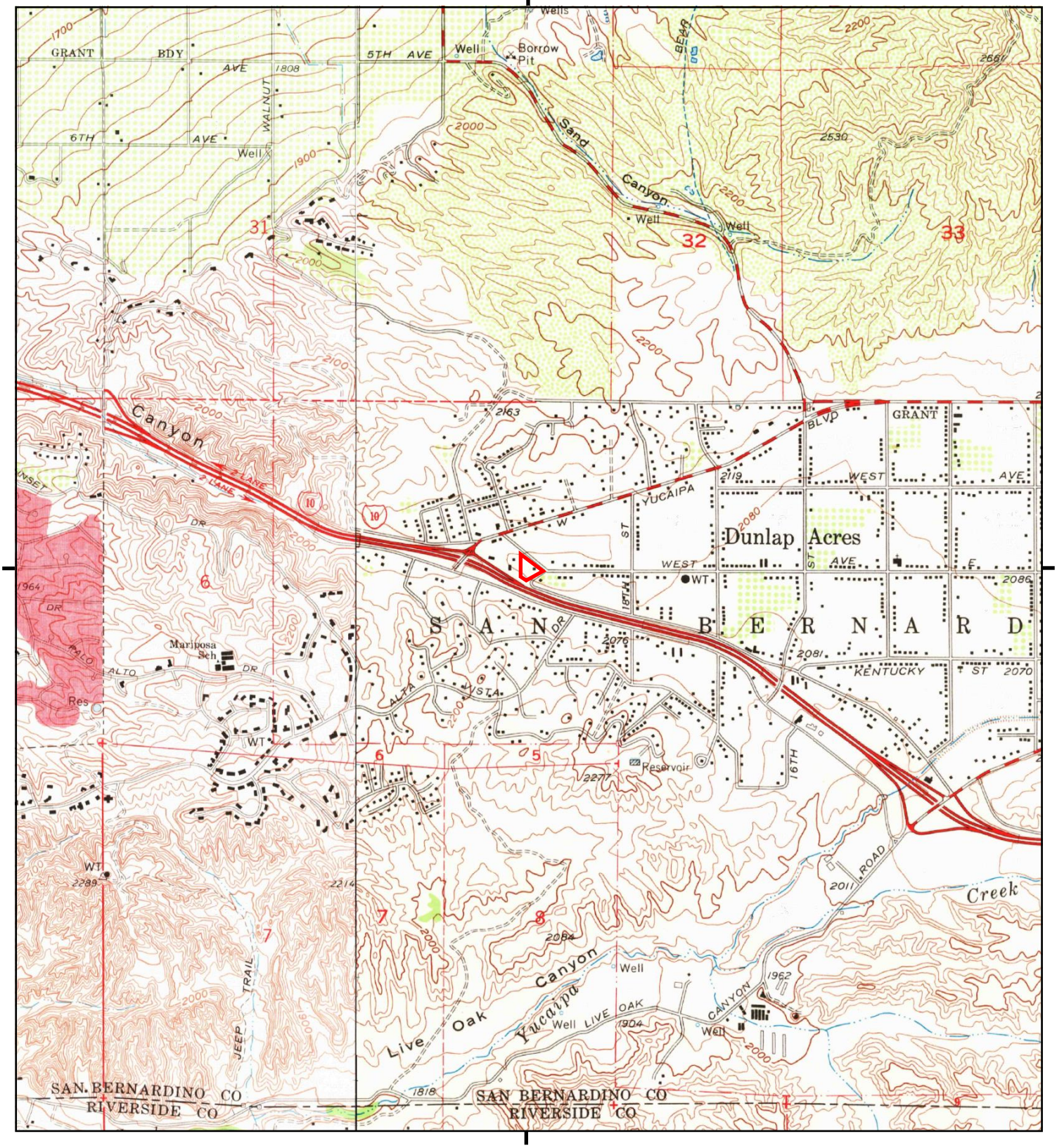
NW, Redlands, 1973, 7.5-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



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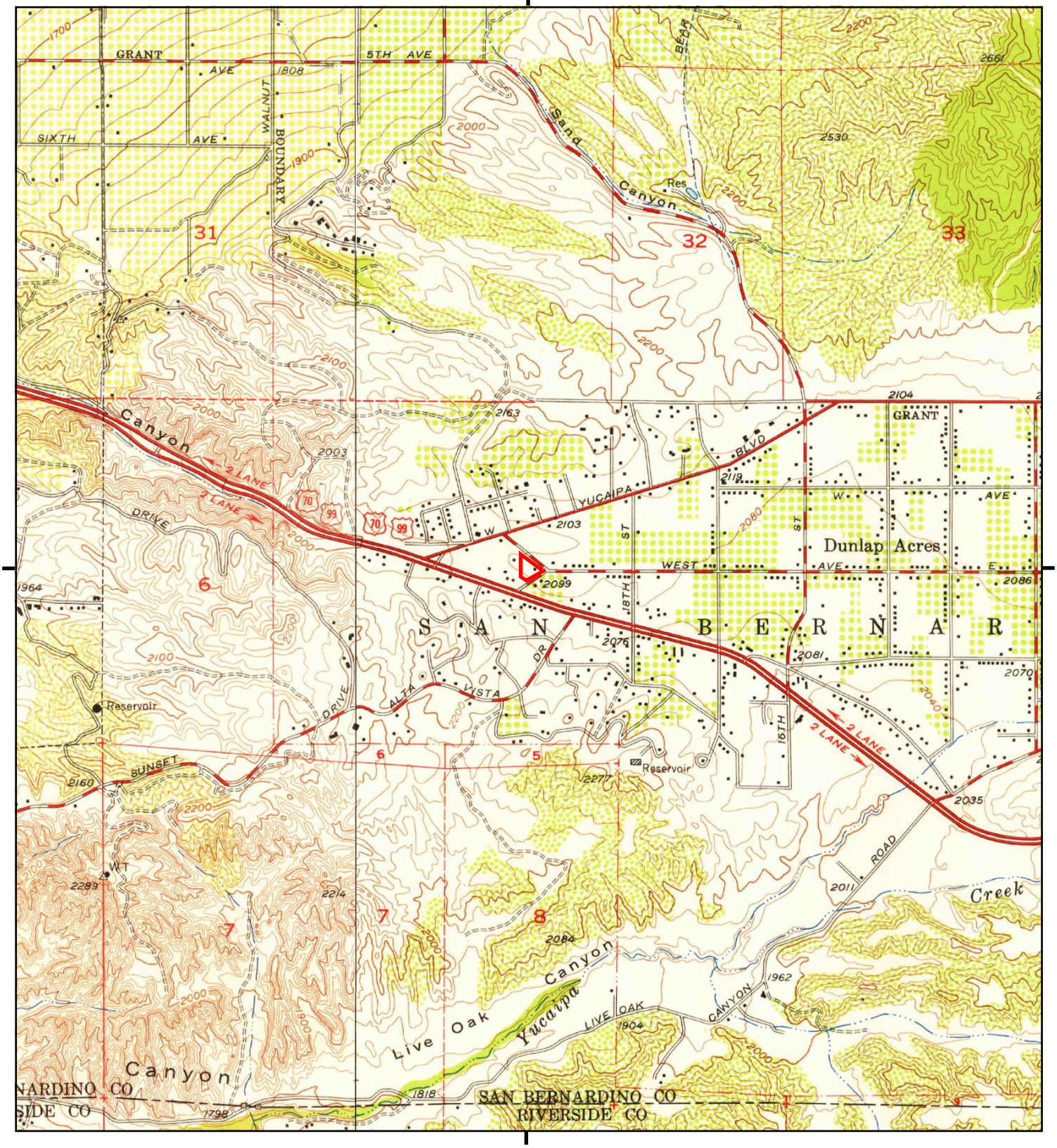
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Yucaipa, 1967, 7.5-minute
NW, Redlands, 1967, 7.5-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



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0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

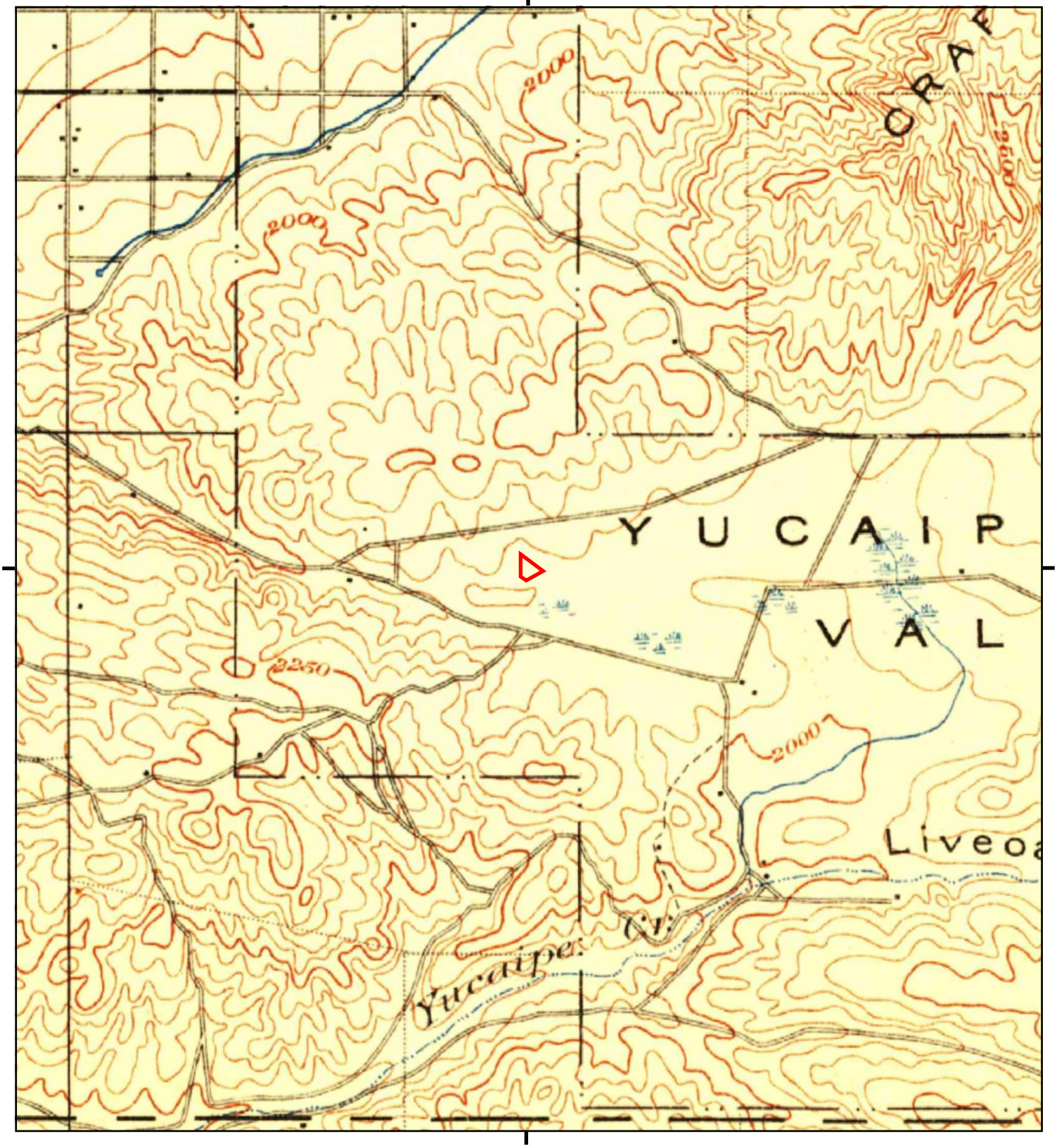
TP, Yucaipa, 1954, 7.5-minute
NW, Redlands, 1954, 7.5-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Historical Topo Map

1901



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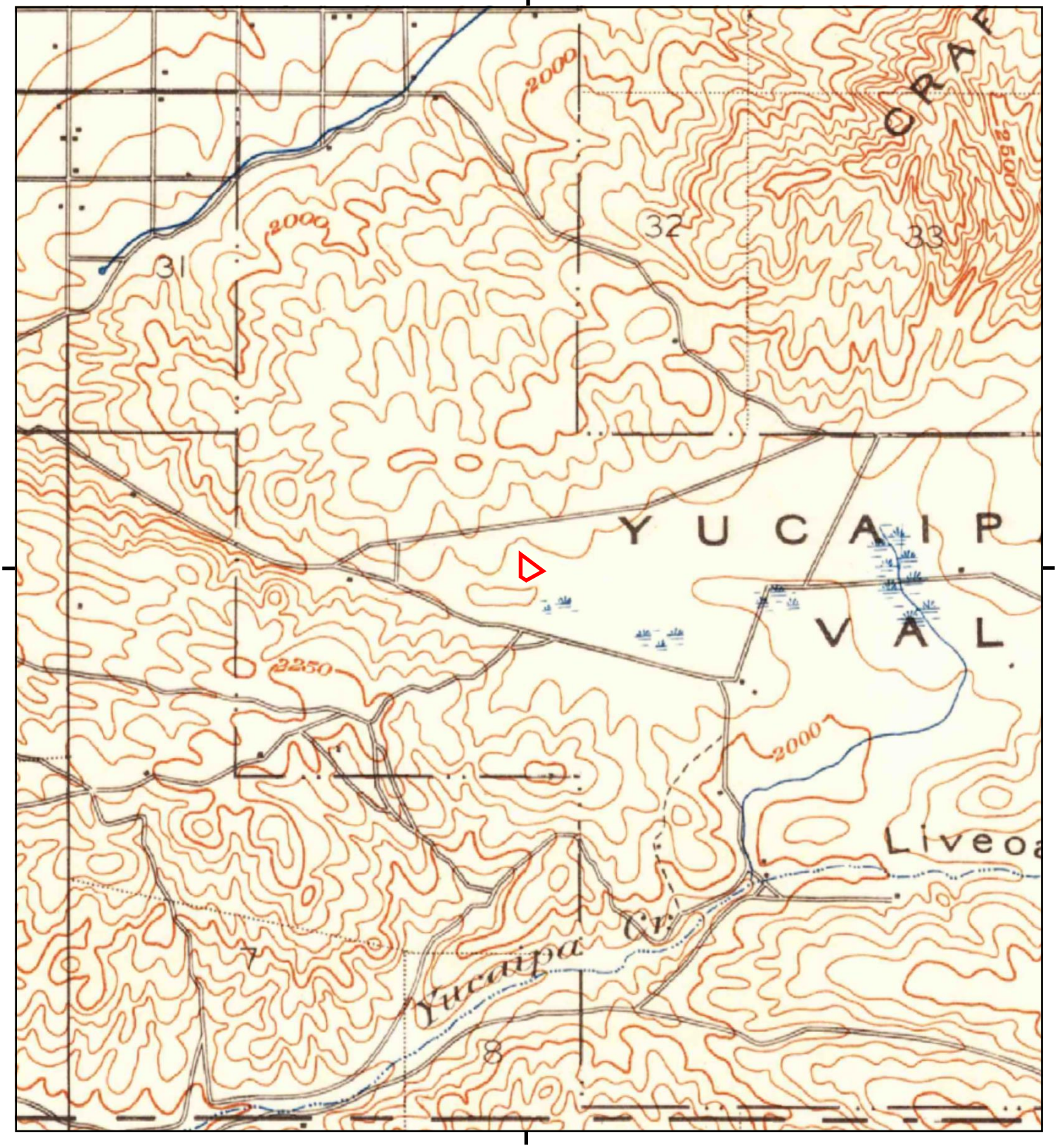
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Redlands, 1901, 15-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Redlands, 1899, 15-minute

SITE NAME: Residential Property
ADDRESS: 31479 Avenue E
Yucaipa, CA 92399
CLIENT: The Reynolds Group

N

Residential Property

31479 Avenue E

Yucaipa, CA 92399

Inquiry Number: 5347105.31

June 28, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

FIGURE 4

EDR Aerial Photo Decade Package

06/28/18

Site Name:

Residential Property
31479 Avenue E
Yucaipa, CA 92399
EDR Inquiry # 5347105.31

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: October 02, 1995	USGS/DOQQ
1989	1"=500'	Flight Date: August 14, 1989	USDA
1985	1"=500'	Flight Date: September 02, 1985	USDA
1978	1"=500'	Flight Date: September 20, 1978	USDA
1975	1"=500'	Flight Date: August 01, 1975	USGS
1968	1"=500'	Flight Date: August 11, 1968	USDA
1961	1"=500'	Flight Date: June 14, 1961	USDA
1959	1"=500'	Flight Date: October 16, 1959	USDA
1953	1"=500'	Flight Date: February 22, 1953	USDA
1949	1"=500'	Flight Date: May 23, 1949	USDA
1938	1"=500'	Flight Date: July 04, 1938	USDA

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INQUIRY #: 5347105.31

YEAR: 2012

= 500'

N

EDR



INQUIRY #: 5347105.31

YEAR: 2009

= 500'

N

EDR



INQUIRY #: 5347105.31

YEAR: 2006

= 500'

N

EDR



INQUIRY #: 5347105.31

YEAR: 1995

= 500'

N

EDR

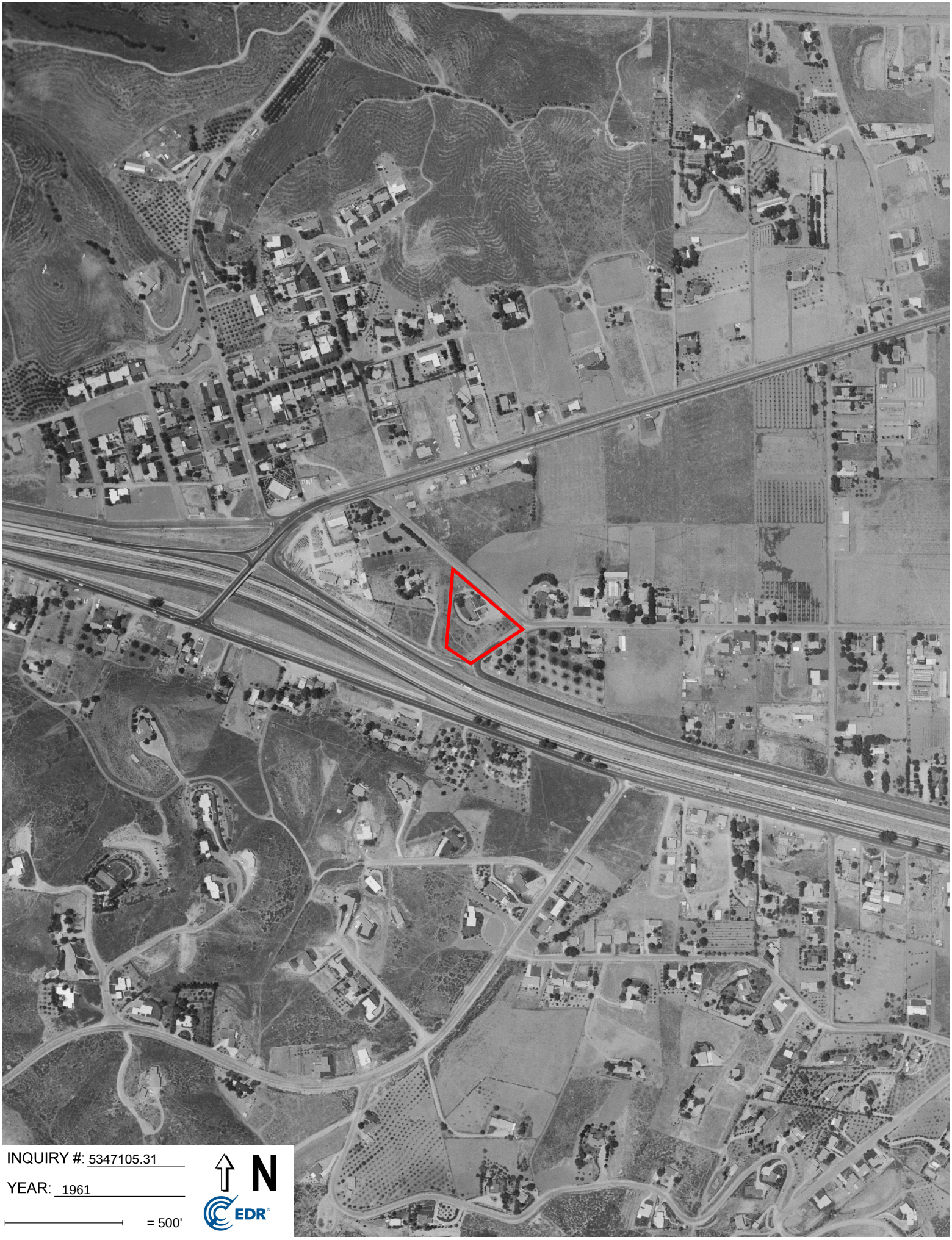

INQUIRY #: 5347105.31
YEAR: 1989
= 500'
N
EDR


INQUIRY #: 5347105.31
YEAR: 1985
= 500'
N
EDR


INQUIRY #: 5347105.31
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 5347105.31
YEAR: 1975
= 500'
N
EDR


INQUIRY #: 5347105.31
YEAR: 1968
= 500'
N
EDR



INQUIRY #: 5347105.31

YEAR: 1961

= 500'

N

EDR


INQUIRY #: 5347105.31
YEAR: 1959
= 500'
N
EDR



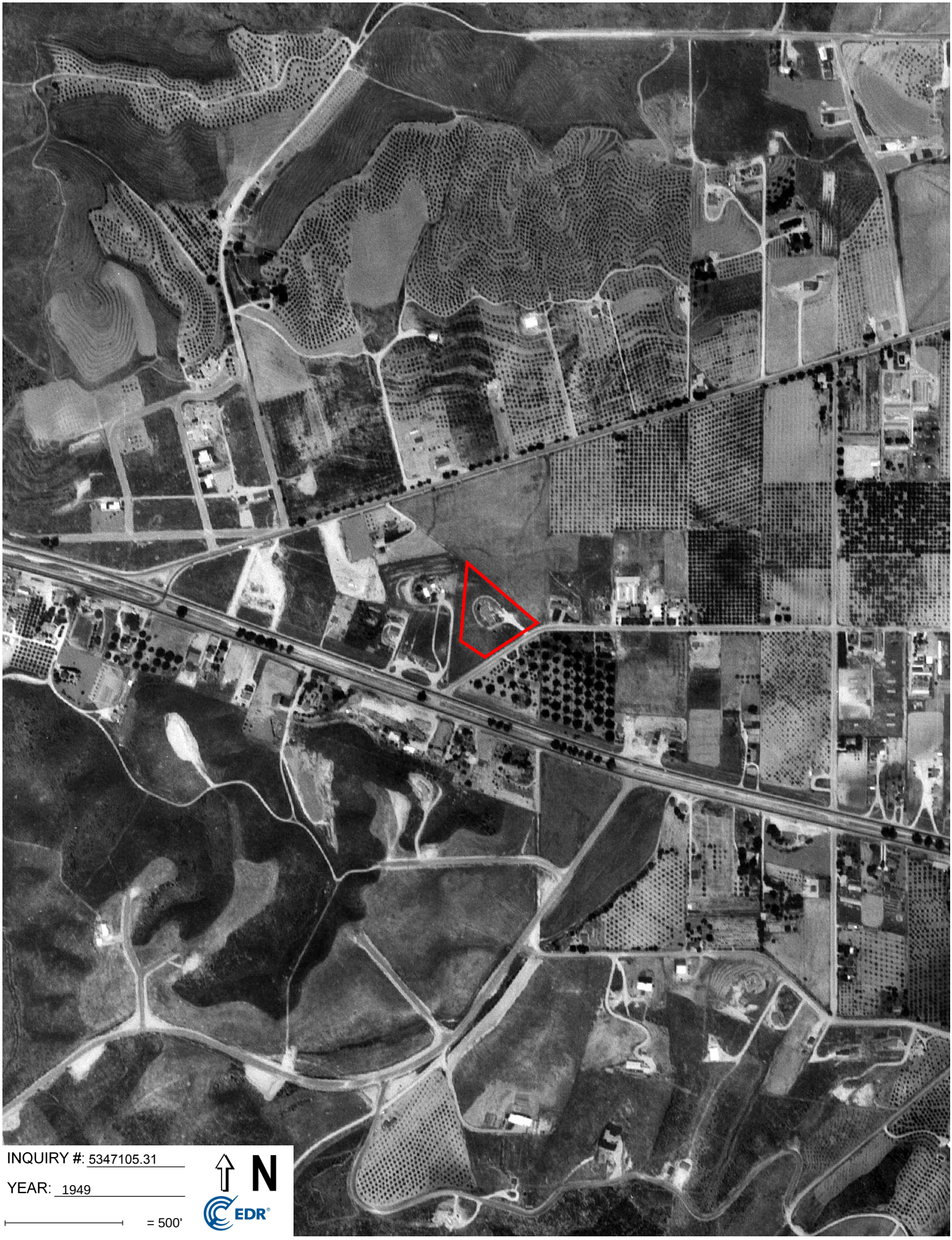
INQUIRY #: 5347105.31

YEAR: 1953

= 500'

N

EDR



INQUIRY #: 5347105.31

YEAR: 1949

= 500'

N

EDR



INQUIRY #: 5347105.31

YEAR: 1938

= 500'

N

EDR

APPENDIX A

PHOTOGRAPHS OF PROPERTY AND VICINITY



1. VIEW OF PROPERTY FROM NORTHEAST CORNER LOOKING WEST.



2. VIEW OF PROPERTY FROM WEST SIDE LOOKING EAST.



3. RESIDENTIAL HOME AT NORTH-CENTER AREA OF PROPERTY.



4. INTERIOR OF RESIDENTIAL HOME ON PROPERTY.



5. GRADED PARKING AREA AT NORTHWEST CORNER OF PROPERTY.



6. NORTH BOUNDARY OF PROPERTY ALONG AVENUE E.



7. WEST BOUNDARY OF PROPERTY ALONG DUNLAP AVENUE.



8. ADJACENT EAST SITE, EAST OF DUNLAP AVENUE.



9. ADJACENT NORTH RESIDENTIAL HOME, NORTH OF AVENUE E.



10. RESTAURANTS ADJOINING WEST OF PROPERTY.

APPENDIX B

RESPONSE TO INTERVIEW QUESTIONS

SITE ADDRESS: 31479 Avenue E, Yucaipa (Gudrun)
APN: 0300-192-07 & -08

DATE OF RESPONSE: 8-30-18

RESPONDENT NAME & TITLE: VANTAGE ONE REAL ESTATE INVESTMENTS, LLC
Tom Robinson, MANAGING MEMBER

RESPONDENT SIGNATURE:

THE
REYNOLDS GROUP
A California Corporation

CURRENT OWNER PHASE I QUESTIONS (USE ADDITIONAL SHEETS IF NECESSARY TO COMPLETELY ANSWER THE FOLLOWING QUESTIONS:

1. WHO IS THE LEGAL OWNER/ENTITY OF THE PROPERTY? GUDRUN G. STRONG, TRUSTEE OF THE GUDRUN G. STRONG TRUST, DATED JULY 31, 2006
2. HOW LONG HAVE YOU OWNED THE PROPERTY? IF LESS THAN 5 YEARS, PLEASE PROVIDE PREVIOUS OWNER CONTACT INFORMATION? DO NOT OWN
3. PLEASE PROVIDE HISTORICAL USES AT THE PROPERTY? RESIDENTIAL USE TO OUR KNOWLEDGE
4. ARE YOU AWARE OF ANY PREVIOUS ENVIRONMENTAL INVESTIGATIONS PERFORMED AT THE PROPERTY? IF SO, PLEASE PROVIDE A COPY OF THE REPORT(S). NOT TO OUR KNOWLEDGE
5. DO ANY WELLS, UNDERGROUND STORAGE TANKS, CLARIFIERS, OR HYDRAULIC LIFTS EXIST AT THE PROPERTY? ANY CHEMICAL USE? ANY HAZARDOUS DUMPING? NOT TO OUR KNOWLEDGE
6. ARE YOU AWARE OF ANY EXISTING OR HISTORICAL ENVIRONMENTAL HAZARDS AT THE PROPERTY? NOT TO OUR KNOWLEDGE
7. DO ANY ENVIRONMENTAL LIENS, ENGINEERING CONTROLS OR LAND USE RESTRICTIONS EXIST FOR THE PROPERTY? NOT TO OUR KNOWLEDGE
8. WHAT IS THE PURPOSE OF HAVING THIS PHASE I PERFORMED? (EX: POTENTIAL SALE, REFINANCE, INTERNAL DUE DILIGENCE ONLY) POTENTIAL PURCHASE OF PROPERTY
9. IF APPLICABLE, DO YOU BELIEVE THE LISTED SALE PRICE OF THE PROPERTY IS "REASONABLE" AND NOT NOTABLY DISCOUNTED DUE TO POTENTIAL ENVIRONMENTAL ISSUES? YES

Please e-mail or fax your response to me just as soon as possible and no later than **July 13, 2018**. You may send it to fischer@reynolds-group.com or by fax to (714)730-6476. If you have questions, please feel free in calling me in our offices at (714)730-5397 Ext. 123. Thanks very much!

THE REYNOLDS GROUP
a California corporation by:
Rosanne Fischer, REPA #419564

APPENDIX C

EDR ENVIRONMENTAL RADIUS MAP REPORT

Residential Property
31479 Avenue E
Yucaipa, CA 92399

Inquiry Number: 5347105.21s
June 27, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
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Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

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Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-9
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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

31479 AVENUE E
YUCAIPA, CA 92399

COORDINATES

Latitude (North):	34.0267090 - 34° 1' 36.15''
Longitude (West):	117.1169930 - 117° 7' 1.17''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	489199.1
UTM Y (Meters):	3764929.0
Elevation:	2083 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5630639 YUCAIPA, CA
Version Date:	2012
Northwest Map:	5630631 REDLANDS, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140603, 20140530
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
31479 AVENUE E
YUCAIPA, CA 92399

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	NTC YUCAIPA DUNLAP B	31470 DUNLAP BOULEVA	NPDES, CIWQS	Higher	1 ft.
A2	IN-N-OUT BURGER #318	31465 AVENUE E	San Bern. Co. Permit	Higher	31, 0.006, NNW
3	GK MARKET	31583 OUTER HWY 10	UST	Lower	285, 0.054, SSW
B4	CIRCLE MOBIL	31429 YUCAIPA BLVD	San Bern. Co. Permit	Higher	298, 0.056, NNW
B5	CIRCLE MOBIL	31429 YUCAIPA BLVD	UST	Higher	298, 0.056, NNW
B6	BAKER'S DRIVE THRU #	31453 YUCAIPA BLVD	San Bern. Co. Permit	Higher	301, 0.057, NW
B7	FRONTIER CALIFORNIA,	31432 YUCAIPA BLVD	San Bern. Co. Permit	Higher	456, 0.086, NNW
B8	HERMAN KEITH	31396 YUCAIPA BLVD	EDR Hist Auto	Higher	463, 0.088, NW
B9	HUGHES CONCRETE PROD	31361 YUCAIPA	SWEEPS UST, HIST UST, EMI	Higher	476, 0.090, NW
C10	ARCO AM/PM	31340 YUCAIPA BLVD	UST	Higher	485, 0.092, NW
C11	ARCO AM PM	31340 YUCAIPA BLVD	EDR Hist Auto	Higher	485, 0.092, NW
D12	CIRCLE SERVICE	31491 YUCAIPA BLVD	UST, SWEEPS UST, HIST UST	Higher	552, 0.105, NNE
D13	CIRCLE SERVICE	31491 YUCAIPA VLVD	HIST UST	Higher	552, 0.105, NNE
B14	CHEVRON STATION #992	31412 YUCAIPA BLVD	UST, SWEEPS UST	Higher	564, 0.107, NW
B15	99280	31412 YUCAIPA BLVD	HIST UST	Higher	564, 0.107, NW
B16	YUCAIPA CHEVRON	31412 YUCAIPA BLVD	EDR Hist Auto	Higher	564, 0.107, NW
B17	CHEVRON STATION #992	31412 YUCAIPA BLVD	HAZNET, San Bern. Co. Permit	Higher	564, 0.107, NW
B18	CHEVRON STATION NO 9	31412 YUCAIPA BLVD	RCRA-SQG, FINDS, ECHO	Higher	564, 0.107, NW
D19	GATEWAY TIRE & AUTO	31504 YUCAIPA BLVD	San Bern. Co. Permit	Higher	571, 0.108, North
D20	JC'S HAWG SHOP	31510 YUCAIPA BLVD	San Bern. Co. Permit	Higher	588, 0.111, North
C21	STEAMERS DRY CLEANER	31364 HAMPTON RD APT	EDR Hist Cleaner	Higher	644, 0.122, NW
C22	YUCAIPA GAS MART	31340 HAMPTON RD	UST	Lower	717, 0.136, WNW
C23	YUCAIPA GAS MART	31340 HAMPTON RD	San Bern. Co. Permit	Lower	717, 0.136, WNW
D24	EUROPEAN AUTOMOTIVE	31516 YUCAIPA	LUST, SWEEPS UST, HIST CORTESE, San Bern. Co....	Higher	762, 0.144, NNE
D25	JOHN LAMASTERS SERVI	31516 YUCAIPA BLVD	HIST UST	Higher	762, 0.144, NNE
26	ROCKY PLAZA MARKET &	31583 OUTER HWY 10 U	San Bern. Co. Permit	Lower	793, 0.150, SSE
E27	VERIZON WIRELESS: YU	31650 DUNLAP BLVD	San Bern. Co. Permit	Lower	874, 0.166, ESE
E28	CAL MESA STEEL, INC.	31682 DUNLAP BLVD.	HAZNET, San Bern. Co. Permit	Lower	1037, 0.196, ESE
E29	CAL MESA STEEL SUPPL	31682 DUNLAP RD	San Bern. Co. Permit	Lower	1037, 0.196, ESE
30	ALAN GRUBEL'S AUTOMO	31285 S OUTER HWY 10	San Bern. Co. Permit	Lower	1112, 0.211, West
31	CHAMPIONSHIP AUTOMOT	31763 OUTER HWY 10 S	San Bern. Co. Permit	Lower	1114, 0.211, SE
F32	IPS SERVICES INC	31710 DUNLAP BLVD	SWEEPS UST, HIST UST, San Bern. Co. Permit	Lower	1268, 0.240, ESE
F33	INLAND POWER SWEEPIN	31710 DUNLAP BLVD	RCRA NonGen / NLR, FINDS, ECHO	Lower	1268, 0.240, ESE
34	SORENSON ENGRG., INC	32032 DUNLAP BOULEVA	ENVIROSTOR, LUST, CPS-SLIC, AST, SWEEPS UST, HIST...	Higher	3465, 0.656, ESE
35	JORCO CHEMICAL COMPA	32185 EAST OUTER HIG	ENVIROSTOR, VCP	Lower	4492, 0.851, ESE

EXECUTIVE SUMMARY

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 FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

EXECUTIVE SUMMARY

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
CPS-SLIC ---------- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
AST ---------- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---------- Waste Management Unit Database
SWRCY ---------- Recycler Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program

CDL ---- Clandestine Drug Labs
Toxic Pits ---- Toxic Pits Cleanup Act Sites
US CDL ---- National Clandestine Laboratory Register
CERS HAZ WASTE ---- CERS HAZ WASTE

Local Lists of Registered Storage Tanks

CA FID UST ---- Facility Inventory Database
CERS TANKS ---- California Environmental Reporting System (CERS) Tanks

Local Land Records

LIENS ---- Environmental Liens Listing
LIENS 2 ---- CERCLA Lien Information
DEED ---- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System
CHMIRS ---- California Hazardous Material Incident Report System
LDS ---- Land Disposal Sites Listing
MCS ---- Military Cleanup Sites Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites

US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
UXO	Unexploded Ordnance Sites
DOCKET HWC	Hazardous Waste Compliance Docket Listing
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
UIC GEO	UIC GEO (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
CERS	CERS
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/01/2018 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
CHEVRON STATION NO 9	***31412 YUCAIPA BLVD***	***NW 0 - 1/8 (0.107 mi.)***	***B18***	***23***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/30/2018 has revealed that there are 2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SORENSON ENGRG., INC Facility Id: 71002160 Status: Inactive - Needs Evaluation	***32032 DUNLAP BOULEVA***	***ESE 1/2 - 1 (0.656 mi.)***	***34***	***39***

Lower Elevation	Address	Direction / Distance	Map ID	Page
JORCO CHEMICAL COMPA Facility Id: 60000998	***32185 EAST OUTER HIG***	***ESE 1/2 - 1 (0.851 mi.)***	***35***	***58***

Status: No Further Action

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EUROPEAN AUTOMOTIVE	***31516 YUCAIPA***	***NNE 1/8 - 1/4 (0.144 mi.)***	***D24***	***27***
Database: LUST REG 8, Date of Government Version: 02/14/2005				
Database: LUST, Date of Government Version: 03/12/2018				
Status: Completed - Case Closed				
Facility Status: Case Closed				
Global Id: T0607100415				
Global ID: T0607100415				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 6 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CIRCLE MOBIL	31429 YUCAIPA BLVD	NNW 0 - 1/8 (0.056 mi.)	B5	12
Database: UST, Date of Government Version: 03/12/2018				
Facility Id: FA0006989				
ARCO AM/PM	31340 YUCAIPA BLVD	NW 0 - 1/8 (0.092 mi.)	C10	15
Database: UST, Date of Government Version: 03/12/2018				
Facility Id: 88016863				
CIRCLE SERVICE	***31491 YUCAIPA BLVD***	***NNE 0 - 1/8 (0.105 mi.)***	***D12***	***16***
Database: UST, Date of Government Version: 03/12/2018				
Facility Id: 87012775				
CHEVRON STATION #992	***31412 YUCAIPA BLVD***	***NW 0 - 1/8 (0.107 mi.)***	***B14***	***19***
Database: UST, Date of Government Version: 03/12/2018				
Facility Id: 86009247				
Facility Id: FA0001907				

Lower Elevation	Address	Direction / Distance	Map ID	Page
GK MARKET	31583 OUTER HWY 10	SSW 0 - 1/8 (0.054 mi.)	3	11
Database: UST, Date of Government Version: 03/12/2018				

Facility Id: 89017447

YUCAIPA GAS MART | 31340 HAMPTON RD | WNW 1/8 - 1/4 (0.136 mi.) | C22 | 26
Database: UST, Date of Government Version: 03/12/2018
Facility Id: FA0001039

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 5 SWEEPS UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HUGHES CONCRETE PROD Status: A Tank Status: A Comp Number: 2777	***31361 YUCAIPA***	***NW 0 - 1/8 (0.090 mi.)***	***B9***	***13***
CIRCLE SERVICE Status: A Comp Number: 57285	***31491 YUCAIPA BLVD***	***NNE 0 - 1/8 (0.105 mi.)***	***D12***	***16***
CHEVRON STATION #992 Status: A Tank Status: A Comp Number: 63200	***31412 YUCAIPA BLVD***	***NW 0 - 1/8 (0.107 mi.)***	***B14***	***19***
EUROPEAN AUTOMOTIVE Status: A Tank Status: A Comp Number: 28083	***31516 YUCAIPA***	***NNE 1/8 - 1/4 (0.144 mi.)***	***D24***	***27***

Lower Elevation	Address	Direction / Distance	Map ID	Page
IPS SERVICES INC Status: A Comp Number: 10718	***31710 DUNLAP BLVD***	***ESE 1/8 - 1/4 (0.240 mi.)***	***F32***	***36***

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 6 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HUGHES CONCRETE PROD	***31361 YUCAIPA***	***NW 0 - 1/8 (0.090 mi.)***	***B9***	***13***

Facility Id: 00000002777				
CIRCLE SERVICE	***31491 YUCAIPA BLVD***	***NNE 0 - 1/8 (0.105 mi.)***	***D12***	***16***
Facility Id: 00000057285				
CIRCLE SERVICE	31491 YUCAIPA VLVD	NNE 0 - 1/8 (0.105 mi.)	D13	18
99280	31412 YUCAIPA BLVD	NW 0 - 1/8 (0.107 mi.)	B15	20
Facility Id: 00000063200				
JOHN LAMASTERS SERVI	31516 YUCAIPA BLVD	NNE 1/8 - 1/4 (0.144 mi.)	D25	31
Facility Id: 00000028083				

Lower Elevation	Address	Direction / Distance	Map ID	Page
IPS SERVICES INC	***31710 DUNLAP BLVD***	***ESE 1/8 - 1/4 (0.240 mi.)***	***F32***	***36***
Facility Id: 00000010718				

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 03/01/2018 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
INLAND POWER SWEEPIN	***31710 DUNLAP BLVD***	***ESE 1/8 - 1/4 (0.240 mi.)***	***F33***	***37***

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 is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EUROPEAN AUTOMOTIVE	***31516 YUCAIPA***	***NNE 1/8 - 1/4 (0.144 mi.)***	***D24***	***27***
Reg Id: 083602839T				

NPDES: A listing of NPDES permits, including stormwater.

A review of the NPDES list, as provided by EDR, and dated 03/14/2018 has revealed that there is 1 NPDES site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NTC YUCAIPA DUNLAP B	***31470 DUNLAP BOULEVA***	***0 - 1/8 (0.000 mi.)***	***A1***	***8***
Facility Status: Terminated				

EXECUTIVE SUMMARY

San Bern. Co. Permit: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 04/09/2018 has revealed that there are 16 San Bern. Co. Permit sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
IN-N-OUT BURGER #318 Facility Status: FEE EXEMPT Facility Id: FA0017451	31465 AVENUE E	NNW 0 - 1/8 (0.006 mi.)	A2	11
CIRCLE MOBIL Facility Status: ACTIVE Facility Id: FA0006989	31429 YUCAIPA BLVD	NNW 0 - 1/8 (0.056 mi.)	B4	11
BAKER'S DRIVE THRU # Facility Status: INACTIVE Facility Id: FA0012313	31453 YUCAIPA BLVD	NW 0 - 1/8 (0.057 mi.)	B6	12
FRONTIER CALIFORNIA, Facility Status: ACTIVE Facility Id: FA0007098	31432 YUCAIPA BLVD	NNW 0 - 1/8 (0.086 mi.)	B7	13
CHEVRON STATION #992 Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0001907	***31412 YUCAIPA BLVD***	***NW 0 - 1/8 (0.107 mi.)***	***B17***	***22***
GATEWAY TIRE & AUTO Facility Status: ACTIVE Facility Id: FA0003430	31504 YUCAIPA BLVD	N 0 - 1/8 (0.108 mi.)	D19	25
JC'S HAWG SHOP Facility Status: INACTIVE Facility Id: FA0004105	31510 YUCAIPA BLVD	N 0 - 1/8 (0.111 mi.)	D20	25
EUROPEAN AUTOMOTIVE Facility Status: ACTIVE Facility Status: FEE EXEMPT Facility Id: FA0002951	***31516 YUCAIPA***	***NNE 1/8 - 1/4 (0.144 mi.)***	***D24***	***27***

Lower Elevation	Address	Direction / Distance	Map ID	Page
YUCAIPA GAS MART Facility Status: ACTIVE Facility Id: FA0001039	31340 HAMPTON RD	WNW 1/8 - 1/4 (0.136 mi.)	C23	26
ROCKY PLAZA MARKET & Facility Status: INACTIVE Facility Id: FA0003472	31583 OUTER HWY 10 U	SSE 1/8 - 1/4 (0.150 mi.)	26	32
VERIZON WIRELESS: YU Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0000749 Facility Id: FA0013929	31650 DUNLAP BLVD	ESE 1/8 - 1/4 (0.166 mi.)	E27	33
CAL MESA STEEL, INC. Facility Status: ACTIVE Facility Status: INACTIVE Facility Id: FA0004342	***31682 DUNLAP BLVD.***	***ESE 1/8 - 1/4 (0.196 mi.)***	***E28***	***34***
CAL MESA STEEL SUPPL	31682 DUNLAP RD	ESE 1/8 - 1/4 (0.196 mi.)	E29	35

Facility Status: ACTIVE Facility Id: FA0001677				
ALAN GRUBEL'S AUTOMO Facility Status: ACTIVE Facility Id: FA0000797	31285 S OUTER HWY 10	W 1/8 - 1/4 (0.211 mi.)	30	35
CHAMPIONSHIP AUTOMOT Facility Status: INACTIVE Facility Id: FA0001852	31763 OUTER HWY 10 S	SE 1/8 - 1/4 (0.211 mi.)	31	36
IPS SERVICES INC Facility Status: INACTIVE Facility Id: FA0002422	***31710 DUNLAP BLVD***	***ESE 1/8 - 1/4 (0.240 mi.)***	***F32***	***36***

CIWQS: The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

A review of the CIWQS list, as provided by EDR, and dated 03/05/2018 has revealed that there is 1 CIWQS site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NTC YUCAIPA DUNLAP B	***31470 DUNLAP BOULEVA***	***0 - 1/8 (0.000 mi.)***	***A1***	***8***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 3 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HERMAN KEITH	31396 YUCAIPA BLVD	NW 0 - 1/8 (0.088 mi.)	B8	13
ARCO AM PM	31340 YUCAIPA BLVD	NW 0 - 1/8 (0.092 mi.)	C11	15
YUCAIPA CHEVRON	31412 YUCAIPA BLVD	NW 0 - 1/8 (0.107 mi.)	B16	21

EXECUTIVE SUMMARY

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there is 1 EDR Hist Cleaner site within approximately 0.125 miles of the target property.

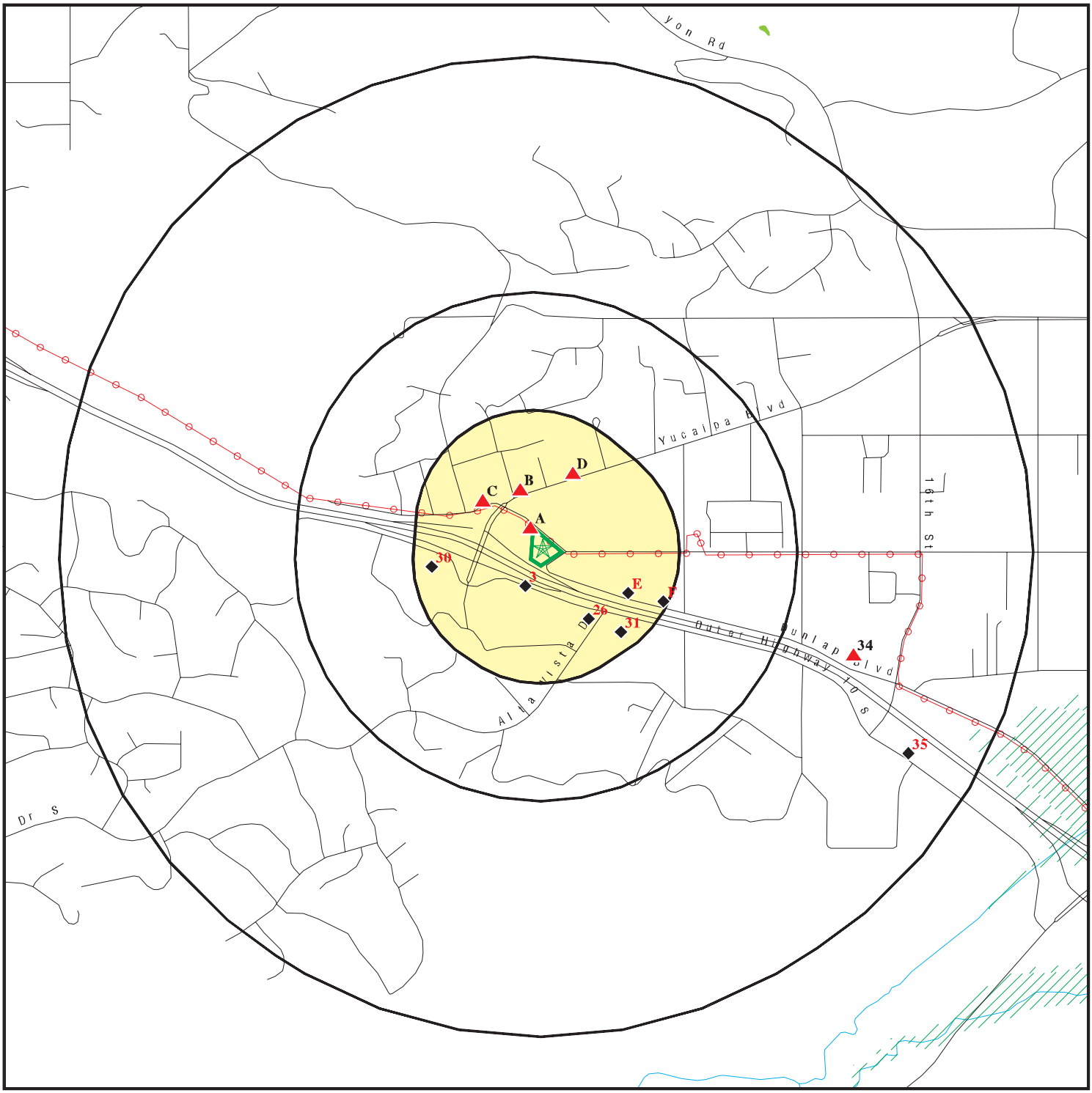
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
STEAMERS DRY CLEANER	31364 HAMPTON RD APT	NW 0 - 1/8 (0.122 mi.)	C21	26

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 4 records.

Site Name	Database(s)
USA CLEANERS YUCAIPA	CDL
METH-LAB YUCAIPA	DRYCLEANERS
EDISON/REDLANDS MGP	SEMS-ARCHIVE
	EDR MGP

OVERVIEW MAP - 5347105.21S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA
Power transmission lines
100-year flood zone
500-year flood zone
National Wetland Inventory
State Wetlands

Upgradient Area
Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Residential Property	CLIENT: The Reynolds Group
ADDRESS: 31479 Avenue E Yucaipa CA 92399	CONTACT: Rosanne Fischer
LAT/LONG: 34.026709 / 117.116993	INQUIRY #: 5347105.21s DATE: June 27, 2018 6:01 pm

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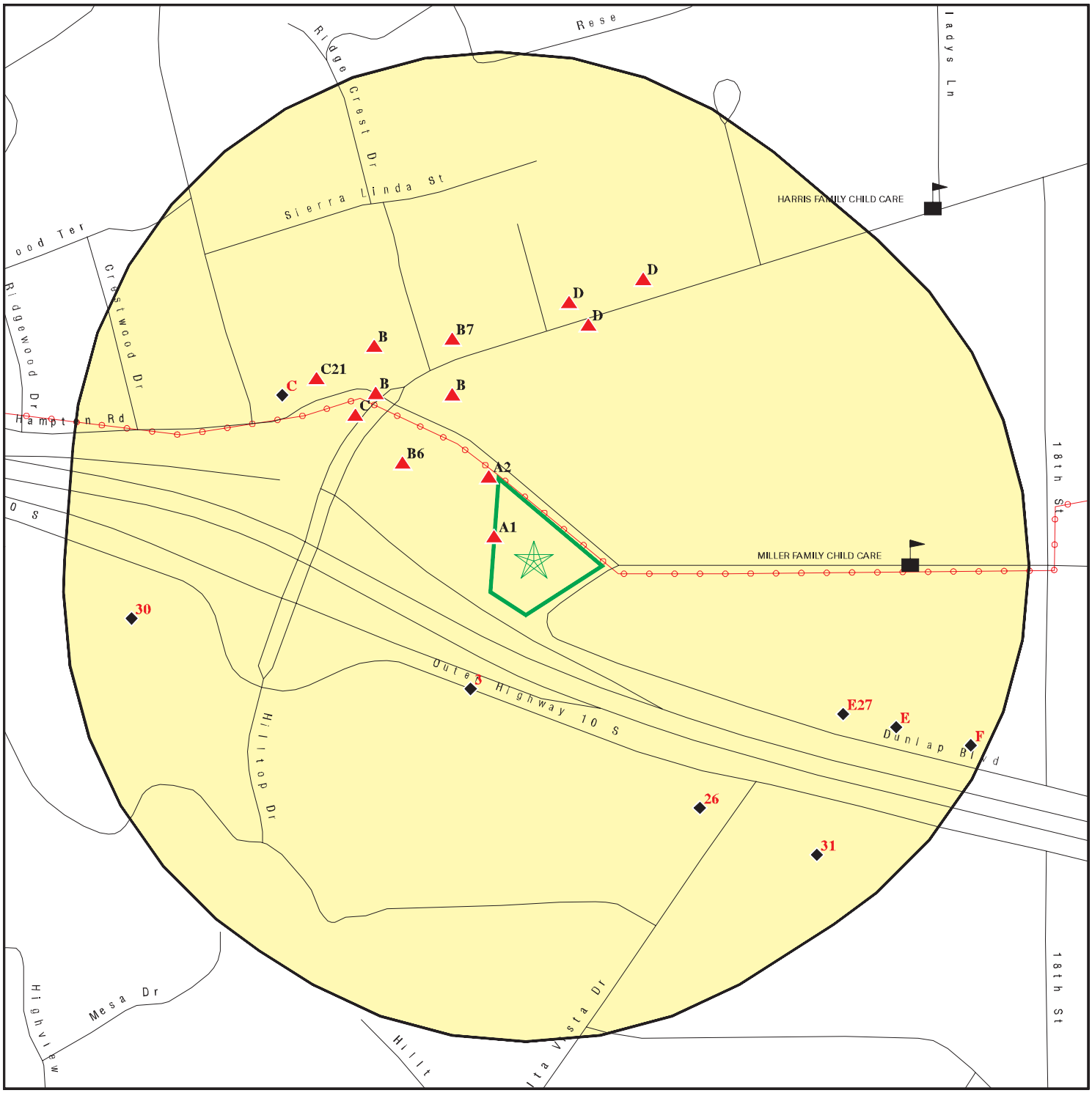
DETAIL MAP - 5347105.21S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Residential Property	CLIENT: The Reynolds Group
ADDRESS: 31479 Avenue E Yucaipa CA 92399	CONTACT: Rosanne Fischer
LAT/LONG: 34.026709 / 117.116993	INQUIRY #: 5347105.21s DATE: June 27, 2018 6:03 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		1	0	NR	NR	NR	1
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	2	NR	2
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	1	0	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		5	1	NR	NR	NR	6
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		3	2	NR	NR	NR	5
HIST UST	0.250		4	2	NR	NR	NR	6
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	1	NR	NR	NR	1
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		0	NR	NR	NR	NR	0
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	1	0	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		1	NR	NR	NR	NR	1
San Bern. Co. Permit	0.250		7	9	NR	NR	NR	16
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		1	NR	NR	NR	NR	1
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		3	NR	NR	NR	NR	3
EDR Hist Cleaner	0.125		1	NR	NR	NR	NR	1
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	26	17	0	2	0	45

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **NTC YUCAIPA DUNLAP BOULEVARD** **NPDES S117348172**
31470 DUNLAP BOULEVARD **CIWQS N/A**
< 1/8 **YUCAIPA, CA 92399**
1 ft.

Site 1 of 2 in cluster A

Relative: **Higher**

Actual: **2083 ft.**

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	450360
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	8 36C371243
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	05/09/2017
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	10/16/2014
PROCESSED DATE:	10/23/2014
STATUS CODE NAME:	Terminated
STATUS DATE:	05/22/2017
PLACE SIZE:	2.19
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Thomas Robinson
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	949-631-6620
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	sawlisa@yahoo.com
OPERATOR NAME:	VantageOne Real Estate Investments III LLC
OPERATOR ADDRESS:	4 Corporate Plaza Drive
OPERATOR CITY:	Newport Beach
OPERATOR STATE:	California
OPERATOR ZIP:	92660
OPERATOR CONTACT NAME:	Thomas Robinson
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	949-631-6620
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	sawlisa@yahoo.com
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	VantageOne Real Estate Investments III LLC
DEVELOPER ADDRESS:	4 Corporate Plaza Drive
DEVELOPER CITY:	Newport Beach
DEVELOPER STATE:	California
DEVELOPER ZIP:	92660
DEVELOPER CONTACT NAME:	Thomas Robinson
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	N

NTC YUCAIPA DUNLAP BOULEVARD (Continued) **S117348172**

CONSTYPE BELOW GROUND IND:	N
CONSTYPE CABLE LINE IND:	N
CONSTYPE COMM LINE IND:	N
CONSTYPE COMMERTIAL IND:	Y
CONSTYPE ELECTRICAL LINE IND:	N
CONSTYPE GAS LINE IND:	N
CONSTYPE INDUSTRIAL IND:	N
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	N
CONSTYPE RECONS IND:	N
CONSTYPE RESIDENTIAL IND:	N
CONSTYPE TRANSPORT IND:	N
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	N
CONSTYPE WATER SEWER IND:	N
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Live Oak Creek
CERTIFIER NAME:	Thomas Robinson
CERTIFIER TITLE:	Managing Member
CERTIFICATION DATE:	16-OCT-14
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	450360
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36C371243
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	10/23/2014
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	05/09/2017
Discharge Name:	VantageOne Real Estate Investments III LLC
Discharge Address:	4 Corporate Plaza Drive
Discharge City:	Newport Beach
Discharge State:	California
Discharge Zip:	92660
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported

NTC YUCAIPA DUNLAP BOULEVARD (Continued) **S117348172**

OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

CIWQS:

Agency:	VantageOne Real Estate Investments III LLC
Agency Address:	4 Corporate Plaza Drive Suite 210, Newport Beach, CA 92660
Place/Project Type:	Construction - Commercial
SIC/NAICS:	Not reported
Region:	8
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	8 36C371243
NPDES Number:	CAS000002
Adoption Date:	Not reported
Effective Date:	10/23/2014

NTC YUCAIPA DUNLAP BOULEVARD (Continued) **S117348172**

Termination Date:	05/09/2017
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	1
Violations within 5 years:	1
Latitude:	34.026365
Longitude:	-117.115944

A2 **IN-N-OUT BURGER #318** **San Bern. Co. Permit** **S122218650**
NNW **31465 AVENUE E** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.006 mi.
31 ft. **Site 2 of 2 in cluster A**

Relative: **Higher**
Actual: **2085 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0017451
Owner:	IN-N-OUT BURGER INC.
Permit Number:	PT0038408
Permit Category:	HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status:	FEE EXEMPT
Expiration Date:	06/30/2019

---

3 **GK MARKET** **UST** **U003976924**
SSW **31583 OUTER HWY 10** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.054 mi.
285 ft.

Relative: **Lower**
Actual: **2080 ft.**

UST:

Facility ID:	89017447
Permitting Agency:	SAN BERNARDINO COUNTY
Latitude:	34.0258476
Longitude:	-117.1140138

B4 **CIRCLE MOBIL** **San Bern. Co. Permit** **S105974516**
NNW **31429 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.056 mi.
298 ft. **Site 1 of 11 in cluster B**

Relative: **Higher**
Actual: **2093 ft.**

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0006989
Owner:	Circle B Industries, Inc.
Permit Number:	PT0011371
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0006989

CIRCLE MOBIL (Continued) **S105974516**

Owner: Circle B Industries, Inc.
Permit Number: PT0011372
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0006989
Owner: Circle B Industries, Inc.
Permit Number: PT0029702
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0006989
Owner: Circle B Industries, Inc.
Permit Number: PT0003195
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

B5 **CIRCLE MOBIL** **UST** **U004263973**
NNW **31429 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.056 mi.
298 ft. **Site 2 of 11 in cluster B**

Relative: Higher
Actual: 2093 ft.

UST:
Facility ID: FA0006989
Permitting Agency: San Bernardino County Fire Department
Latitude: 34.028099
Longitude: -117.117821

B6 **BAKER'S DRIVE THRU #137** **San Bern. Co. Permit** **S109598418**
NW **31453 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.057 mi.
301 ft. **Site 3 of 11 in cluster B**

Relative: Higher
Actual: 2086 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0012313
Owner: BAKER'S BURGERS INC
Permit Number: PT0021841
Permit Category: BULK CO2 AT RETAIL FOOD FACILITIES
Facility Status: INACTIVE
Expiration Date: 05/31/2010

B7 **FRONTIER CALIFORNIA, INC.: MENTONE RSU0** **San Bern. Co. Permit** **S104771965**
NNW **31432 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.086 mi.
456 ft. **Site 4 of 11 in cluster B**

Relative:
Higher

Actual:
2101 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0007098
Owner: Frontier California Inc.
Permit Number: PT0003922
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 05/31/2018

B8 **HERMAN KEITH** **EDR Hist Auto** **1020390481**
NW **31396 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.088 mi.
463 ft. **Site 5 of 11 in cluster B**

Relative:
Higher

Actual:
2090 ft.

EDR Hist Auto

Year:	Name:	Type:
1969	HERMAN KEITH	Gasoline Service Stations
1970	HERMAN KEITH	Gasoline Service Stations

B9 **HUGHES CONCRETE PROD.** **SWEEPS UST** **U001575871**
NW **31361 YUCAIPA** **HIST UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **EMI**
0.090 mi.
476 ft. **Site 6 of 11 in cluster B**

Relative:
Higher

Actual:
2086 ft.

SWEEPS UST:
Status: Active
Comp Number: 2777
Number: 9
Board Of Equalization: 44-019856
Referral Date: 03-23-92
Action Date: 03-23-92
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 36-000-002777-000003
Tank Status: A
Capacity: 6000
Active Date: 06-28-88
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 2

Status: Active
Comp Number: 2777
Number: 9
Board Of Equalization: 44-019856
Referral Date: 03-23-92
Action Date: 03-23-92
Created Date: 02-29-88

HUGHES CONCRETE PROD. (Continued) **U001575871**

Owner Tank Id: 2
SWRCB Tank Id: 36-000-002777-000004
Tank Status: A
Capacity: 550
Active Date: 06-28-88
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

HIST UST:
File Number: 00029FDE
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029FDE.pdf
Region: STATE
Facility ID: 00000002777
Facility Type: Other
Other Type: MANUFACTURER
Contact Name: W.H.HUGHES
Telephone: 7147947676
Owner Name: HUGHES CONCRETE PRODUCTS, INC
Owner Address: 31361 YUCAIPA BLVD
Owner City,St,Zip: YUCAIPA, CA 92399
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000300
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 003
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: None

Tank Num: 004
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: UNLEADED

HUGHES CONCRETE PROD. (Continued) **U001575871**

Container Construction Thickness: Not reported
Leak Detection: None

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EMI:

Year:	1987
County Code:	36
Air Basin:	SC
Facility ID:	21152
Air District Name:	SC
SIC Code:	1442
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

C10 **ARCO AM/PM** **UST** **U003785099**
NW **31340 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.092 mi.
485 ft. **Site 1 of 5 in cluster C**

Relative: **Higher**

Actual: **2083 ft.**

UST:

Facility ID:	88016863
Permitting Agency:	SAN BERNARDINO COUNTY
Latitude:	34.02761
Longitude:	-117.11899

C11 **ARCO AM PM** **EDR Hist Auto** **1021059509**
NW **31340 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.092 mi.
485 ft. **Site 2 of 5 in cluster C**

Relative: **Higher**

Actual: **2083 ft.**

EDR Hist Auto

Year:	Name:	Type:
1994	PETROMART INC	Convenience Stores
1995	PETROMART INC	Convenience Stores
1996	PETROMART INC	Convenience Stores
1997	PETROMART INC	Convenience Stores
1998	PETROMART INC	Convenience Stores
2001	PETROMART INC	Convenience Stores
2002	ARCO AM/PM	Convenience Stores
2003	ARCO AM/PM	Convenience Stores
2004	ARCO AM/PM	Convenience Stores
2005	ARCO AM/PM	Convenience Stores
2006	ARCO AM/PM	Convenience Stores
2007	ARCO AM PM	Convenience Stores

ARCO AM PM (Continued) **1021059509**

2008	ARCO AM PM	Convenience Stores
2009	ARCO AM PM	Convenience Stores
2010	BP NORTH AMERICA	Gasoline Service Stations, NEC
2010	ARCO AM PM	Convenience Stores
2011	ARCO AM PM	Convenience Stores
2011	BP NORTH AMERICA	Gasoline Service Stations, NEC
2012	ARCO AM PM	Convenience Stores
2013	ARCO AM PM	Convenience Stores
2014	ARCO AM PM	Convenience Stores

D12 **CIRCLE SERVICE** **UST** **U001575866**
NNE **31491 YUCAIPA BLVD** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399** **HIST UST**
0.105 mi.
552 ft. **Site 1 of 6 in cluster D**

Relative:
Higher

Actual:
2107 ft.

UST:

Facility ID:	87012775
Permitting Agency:	SAN BERNARDINO COUNTY
Latitude:	34.02874
Longitude:	-117.11643

SWEEPS UST:

Status:	Active
Comp Number:	57285
Number:	9
Board Of Equalization:	44-021251
Referral Date:	07-28-92
Action Date:	06-29-94
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	57285
Number:	Not reported
Board Of Equalization:	44-021251
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	36-000-057285-000001
Tank Status:	Not reported
Capacity:	7500
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	4

CIRCLE SERVICE (Continued) **U001575866**

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000002
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: LEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000003
Tank Status: Not reported
Capacity: 7500
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Not reported
Comp Number: 57285
Number: Not reported
Board Of Equalization: 44-021251
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 36-000-057285-000004
Tank Status: Not reported
Capacity: 500
Active Date: Not reported
Tank Use: OIL
STG: WASTE
Content: WASTE OIL
Number Of Tanks: Not reported

HIST UST:
File Number: Not reported
URL: Not reported
Region: STATE
Facility ID: 00000057285
Facility Type: Gas Station

CIRCLE SERVICE (Continued) **U001575866**

Other Type:	Not reported
Contact Name:	Not reported
Telephone:	8184427956
Owner Name:	CIRCLE "B" INDUSTRIES INC.
Owner Address:	P.O. BOX 519
Owner City,St,Zip:	TEMPLE CITY, CA 91780
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00000500
Tank Used for:	WASTE
Type of Fuel:	WASTE OIL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor, Pressure Test

D13 **CIRCLE SERVICE** **HIST UST** **S118408681**
NNE **31491 YUCAIPA VLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.105 mi.
552 ft. **Site 2 of 6 in cluster D**

Relative: HIST UST:
Higher

File Number:	00029C23
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029C23.pdf
Region:	Not reported
Facility ID:	Not reported
Facility Type:	Not reported
Other Type:	Not reported
Contact Name:	Not reported

Actual:
2107 ft.

CIRCLE SERVICE (Continued) **S118408681**

Telephone:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City,St,Zip:	Not reported
Total Tanks:	Not reported
Tank Num:	Not reported
Container Num:	Not reported
Year Installed:	Not reported
Tank Capacity:	Not reported
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

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B14 **CHEVRON STATION #99280/1476** **UST** **U003939026**
NW **31412 YUCAIPA BLVD** **SWEEPS UST** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.107 mi.
564 ft. **Site 7 of 11 in cluster B**

Relative:
Higher

Actual:
2095 ft.

UST:

Facility ID:	86009247
Permitting Agency:	SAN BERNARDINO COUNTY
Latitude:	34.029868
Longitude:	-117.117274
Facility ID:	FA0001907
Permitting Agency:	San Bernardino County Fire Department
Latitude:	34.028288
Longitude:	-117.118415

SWEEPS UST:

Status:	Active
Comp Number:	63200
Number:	9
Board Of Equalization:	44-021363
Referral Date:	07-28-92
Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	1
SWRCB Tank Id:	36-000-063200-000001
Tank Status:	A
Capacity:	1000
Active Date:	04-28-89
Tank Use:	OIL
STG:	W
Content:	WASTE OIL
Number Of Tanks:	4
Status:	Active
Comp Number:	63200
Number:	9
Board Of Equalization:	44-021363
Referral Date:	07-28-92

CHEVRON STATION #99280/1476 (Continued) **U003939026**

Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	2
SWRCB Tank Id:	36-000-063200-000002
Tank Status:	A
Capacity:	10000
Active Date:	04-28-89
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	63200
Number:	9
Board Of Equalization:	44-021363
Referral Date:	07-28-92
Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	3
SWRCB Tank Id:	36-000-063200-000003
Tank Status:	A
Capacity:	10000
Active Date:	04-28-89
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	63200
Number:	9
Board Of Equalization:	44-021363
Referral Date:	07-28-92
Action Date:	07-28-92
Created Date:	02-29-88
Owner Tank Id:	4
SWRCB Tank Id:	36-000-063200-000004
Tank Status:	A
Capacity:	10000
Active Date:	04-28-89
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

B15 **99280** **HIST UST** **U001575864**
NW **31412 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.107 mi.
564 ft. **Site 8 of 11 in cluster B**

Relative: HIST UST:
Higher

File Number:	00029BE6
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029BE6.pdf
Region:	STATE
Facility ID:	00000063200
Facility Type:	Gas Station

Actual:
2095 ft.

99280 (Continued) **U001575864**

Other Type:	Not reported
Contact Name:	LOPEZ,JAMES
Telephone:	7147943816
Owner Name:	CHEVRON U.S.A. INC.
Owner Address:	575 MARKET
Owner City,St,Zip:	SAN FRANCISCO, CA 94105
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	1965
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	1965
Tank Capacity:	00007000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000250
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	1965
Tank Capacity:	00003000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported
Container Construction Thickness:	0000170
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	1965
Tank Capacity:	00000550
Tank Used for:	WASTE
Type of Fuel:	Not reported
Container Construction Thickness:	0000100
Leak Detection:	Stock Inventor

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B16 **YUCAIPA CHEVRON** **EDR Hist Auto** **1022116982**
NW **31412 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.107 mi.
564 ft. **Site 9 of 11 in cluster B**

Relative: EDR Hist Auto
Higher

Actual:
2095 ft.

Year:	Name:	Type:
1992	YUCAIPA CHEVRON	Gasoline Service Stations
1993	YUCAIPA CHEVRON	Gasoline Service Stations
1994	YUCAIPA CHEVRON	Gasoline Service Stations

YUCAIPA CHEVRON (Continued) **1022116982**

1995	YUCAIPA CHEVRON	Gasoline Service Stations
1996	YUCAIPA CHEVRON	Gasoline Service Stations
1997	YUCAIPA CHEVRON	Gasoline Service Stations
1998	YUCAIPA CHEVRON	Gasoline Service Stations
2002	YUCAIPA CHEVRON	Gasoline Service Stations
2003	YUCAIPA CHEVRON	Gasoline Service Stations
2004	YUCAIPA CHEVRON	Gasoline Service Stations
2005	YUCAIPA CHEVRON	Gasoline Service Stations, NEC
2006	YUCAIPA CHEVRON	Gasoline Service Stations, NEC
2007	YUCAIPA CHEVRON	Gasoline Service Stations, NEC
2009	YUCAIPA CHEVRON	Gasoline Service Stations, NEC

B17 **CHEVRON STATION #99280/1476** **HAZNET** **S113102410**
NW **31412 YUCAIPA BLVD** **San Bern. Co. Permit** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.107 mi.
564 ft. **Site 10 of 11 in cluster B**

Relative:
Higher

Actual:
2095 ft.

HAZNET:

envid:	S113102410
Year:	2001
GEPAID:	CAL000196507
Contact:	MATTHEW FOSTER/MANAGER
Telephone:	9093891153
Mailing Name:	Not reported
Mailing Address:	31412 YUCAIPA BLVD
Mailing City,St,Zip:	YUCAIPA, CA 923990000
Gen County:	Not reported
TSD EPA ID:	KYD053348108
TSD County:	Not reported
Waste Category:	Solids or sludges with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Invalid Code
Tons:	0.46
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	San Bernardino

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0001907
Owner:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number:	PT0011638
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0001907
Owner:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number:	PT0011639
Permit Category:	UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status:	ACTIVE
Expiration Date:	10/31/2018

Region:	SAN BERNARDINO
Facility ID:	FA0001907
Owner:	CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)

CHEVRON STATION #99280/1476 (Continued) **S113102410**

Permit Number: PT0011640
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number: PT0020288
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number: PT0002453
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number: PT0003341
Permit Category: SPECIAL HANDLER
Facility Status: INACTIVE
Expiration Date: 10/31/2003

Region: SAN BERNARDINO
Facility ID: FA0001907
Owner: CHEVRON PRODUCTS COMPANY (A DIVISION OF CHEVRON U.S.A. INC.)
Permit Number: PT0003340
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 10/31/2003

B18 **CHEVRON STATION NO 99280** **RCRA-SQG 1000819732**
NW **31412 YUCAIPA BLVD** **FINDS CAD983657305**
< 1/8 **YUCAIPA, CA 92399** **ECHO**
0.107 mi.
564 ft. **Site 11 of 11 in cluster B**

Relative:
Higher

Actual:
2095 ft.

RCRA-SQG:
Date form received by agency: 06/17/2002
Facility name: CHEVRON STATION NO 99280
Facility address: 31412 YUCAIPA BLVD
YUCAIPA, CA 92399-1631
EPA ID: CAD983657305
Mailing address: P O BOX 6004
SAN RAMON, CA 94583
Contact: KATHY NORRIS
Contact address: P O BOX 6004
SAN RAMON, CA 94583
Contact country: US
Contact telephone: 925-842-5931
Contact email: Not reported
EPA Region: 09

CHEVRON STATION NO 99280 (Continued) **1000819732**

Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: CHEVRON PRODUCTS CO
Owner/operator address: P O BOX 6004
SAN RAMON, CA 94583
Owner/operator country: Not reported
Owner/operator telephone: 925-842-5931
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: 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.

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110002891041

Environmental Interest/Information System

CHEVRON STATION NO 99280 (Continued) **1000819732**

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000819732
Registry ID: 110002891041
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002891041

D19 **GATEWAY TIRE & AUTO SVC** **San Bern. Co. Permit** **S104766482**
North **31504 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.108 mi.
571 ft. **Site 3 of 6 in cluster D**

Relative: **Higher**
Actual: **2108 ft.**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0003430
Owner: CARDENAS, ARNULFO
Permit Number: PT0006411
Permit Category: SMALL QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 11/30/2018

Region: SAN BERNARDINO
Facility ID: FA0003430
Owner: CARDENAS, ARNULFO
Permit Number: PT0006412
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 11/30/2018

D20 **JC'S HAWG SHOP** **San Bern. Co. Permit** **S104905437**
North **31510 YUCAIPA BLVD** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.111 mi.
588 ft. **Site 4 of 6 in cluster D**

Relative: **Higher**
Actual: **2109 ft.**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0004105
Owner: SLAGEL, BRUCE
Permit Number: PT0009873
Permit Category: CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR

JC'S HAWG SHOP (Continued) **S104905437**

Facility Status: INACTIVE
Expiration Date: 12/31/2005

Region: SAN BERNARDINO
Facility ID: FA0004105
Owner: SLAGEL, BRUCE
Permit Number: PT0014134
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Facility Status: INACTIVE
Expiration Date: 12/31/2004

C21 **STEAMERS DRY CLEANERS** **EDR Hist Cleaner** **1020094956**
NW **31364 HAMPTON RD APT D** **N/A**
< 1/8 **YUCAIPA, CA 92399**
0.122 mi.
644 ft. **Site 3 of 5 in cluster C**

Relative: EDR Hist Cleaner
Higher

Actual:
2087 ft.

Year:	Name:	Type:
2006	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2007	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2008	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2009	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC
2010	STEAMERS DRY CLEANERS	Drycleaning Plants, Except Rugs, NEC

C22 **YUCAIPA GAS MART** **UST** **U004263529**
WNW **31340 HAMPTON RD** **N/A**
1/8-1/4 **YUCAIPA, CA 92399**
0.136 mi.
717 ft. **Site 4 of 5 in cluster C**

Relative: UST:
Lower
Facility ID: FA0001039
Permitting Agency: San Bernardino County Fire Department
Actual: Latitude: 34.028301
2075 ft. Longitude: -117.119667

C23 **YUCAIPA GAS MART** **San Bern. Co. Permit** **S109521083**
WNW **31340 HAMPTON RD** **N/A**
1/8-1/4 **YUCAIPA, CA 92399**
0.136 mi.
717 ft. **Site 5 of 5 in cluster C**

Relative: San Bern. Co. Permit:
Lower
Region: SAN BERNARDINO
Facility ID: FA0001039
Actual: Owner: PATEL, NAYAN & PATEL, SUNIL
2075 ft. Permit Number: PT0004050
Permit Category: HAZMAT HANDLER - UST ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039

YUCAIPA GAS MART (Continued) **S109521083**

Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0023925
Permit Category: WASTE INCIDENTAL UST OPERATION ONLY
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010973
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010974
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001039
Owner: PATEL, NAYAN & PATEL, SUNIL
Permit Number: PT0010975
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: ACTIVE
Expiration Date: 10/31/2018

D24 **EUROPEAN AUTOMOTIVE** **LUST** **S102037889**
NNE **31516 YUCAIPA** **SWEEPS UST** **N/A**
1/8-1/4 **YUCAIPA, CA 92399** **HIST CORTESE**
0.144 mi. **San Bern. Co. Permit**
762 ft. **Site 5 of 6 in cluster D**

Relative: Higher
Actual: 2113 ft.

LUST:
Lead Agency: SAN BERNARDINO COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607100415
Global Id: T0607100415
Latitude: 34.029189
Longitude: -117.115917
Status: Completed - Case Closed
Status Date: 10/31/1996
Case Worker: JC
RB Case Number: 083602839T
Local Agency: SAN BERNARDINO COUNTY
File Location: Local Agency
Local Case Number: 96027
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0607100415
Contact Type: Local Agency Caseworker
Contact Name: JACKSON CRUTSINGER

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Organization Name: SAN BERNARDINO COUNTY
Address: 620 SOUTH E STREET
City: SAN BERNARDINO
Email: jcrutsinger@sbcfire.org
Phone Number: Not reported

Global Id: T0607100415
Contact Type: Regional Board Caseworker
Contact Name: VALERIE JAHN-BULL
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: valerie.jahn-bull@waterboards.ca.gov
Phone Number: 9517824903

LUST:
Global Id: T0607100415
Action Type: REMEDIATION
Date: 05/22/1996
Action: Not reported

Global Id: T0607100415
Action Type: Other
Date: 05/22/1996
Action: Leak Discovery

Global Id: T0607100415
Action Type: Other
Date: 05/22/1996
Action: Leak Stopped

Global Id: T0607100415
Action Type: Other
Date: 06/05/1996
Action: Leak Reported

Global Id: T0607100415
Action Type: ENFORCEMENT
Date: 09/04/1996
Action: LOP Case Closure Summary to RB

Global Id: T0607100415
Action Type: ENFORCEMENT
Date: 10/31/1996
Action: Closure/No Further Action Letter

LUST:
Global Id: T0607100415
Status: Open - Case Begin Date
Status Date: 05/22/1996

Global Id: T0607100415
Status: Open - Site Assessment
Status Date: 05/22/1996

Global Id: T0607100415

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Status: Open - Site Assessment
Status Date: 06/05/1996

Global Id: T0607100415
Status: Completed - Case Closed
Status Date: 10/31/1996

LUST REG 8:

Region:	8
County:	San Bernardino
Regional Board:	Santa Ana Region
Facility Status:	Case Closed
Case Number:	083602839T
Local Case Num:	96027
Case Type:	Aquifer affected
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	Not reported
Cross Street:	RIDGECREST
Enf Type:	CLOS
Funding:	Not reported
How Discovered:	Tank Closure
How Stopped:	Not reported
Leak Cause:	UNK
Leak Source:	UNK
Global ID:	T0607100415
How Stopped Date:	5/22/1996
Enter Date:	6/20/1996
Date Confirmation of Leak Began:	5/22/1996
Date Preliminary Assessment Began:	5/22/1996
Discover Date:	5/22/1996
Enforcement Date:	Not reported
Close Date:	10/31/1996
Date Prelim Assessment Workplan Submitted:	Not reported
Date Pollution Characterization Began:	6/5/1996
Date Remediation Plan Submitted:	Not reported
Date Remedial Action Underway:	Not reported
Date Post Remedial Action Monitoring:	Not reported
Enter Date:	6/20/1996
GW Qualifies:	Not reported
Soil Qualifies:	Not reported
Operator:	Not reported
Facility Contact:	Not reported
Interim:	Not reported
Oversite Program:	LUST
Latitude:	34.0283624
Longitude:	-117.1180938
MTBE Date:	Not reported
Max MTBE GW:	Not reported
MTBE Concentration:	1
Max MTBE Soil:	Not reported
MTBE Fuel:	1
MTBE Tested:	MTBE Detected. Site tested for MTBE & MTBE detected
MTBE Class:	*
Staff:	VJJ
Staff Initials:	JC3

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

Lead Agency: Local Agency
Local Agency: 36000L
Hydr Basin #: UPPER SANTA ANA VALL
Beneficial: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Work Suspended: Not reported
Summary: Not reported

SWEEPS UST:
Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 1
SWRCB Tank Id: 36-000-028083-000001
Tank Status: A
Capacity: 7500
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: 4

Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 2
SWRCB Tank Id: 36-000-028083-000002
Tank Status: A
Capacity: 7500
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: LEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 3
SWRCB Tank Id: 36-000-028083-000003
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL

EUROPEAN AUTOMOTIVE (Continued) **S102037889**

STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 28083
Number: 9
Board Of Equalization: 44-020831
Referral Date: 07-28-92
Action Date: 07-28-92
Created Date: 02-29-88
Owner Tank Id: 4
SWRCB Tank Id: 36-000-028083-000004
Tank Status: A
Capacity: Not reported
Active Date: 07-01-85
Tank Use: UNKNOWN
STG: P
Content: Not reported
Number Of Tanks: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 36
Reg By: LTNKA
Reg Id: 083602839T

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002951
Owner: ARYAFAR, BEHROUZ
Permit Number: PT0002763
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR SPECIAL
Facility Status: ACTIVE
Expiration Date: 12/31/2018

Region: SAN BERNARDINO
Facility ID: FA0002951
Owner: ARYAFAR, BEHROUZ
Permit Number: PT0002764
Permit Category: HAZMAT HANDLER GENERAL ACT.(NB)
Facility Status: FEE EXEMPT
Expiration Date: 12/31/2003

D25 **JOHN LAMASTERS SERVICE** **HIST UST** **U001575874**
NNE **31516 YUCAIPA BLVD** **N/A**
1/8-1/4 **YUCAIPA, CA 92399**
0.144 mi.
762 ft. **Site 6 of 6 in cluster D**

Relative:
Higher

Actual:
2113 ft.

HIST UST:
File Number: 00029B7C
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029B7C.pdf
Region: STATE
Facility ID: 00000028083
Facility Type: Gas Station
Other Type: Not reported

JOHN LAMASTERS SERVICE (Continued) **U001575874**

Contact Name:	JOHN LAMASTER
Telephone:	7147943332
Owner Name:	CHET CRILLY
Owner Address:	31520 YUCAIPA BLVD.
Owner City,St,Zip:	YUCAIPA, CA 92399
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00007500
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor
Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	Not reported
Type of Fuel:	Not reported
Container Construction Thickness:	Not reported
Leak Detection:	Not reported

Click here for Geo Tracker PDF:

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26 **ROCKY PLAZA MARKET & LIQUOR** **San Bern. Co. Permit** **S110374351**
SSE **31583 OUTER HWY 10 UNIT 4** **N/A**
1/8-1/4 **YUCAIPA, CA 92399**
0.150 mi.
793 ft.

Relative:
Lower

Actual:
2078 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0003472
Owner:	ABDULNOUR, SUHEIL
Permit Number:	PT0004155
Permit Category:	HAZMAT HANDLER - UST ONLY
Facility Status:	INACTIVE

ROCKY PLAZA MARKET & LIQUOR (Continued) **S110374351**

Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0010998
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0010999
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

Region: SAN BERNARDINO
Facility ID: FA0003472
Owner: ABDULNOUR, SUHEIL
Permit Number: PT0011000
Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
Facility Status: INACTIVE
Expiration Date: 04/30/2013

E27
ESE
1/8-1/4
0.166 mi.
874 ft.

VERIZON WIRELESS: YUCAIPA **San Bern. Co. Permit** **S104763380**
31650 DUNLAP BLVD **N/A**
YUCAIPA, CA 92399

Site 1 of 3 in cluster E

Relative:
Lower

Actual:
2081 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0000749
Owner: Verizon Wireless
Permit Number: PT0008177
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0013929
Owner: AMERICAN TOWERS - EH&S Dept.
Permit Number: PT0024606
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status: INACTIVE
Expiration Date: 09/30/2014

Region: SAN BERNARDINO
Facility ID: FA0000749
Owner: Verizon Wireless
Permit Number: PT0018578
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 09/30/2013

E28 **CAL MESA STEEL, INC.** **HAZNET** **S104764527**
ESE **31682 DUNLAP BLVD.** **San Bern. Co. Permit** **N/A**
1/8-1/4 **YUCAIPA, CA 92399**
0.196 mi.
1037 ft. **Site 2 of 3 in cluster E**

Relative:
Lower

Actual:
2080 ft.

HAZNET:

envid:	S104764527
Year:	2013
GEPAID:	CAC002733059
Contact:	RANDY LAZZARD
Telephone:	9097947774
Mailing Name:	Not reported
Mailing Address:	31682 DUNLAP BLVD.
Mailing City,St,Zip:	YUCAIPA, CA 92399
Gen County:	San Bernardino
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.76
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Not reported

envid:	S104764527
Year:	2013
GEPAID:	CAC002733059
Contact:	RANDY LAZZARD
Telephone:	9097947774
Mailing Name:	Not reported
Mailing Address:	31682 DUNLAP BLVD.
Mailing City,St,Zip:	YUCAIPA, CA 92399
Gen County:	San Bernardino
TSD EPA ID:	CAD097030993
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.035
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Not reported

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0004342
Owner:	New Cingular Wireless PCS, LLC dba AT&T Mobility
Permit Number:	PT0008338
Permit Category:	HAZARDOUS MATERIALS 1-3 CHEMICALS SPECIAL
Facility Status:	ACTIVE
Expiration Date:	11/30/2018

Region:	SAN BERNARDINO
Facility ID:	FA0004342
Owner:	New Cingular Wireless PCS, LLC dba AT&T Mobility
Permit Number:	PT0020797
Permit Category:	EPCRA FACILITY

CAL MESA STEEL, INC. (Continued) **S104764527**

Facility Status: INACTIVE
Expiration Date: 11/30/2013

E29
ESE
1/8-1/4
0.196 mi.
1037 ft.

CAL MESA STEEL SUPPLY INC **San Bern. Co. Permit** **S122218481**
31682 DUNLAP RD **N/A**
YUCAIPA, CA 92399

Site 3 of 3 in cluster E

Relative:
Lower

Actual:
2080 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0001677
Owner: Onelda Snyder
Permit Number: PT0007948
Permit Category: HAZARDOUS MATERIALS 4-10 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 05/31/2018

Region: SAN BERNARDINO
Facility ID: FA0001677
Owner: Onelda Snyder
Permit Number: PT0014180
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR
Facility Status: ACTIVE
Expiration Date: 05/31/2018

30
West
1/8-1/4
0.211 mi.
1112 ft.

ALAN GRUBEL'S AUTOMOTIVE **San Bern. Co. Permit** **S105158993**
31285 S OUTER HWY 10 **N/A**
REDLANDS, CA 92373

Relative:
Lower

Actual:
2046 ft.

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0000797
Owner: James Dodd
Permit Number: PT0009944
Permit Category: CONDITIONALLY EXEMPT SM QTY GENERATOR
Facility Status: ACTIVE
Expiration Date: 10/31/2018

Region: SAN BERNARDINO
Facility ID: FA0000797
Owner: James Dodd
Permit Number: PT0009945
Permit Category: HAZARDOUS MATERIALS 1-3 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 10/31/2018

31
SE
1/8-1/4
0.211 mi.
1114 ft.

CHAMPIONSHIP AUTOMOTIVE
31763 OUTER HWY 10 S
REDLANDS, CA 92373

San Bern. Co. Permit **S105047617**
N/A

Relative:
Lower

Actual:
2076 ft.

San Bern. Co. Permit:

Region:	SAN BERNARDINO
Facility ID:	FA0001852
Owner:	CHAMPIONSHIP AUTOMOTIVE
Permit Number:	PT0000440
Permit Category:	SPECIAL HANDLER
Facility Status:	INACTIVE
Expiration Date:	03/31/2005

Region:	SAN BERNARDINO
Facility ID:	FA0001852
Owner:	CHAMPIONSHIP AUTOMOTIVE
Permit Number:	PT0000441
Permit Category:	SPECIAL GENERATOR
Facility Status:	INACTIVE
Expiration Date:	03/31/2005

F32
ESE
1/8-1/4
0.240 mi.
1268 ft.

IPS SERVICES INC
31710 DUNLAP BLVD
YUCAIPA, CA 92399

Site 1 of 2 in cluster F

SWEEPS UST **U001575872**
HIST UST **N/A**
San Bern. Co. Permit

Relative:
Lower

Actual:
2079 ft.

SWEEPS UST:

Status:	Active
Comp Number:	10718
Number:	9
Board Of Equalization:	Not reported
Referral Date:	03-24-92
Action Date:	03-24-92
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Not reported
Comp Number:	10718
Number:	Not reported
Board Of Equalization:	Not reported
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	36-000-010718-000001
Tank Status:	Not reported
Capacity:	12000
Active Date:	Not reported
Tank Use:	M.V. FUEL

IPS SERVICES INC (Continued) **U001575872**

STG: PRODUCT
Content: LEADED
Number Of Tanks: 1

HIST UST:
File Number: 00029D83
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00029D83.pdf
Region: STATE
Facility ID: 00000010718
Facility Type: Other
Other Type: CONTRACTOR
Contact Name: DENNIS C. RIEGER
Telephone: 7149859303
Owner Name: DENNIS C. RIEGER
Owner Address: 31046 E. SUNSET DR. SO
Owner City,St,Zip: REDLANDS, CA 92373
Total Tanks: 0001

Tank Num: 001
Container Num: 1
Year Installed: 1980
Tank Capacity: 00012000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0002422
Owner: COLLISION CONCEPT
Permit Number: PT0004865
Permit Category: SPECIAL GENERATOR
Facility Status: INACTIVE
Expiration Date: 05/31/1999

F33 **INLAND POWER SWEEPING** **RCRA NonGen / NLR** **1000151894**
ESE **31710 DUNLAP BLVD** **FINDS** **CAD073571648**
1/8-1/4 **YUCAIPA, CA 92399** **ECHO**
0.240 mi.
1268 ft. **Site 2 of 2 in cluster F**

Relative:
Lower

Actual:
2079 ft.

RCRA NonGen / NLR:
Date form received by agency: 07/10/1980
Facility name: INLAND POWER SWEEPING
Facility address: 31710 DUNLAP BLVD
YUCAIPA, CA 92399
EPA ID: CAD073571648
Mailing address: PO BOX 322
YUCAIPA, CA 92399
Contact: ENVIRONMENTAL MANAGER
Contact address: 31710 DUNLAP BLVD
YUCAIPA, CA 92399
Contact country: US
Contact telephone: 714-825-3314

INLAND POWER SWEEPING (Continued) **1000151894**

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: KERRY A RIEGER & DENNIS C RIEGER
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
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
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
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 waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: Yes
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002657296

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource

INLAND POWER SWEEPING (Continued) **1000151894**

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.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000151894
Registry ID:	110002657296
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002657296

34
ESE
1/2-1
0.656 mi.
3465 ft.

Relative:
Higher

Actual:
2092 ft.

SORENSON ENGRG., INC.
32032 DUNLAP BOULEVARD
YUCAIPA, CA 92399

ENVIROSTOR **U001575886**
LUST **N/A**
CPS-SLIC
AST
SWEEPS UST
HIST UST
EMI
NPDES
San Bern. Co. Permit
CIWQS

ENVIROSTOR:

Facility ID:	71002160
Status:	Inactive - Needs Evaluation
Status Date:	Not reported
Site Code:	Not reported
Site Type:	Tiered Permit
Site Type Detailed:	Tiered Permit
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Not reported
Division Branch:	Cleanup Cypress
Assembly:	42
Senate:	23
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	34.02339
Longitude:	-117.1059
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CAD008261737
Alias Type:	EPA Identification Number
Alias Name:	110000497971
Alias Type:	EPA (FRS #)

SORENSON ENGRG., INC. (Continued) **U001575886**

Alias Name: 71002160
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: Not reported
Completed Sub Area Name: Not reported
Completed Document Type: Not reported
Completed Date: Not reported
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LUST:
Lead Agency: SAN BERNARDINO COUNTY
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607199171
Global Id: T0607199171
Latitude: 34.023141
Longitude: -117.105568
Status: Completed - Case Closed
Status Date: 05/04/2004
Case Worker: CR2
RB Case Number: 083603657T
Local Agency: SAN BERNARDINO COUNTY
File Location: Local Agency
Local Case Number: 2000001
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline, MTBE / TBA / Other Fuel Oxygenates
Site History: Not reported

LUST:
Global Id: T0607199171
Contact Type: Local Agency Caseworker
Contact Name: CATHERINE RICHARDS
Organization Name: SAN BERNARDINO COUNTY
Address: 620 SOUTH E STREET
City: SAN BERNARDINO
Email: crichards@sbcfire.org
Phone Number: 9093868419

Global Id: T0607199171
Contact Type: Regional Board Caseworker
Contact Name: ROSE SCOTT
Organization Name: SANTA ANA RWQCB (REGION 8)
Address: 3737 MAIN STREET, SUITE 500
City: RIVERSIDE
Email: rose.scott@waterboards.ca.gov
Phone Number: 9513206375

SORENSON ENGRG., INC. (Continued) **U001575886**

LUST:
Global Id: T0607199171
Action Type: REMEDIATION
Date: 06/01/2000
Action: Excavation

Global Id: T0607199171
Action Type: Other
Date: 03/02/2000
Action: Leak Discovery

Global Id: T0607199171
Action Type: ENFORCEMENT
Date: 12/11/2003
Action: * No Action

Global Id: T0607199171
Action Type: ENFORCEMENT
Date: 05/04/2004
Action: Closure/No Further Action Letter - #2000001

Global Id: T0607199171
Action Type: Other
Date: 03/02/2000
Action: Leak Stopped

Global Id: T0607199171
Action Type: Other
Date: 03/15/2000
Action: Leak Reported

LUST:
Global Id: T0607199171
Status: Open - Case Begin Date
Status Date: 03/02/2000

Global Id: T0607199171
Status: Open - Site Assessment
Status Date: 05/03/2000

Global Id: T0607199171
Status: Open - Remediation
Status Date: 06/16/2000

Global Id: T0607199171
Status: Completed - Case Closed
Status Date: 05/04/2004

CPS-SLIC:
Region: STATE
Facility Status: **Open - Assessment & Interim Remedial Action**
Status Date: 02/08/2013
Global Id: SL0607135888
Lead Agency: SANTA ANA RWQCB (REGION 8)
Lead Agency Case Number: Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

Latitude:	34.023391
Longitude:	-117.105932
Case Type:	Cleanup Program Site
Case Worker:	AK
Local Agency:	Not reported
RB Case Number:	2080038
File Location:	Regional Board
Potential Media Affected:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Other Chlorinated Hydrocarbons, Tetrachloroethylene (PCE), Trichloroethylene (TCE)
Site History:	The Site is located approximately 0.75 miles north of Interstate 10 and the Live Oak Canyon exit, within the southern portion of San Bernardino County. The Site occupies approximately 10 acres of land within a mixed industrial and residential area. The Site is relatively flat with an average elevation of 2,085 feet above mean sea level. At the Site, first groundwater is generally present within lenses of silty sand that are interbedded in a slightly to moderately plastic clay-rich soil mixture. The general groundwater flow direction at the Site is toward the northeast, with an average groundwater gradient of 0.021 feet per foot. The depth to the groundwater in the existing monitoring wells ranges from 29 to 46 feet at the northern area of the Site. Groundwater was not encountered in the monitoring wells installed to a depth of 100 feet, in the southern area of the Site. There are currently seventeen monitoring wells at on- and off-Site locations: JMW-1 through JMW-4, JMW-6, JMW-8 through JMW-11, and JMW-17 and JMW-18 at on-Site locations. JMW-7 at Dafna Village (private property) JMW-13, JMW-14, and JMW-15(S/D) on public streets in the downgradient area. Previous investigations at the Site included evaluations of soil vapor, soil matrix and groundwater (using Hydropunch technology and installation of groundwater monitoring wells) to define the extent of VOCs in the soil and groundwater. Soil and soil vapor impacts were detected in the southern portion of the Site. Soil vapor impacts were not detected in the northern portion of the Site. During the most recent investigation, tetrachloroethylene (PCE) was detected in soil vapor samples with a concentration range of 0.137 to 381 micrograms per liter (a%g/L). PCE concentrations in soil ranged from 5 to 319 micrograms per kilogram (a%g/kg). The maximum PCE concentration detected in groundwater was 34,200 a%g/L, in a sample from well JMW-9

Click here to access the California GeoTracker records for this facility:

AST:

Certified Unified Program Agencies:	Not reported
Owner:	David Sorenson
Total Gallons:	Not reported
CERSID:	10044940
Facility ID:	FA0006292
Business Name:	SORENSON ENGINEERING INC
Phone:	909.795.2434
Fax:	909.795.7190
Mailing Address:	32032 Dunlap Boulevard
Mailing Address City:	Yucaipa
Mailing Address State:	CA
Mailing Address Zip Code:	92399
Operator Name:	Sorenson Engineering, Inc.
Operator Phone:	909.795.2434

SORENSON ENGRG., INC. (Continued) **U001575886**

Owner Phone:	909.795.2434
Owner Mail Address:	32032 Dunlap Blvd
Owner State:	CA
Owner Zip Code:	92399
Owner Country:	United States
Property Owner Name:	Sorenson Engineering, Inc.
Property Owner Phone:	909.795.2434
Property Owner Mailing Address:	32032 Dunlap Blvd
Property Owner City:	Yucaipa
Property Owner Stat :	CA
Property Owner Zip Code:	92399
Property Owner Country:	United States
EPAID:	CAD008261737

SWEEPS UST:

Status:	Active
Comp Number:	63321
Number:	9
Board Of Equalization:	44-021366
Referral Date:	09-12-91
Action Date:	09-12-91
Created Date:	02-29-88
Owner Tank Id:	1
SWRCB Tank Id:	36-000-063321-000001
Tank Status:	A
Capacity:	500
Active Date:	07-01-85
Tank Use:	OIL
STG:	W
Content:	WASTE OIL
Number Of Tanks:	4

Status:	Active
Comp Number:	63321
Number:	9
Board Of Equalization:	44-021366
Referral Date:	09-12-91
Action Date:	09-12-91
Created Date:	02-29-88
Owner Tank Id:	2
SWRCB Tank Id:	36-000-063321-000002
Tank Status:	A
Capacity:	2000
Active Date:	07-01-85
Tank Use:	UNKNOWN
STG:	P
Content:	Not reported
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	63321
Number:	9
Board Of Equalization:	44-021366
Referral Date:	09-12-91
Action Date:	09-12-91
Created Date:	02-29-88
Owner Tank Id:	3

SORENSON ENGRG., INC. (Continued) **U001575886**

SWRCB Tank Id: 36-000-063321-000003
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

Status: Active
Comp Number: 63321
Number: 9
Board Of Equalization: 44-021366
Referral Date: 09-12-91
Action Date: 09-12-91
Created Date: 02-29-88
Owner Tank Id: 4
SWRCB Tank Id: 36-000-063321-000004
Tank Status: A
Capacity: 2000
Active Date: 07-01-85
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: Not reported

HIST UST:
File Number: 0002A67A
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002A67A.pdf
Region: STATE
Facility ID: 00000063321
Facility Type: Other
Other Type: MANUFACTURER
Contact Name: ALLEN FEARY
Telephone: 7147952434
Owner Name: SORENSON ENG. INC.
Owner Address: 32032 DUNLAP BLVD.
Owner City,St,Zip: YUCAIPA, CA 92399
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000500
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

SORENSON ENGRG., INC. (Continued) **U001575886**

Tank Num:	003
Container Num:	3
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Tank Num:	004
Container Num:	4
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	DIESEL
Container Construction Thickness:	Not reported
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

EMI:

Year:	1990
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	0
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1996
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	24
Reactive Organic Gases Tons/Yr:	17
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1997
County Code:	36

SORENSON ENGRG., INC. (Continued) **U001575886**

Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1998
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1999
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2000
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	59
Reactive Organic Gases Tons/Yr:	52
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2001
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	10
Reactive Organic Gases Tons/Yr:	10
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2002
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	2003
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	5
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

SORENSON ENGRG., INC. (Continued) **U001575886**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Year: 2004
County Code: 36
Air Basin: SC
Facility ID: 36738
Air District Name: SC
SIC Code: 3451
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 5.1459
Reactive Organic Gases Tons/Yr: 2.5
Carbon Monoxide Emissions Tons/Yr: 0.00927
NOX - Oxides of Nitrogen Tons/Yr: 0.4345
SOX - Oxides of Sulphur Tons/Yr: 0.00022
Particulate Matter Tons/Yr: 0.00199
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Year: 2005
County Code: 36
Air Basin: SC
Facility ID: 36738
Air District Name: SC
SIC Code: 3451
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 4.88653
Reactive Organic Gases Tons/Yr: 2.52918861
Carbon Monoxide Emissions Tons/Yr: .00875
NOX - Oxides of Nitrogen Tons/Yr: .9345
SOX - Oxides of Sulphur Tons/Yr: .00015
Particulate Matter Tons/Yr: .05807
Part. Matter 10 Micrometers and Smllr Tons/Yr: .0124545

Year: 2006
County Code: 36
Air Basin: SC
Facility ID: 36738
Air District Name: SC
SIC Code: 3451
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 6.025349745305051464
Reactive Organic Gases Tons/Yr: 4.208
Carbon Monoxide Emissions Tons/Yr: .009
NOX - Oxides of Nitrogen Tons/Yr: .962
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .058
Part. Matter 10 Micrometers and Smllr Tons/Yr: .01254

Year: 2007
County Code: 36
Air Basin: SC

SORENSON ENGRG., INC. (Continued) **U001575886**

Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.025349745305051464
Reactive Organic Gases Tons/Yr:	4.208
Carbon Monoxide Emissions Tons/Yr:	.009
NOX - Oxides of Nitrogen Tons/Yr:	.962
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.058
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01254

Year:	2008
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6.602823133751223530
Reactive Organic Gases Tons/Yr:	4.20134359088
Carbon Monoxide Emissions Tons/Yr:	.00637
NOX - Oxides of Nitrogen Tons/Yr:	1.74
SOX - Oxides of Sulphur Tons/Yr:	.0001092
Particulate Matter Tons/Yr:	.071365
Part. Matter 10 Micrometers and Smllr Tons/Yr:	.01459675

Year:	2009
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11.2214092358771
Reactive Organic Gases Tons/Yr:	5.4418199999999999
Carbon Monoxide Emissions Tons/Yr:	9.1000000000000004E-3
NOX - Oxides of Nitrogen Tons/Yr:	1.3899999999999999
SOX - Oxides of Sulphur Tons/Yr:	0.000156
Particulate Matter Tons/Yr:	0.10195
Part. Matter 10 Micrometers and Smllr Tons/Yr:	9.7852499999999995E-2

Year:	2010
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

Total Organic Hydrocarbon Gases Tons/Yr:	27.611583339232499
Reactive Organic Gases Tons/Yr:	11.264900000000001
Carbon Monoxide Emissions Tons/Yr:	7.5900000000000004E-3
NOX - Oxides of Nitrogen Tons/Yr:	1.8230500000000001
SOX - Oxides of Sulphur Tons/Yr:	1.2999999999999999E-4
Particulate Matter Tons/Yr:	0.15622
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.030913

Year:	2011
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	19.046371404
Reactive Organic Gases Tons/Yr:	7.78235
Carbon Monoxide Emissions Tons/Yr:	0.01015
NOX - Oxides of Nitrogen Tons/Yr:	2.36562
SOX - Oxides of Sulphur Tons/Yr:	0.00017
Particulate Matter Tons/Yr:	0.05143
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0114209

Year:	2012
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	19.823754428
Reactive Organic Gases Tons/Yr:	8.00662
Carbon Monoxide Emissions Tons/Yr:	0.02642
NOX - Oxides of Nitrogen Tons/Yr:	1.47851
SOX - Oxides of Sulphur Tons/Yr:	0.00045
Particulate Matter Tons/Yr:	0.01686
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.007505

Year:	2013
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	11.814530938
Reactive Organic Gases Tons/Yr:	4.74873393
Carbon Monoxide Emissions Tons/Yr:	0.02677
NOX - Oxides of Nitrogen Tons/Yr:	0.21771
SOX - Oxides of Sulphur Tons/Yr:	0.00045
Particulate Matter Tons/Yr:	0.00786

SORENSON ENGRG., INC. (Continued) **U001575886**

Part. Matter 10 Micrometers and Smllr Tons/Yr:0.0058482

Year:	2014
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	12.614347308
Reactive Organic Gases Tons/Yr:	6.35768
Carbon Monoxide Emissions Tons/Yr:	0.0217
NOX - Oxides of Nitrogen Tons/Yr:	0.17872
SOX - Oxides of Sulphur Tons/Yr:	0.00037
Particulate Matter Tons/Yr:	0.00478
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.0047748

Year:	2015
County Code:	36
Air Basin:	SC
Facility ID:	36738
Air District Name:	SC
SIC Code:	3451
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	14.331192857
Reactive Organic Gases Tons/Yr:	7.223505934
Carbon Monoxide Emissions Tons/Yr:	0.0273
NOX - Oxides of Nitrogen Tons/Yr:	0.311866155
SOX - Oxides of Sulphur Tons/Yr:	0.000468
Particulate Matter Tons/Yr:	0.012266073
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0.01200943008

NPDES:

Npdes Number:	Not reported
Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	213412
Order No:	Not reported
Regulatory Measure Type:	Industrial
Place Id:	Not reported
WDID:	8 36I013373
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	05/09/2008

SORENSON ENGRG., INC. (Continued) **U001575886**

PROCESSED DATE:	09/03/1997
STATUS CODE NAME:	Active
STATUS DATE:	09/03/1997
PLACE SIZE:	14359
PLACE SIZE UNIT:	SqFt
FACILITY CONTACT NAME:	Paul Sewell
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	909-795-2434
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR NAME:	Sorenson Engineering Inc
OPERATOR ADDRESS:	32032 Dunlap Blvd
OPERATOR CITY:	Yucaipa
OPERATOR STATE:	California
OPERATOR ZIP:	92399
OPERATOR CONTACT NAME:	Paul Sewell
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	909-795-2434
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR TYPE:	State Agency
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	California
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	909-795-2434
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Yucaipa Creek
CERTIFIER NAME:	Jeromy Roush
CERTIFIER TITLE:	Facility Maintenance Manager
CERTIFICATION DATE:	27-FEB-17
PRIMARY SIC:	3451-Screw Machine Products
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

Facility Status:	Not reported
Agency Id:	Not reported
Region:	8
Regulatory Measure Id:	415492
Order No:	Not reported
Regulatory Measure Type:	Construction
Place Id:	Not reported
WDID:	8 36C361525
Program Type:	Not reported
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	Not reported
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	12/13/2016
Discharge Name:	Not reported
Discharge Address:	Not reported
Discharge City:	Not reported
Discharge State:	Not reported
Discharge Zip:	Not reported
RECEIVED DATE:	07/08/2011
PROCESSED DATE:	07/26/2011
STATUS CODE NAME:	Terminated
STATUS DATE:	01/11/2017
PLACE SIZE:	16.21
PLACE SIZE UNIT:	Acres
FACILITY CONTACT NAME:	Paul Sewell
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	909-795-7600
FACILITY CONTACT PHONE EXT:	204
FACILITY CONTACT EMAIL:	bmayer@sitetechinc.com
OPERATOR NAME:	Sorenson Engineering
OPERATOR ADDRESS:	32032 DUNLAP BOULEVARD
OPERATOR CITY:	Yucaipa
OPERATOR STATE:	California
OPERATOR ZIP:	92399
OPERATOR CONTACT NAME:	Paul Sewell
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	909-795-2434
OPERATOR CONTACT PHONE EXT:	204
OPERATOR CONTACT EMAIL:	psewell@sorensoneng.com
OPERATOR TYPE:	Private Business
DEVELOPER NAME:	Sorenson Engineering
DEVELOPER ADDRESS:	32032 DUNLAP BOULEVARD
DEVELOPER CITY:	Yucaipa
DEVELOPER STATE:	California
DEVELOPER ZIP:	92399
DEVELOPER CONTACT NAME:	Paul Sewell
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	N
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

CONSTYPE INDUSTRIAL IND:	Y
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	N
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Joe Watanabe
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	06-OCT-14
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

Npdes Number:	CAS000002
Facility Status:	Terminated
Agency Id:	0
Region:	8
Regulatory Measure Id:	415492
Order No:	2009-0009-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36C361525
Program Type:	Construction
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	07/26/2011
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	12/13/2016
Discharge Name:	Sorenson Engineering
Discharge Address:	32032 DUNLAP BOULEVARD
Discharge City:	Yucaipa
Discharge State:	California
Discharge Zip:	92399
RECEIVED DATE:	Not reported
PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported
Npdes Number:	CAS000001
Facility Status:	Active
Agency Id:	0
Region:	8
Regulatory Measure Id:	213412
Order No:	97-03-DWQ
Regulatory Measure Type:	Enrollee
Place Id:	Not reported
WDID:	8 36I013373
Program Type:	Industrial
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	09/03/1997
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	Sorenson Engineering Inc
Discharge Address:	32032 Dunlap Blvd
Discharge City:	Yucaipa
Discharge State:	California
Discharge Zip:	92399
RECEIVED DATE:	Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

PROCESSED DATE:	Not reported
STATUS CODE NAME:	Not reported
STATUS DATE:	Not reported
PLACE SIZE:	Not reported
PLACE SIZE UNIT:	Not reported
FACILITY CONTACT NAME:	Not reported
FACILITY CONTACT TITLE:	Not reported
FACILITY CONTACT PHONE:	Not reported
FACILITY CONTACT PHONE EXT:	Not reported
FACILITY CONTACT EMAIL:	Not reported
OPERATOR NAME:	Not reported
OPERATOR ADDRESS:	Not reported
OPERATOR CITY:	Not reported
OPERATOR STATE:	Not reported
OPERATOR ZIP:	Not reported
OPERATOR CONTACT NAME:	Not reported
OPERATOR CONTACT TITLE:	Not reported
OPERATOR CONTACT PHONE:	Not reported
OPERATOR CONTACT PHONE EXT:	Not reported
OPERATOR CONTACT EMAIL:	Not reported
OPERATOR TYPE:	Not reported
DEVELOPER NAME:	Not reported
DEVELOPER ADDRESS:	Not reported
DEVELOPER CITY:	Not reported
DEVELOPER STATE:	Not reported
DEVELOPER ZIP:	Not reported
DEVELOPER CONTACT NAME:	Not reported
DEVELOPER CONTACT TITLE:	Not reported
CONSTYPE LINEAR UTILITY IND:	Not reported
EMERGENCY PHONE NO:	Not reported
EMERGENCY PHONE EXT:	Not reported
CONSTYPE ABOVE GROUND IND:	Not reported
CONSTYPE BELOW GROUND IND:	Not reported
CONSTYPE CABLE LINE IND:	Not reported
CONSTYPE COMM LINE IND:	Not reported
CONSTYPE COMMERTIAL IND:	Not reported
CONSTYPE ELECTRICAL LINE IND:	Not reported
CONSTYPE GAS LINE IND:	Not reported
CONSTYPE INDUSTRIAL IND:	Not reported
CONSTYPE OTHER DESRIPTION:	Not reported
CONSTYPE OTHER IND:	Not reported
CONSTYPE RECONS IND:	Not reported
CONSTYPE RESIDENTIAL IND:	Not reported
CONSTYPE TRANSPORT IND:	Not reported
CONSTYPE UTILITY DESCRIPTION:	Not reported
CONSTYPE UTILITY IND:	Not reported
CONSTYPE WATER SEWER IND:	Not reported
DIR DISCHARGE USWATER IND:	Not reported
RECEIVING WATER NAME:	Not reported
CERTIFIER NAME:	Not reported
CERTIFIER TITLE:	Not reported
CERTIFICATION DATE:	Not reported
PRIMARY SIC:	Not reported
SECONDARY SIC:	Not reported
TERTIARY SIC:	Not reported

SORENSON ENGRG., INC. (Continued) **U001575886**

San Bern. Co. Permit:
Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0028871
Permit Category: CA ANNUAL FEE
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0000852
Permit Category: LARGE QUANTITY GENERATOR
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0000851
Permit Category: HAZARDOUS MATERIALS 51-70 CHEMICALS
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0028867
Permit Category: APSA 1,320-10,000 GAL FAC CAPACITY
Facility Status: ACTIVE
Expiration Date: 09/30/2018

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0001598
Permit Category: PBR ANNUAL FEE
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0015161
Permit Category: EPCRA FACILITY
Facility Status: INACTIVE
Expiration Date: 09/30/2013

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0024069
Permit Category: HAZARDOUS WASTE GENERATOR RCRA LQG
Facility Status: INACTIVE
Expiration Date: 09/30/2013

SORENSON ENGRG., INC. (Continued) **U001575886**

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0015162
Permit Category: RISK MANAGEMENT PLAN - LEVEL II
Facility Status: INACTIVE
Expiration Date: 09/30/2011

Region: SAN BERNARDINO
Facility ID: FA0006292
Owner: SORENSON, DAVID
Permit Number: PT0001601
Permit Category: CALARP FACILITY PERMIT
Facility Status: INACTIVE
Expiration Date: 09/30/2011

CIWQS:

Agency:	Sorenson Engineering
Agency Address:	32032 DUNLAP BOULEVARD, Yucaipa, CA 92399
Place/Project Type:	Construction - Industrial
SIC/NAICS:	Not reported
Region:	8
Program:	CONSTW
Regulatory Measure Status:	Terminated
Regulatory Measure Type:	Storm water construction
Order Number:	2009-0009-DWQ
WDID:	8 36C361525
NPDES Number:	CAS000002
Adoption Date:	Not reported
Effective Date:	07/26/2011
Termination Date:	12/13/2016
Expiration/Review Date:	Not reported
Design Flow:	Not reported
Major/Minor:	Not reported
Complexity:	Not reported
TTWQ:	Not reported
Enforcement Actions within 5 years:	1
Violations within 5 years:	1
Latitude:	34.025955
Longitude:	-117.105863

35
ESE
1/2-1
0.851 mi.
4492 ft.

JORCO CHEMICAL COMPANY **ENVIROSTOR** **S109348600**
32185 EAST OUTER HIGHWAY 10 **VCP** **N/A**
REDLANDS, CA 92373

Relative:
Lower

Actual:
2045 ft.

ENVIROSTOR:

Facility ID:	60000998
Status:	No Further Action
Status Date:	06/14/2012
Site Code:	401268
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	2
NPL:	NO
Regulatory Agencies:	SMBRP

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Lead Agency: SMBRP
Program Manager: Johnson Abraham
Supervisor: Shahir Haddad
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 42
Senate: 23
Special Program: Voluntary Cleanup Program
Restricted Use: YES
Site Mgmt Req: NONE SPECIFIED
Funding: Responsible Party
Latitude: 34.02075
Longitude: -117.1034
APN: 0301-15-47, 0301-16-09
Past Use: ABOVE GROUND STORAGE TANKS, MANUFACTURING - CHEMICALS, UNDERGROUND STORAGE TANKS
Potential COC: Freon 113 Ethyl acrylate Ethylbenzene n-Hexane Methanol Methyl acrylate Methyl methacrylate Styrene
Confirmed COC: Ethyl acrylate Ethylbenzene n-Hexane Methyl methacrylate Methanol Styrene Methyl acrylate Freon 113
Potential Description: SOIL
Alias Name: 0301-15-47
Alias Type: APN
Alias Name: 0301-16-09
Alias Type: APN
Alias Name: T0607100271
Alias Type: GeoTracker Global ID
Alias Name: 401268
Alias Type: Project Code (Site Code)
Alias Name: 60000998
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 09/19/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Public Notice
Completed Date: 03/07/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fact Sheets
Completed Date: 03/07/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 09/26/2011
Comments: DTSC conditionally approved the Workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Completed Document Type: Site Characterization Report
Completed Date: 06/14/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/05/2008
Comments: Voluntary Cleanup Agreement fully executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/15/2010
Comments: DTSC signed the VCA Amendment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/18/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/16/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/25/2010
Comments: DTSC sent the letter to the Project Proponent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 09/18/2012
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

JORCO CHEMICAL COMPANY (Continued) **S109348600**

VCP:

Facility ID:	60000998
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	2
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Johnson Abraham
Supervisor:	Shahir Haddad
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	401268
Assembly:	42
Senate:	23
Special Programs Code:	Voluntary Cleanup Program
Status:	No Further Action
Status Date:	06/14/2012
Restricted Use:	YES
Funding:	Responsible Party
Lat/Long:	34.02075 / -117.1034
APN:	0301-15-47, 0301-16-09
Past Use:	ABOVE GROUND STORAGE TANKS, MANUFACTURING - CHEMICALS, UNDERGROUND STORAGE TANKS
Potential COC:	30012, 30271, 30272, 30322, 30364, 30372, 30389, 30525
Confirmed COC:	30271,30272,30322,30389,30364,30525,30372,30012
Potential Description:	SOIL
Alias Name:	0301-15-47
Alias Type:	APN
Alias Name:	0301-16-09
Alias Type:	APN
Alias Name:	T0607100271
Alias Type:	GeoTracker Global ID
Alias Name:	401268
Alias Type:	Project Code (Site Code)
Alias Name:	60000998
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Preliminary Endangerment Assessment Report
Completed Date:	09/19/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Notice
Completed Date:	03/07/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	03/07/2011
Comments:	Not reported

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 09/26/2011
Comments: DTSC conditionally approved the Workplan.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 06/14/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 11/05/2008
Comments: Voluntary Cleanup Agreement fully executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 01/11/2012
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Amendment - Order/Agreement
Completed Date: 09/15/2010
Comments: DTSC signed the VCA Amendment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 11/18/2009
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 03/16/2011
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 06/25/2010
Comments: DTSC sent the letter to the Project Proponent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 09/18/2012
Comments: Not reported

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported

JORCO CHEMICAL COMPANY (Continued) **S109348600**

Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 4 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
REDLANDS	1008407740	EDISON/REDLANDS MGP	501-525 W REDLANDS AT KENDALL	92373	EDR MGP
REDLANDS	S107540561		SAN BERNARDINO AVENUE (W OF WA		CDL
YUCAIPA	1003878992	METH-LAB YUCAIPA	YUCAIPA	92399	SEMS-ARCHIVE
YUCAIPA	S121699679	USA CLEANERS YUCAIPA	34488 YUCAIPA BLVD STE C & D	92399	DRYCLEANERS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
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 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

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: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 05/18/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 05/18/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/30/2018
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: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/16/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 78

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
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: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/16/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 37

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
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

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/06/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 15
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51
Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/21/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/24/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
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).

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 134

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
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: 10/14/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

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: 10/16/2017
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 80

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/06/2018
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.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 38
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 03/19/2018
Date Data Arrived at EDR: 03/21/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 39

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/22/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 01/30/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/04/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Quarterly

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 44

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/24/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 02/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 27

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/22/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 04/19/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 10

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 44

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/24/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Quarterly

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 01/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 46

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Semi-Annually

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: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
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: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 04/06/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 51

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/24/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/15/2018
Next Scheduled EDR Contact: 08/27/2018
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: 03/01/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/08/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 94

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/20/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 08/20/2018
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: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/07/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/27/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 01/04/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 99
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 79

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 02/28/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 72

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 87

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

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: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 06/01/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 02/25/2018
Date Data Arrived at EDR: 03/17/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/23/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 38

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 04/03/2018
Date Data Arrived at EDR: 05/07/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 39

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA SAN FRANCISCO CO

Cupa facilities

Date of Government Version: 04/20/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 10

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

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: 03/27/2018
Date Data Arrived at EDR: 03/29/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 36

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Annually

DRYCLEAN AVAQMD: DRYCLEAN AVAQMD

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 52

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: DRYCLEAN SOUTH COAST

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/16/2018
Date Data Arrived at EDR: 03/20/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 45

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 06/11/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 10/01/2018
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: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 54

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/20/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 60

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 38

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/23/2018
Next Scheduled EDR Contact: 09/03/2018
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

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/23/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/09/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/27/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 42

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 03/14/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 04/19/2018
Number of Days to Update: 45

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/23/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 38

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/14/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region’s active disposal pits are operating without permission.

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 04/13/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/13/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/25/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Varies

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data
The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 44

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/24/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

OTHER OIL GAS: OTHER OIL & GAS (GEOTRACKER)
Other Oil & Gas Projects sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

PROD WATER PONDS: PROD WATER PONDS (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROJECT: PROJECT (GEOTRACKER)
Projects sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

NON-CASE INFO: NON-CASE INFO (GEOTRACKER)
Non-Case Information sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

SAMPLING POINT: SAMPLING POINT (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

WELL STIM PROJ: WELL SAMP PROJ (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

CIWQS: The California Integrated Water Quality System
The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 60

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

UIC GEO: UIC GEO (GEOTRACKER)
Underground control injection sites

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 51

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 65

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 03/31/2018
Date Data Arrived at EDR: 04/05/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 70

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 06/14/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 05/07/2018
Date Data Arrived at EDR: 05/09/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 36

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/25/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/26/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 14

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 48

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/30/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 04/27/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 44

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/25/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/08/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 39

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/30/2018
Next Scheduled EDR Contact: 08/13/2018
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: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 9

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 03/05/2018
Date Data Arrived at EDR: 03/08/2018
Date Made Active in Reports: 04/30/2018
Number of Days to Update: 53

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 50

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/02/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 54

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
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: 11/14/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 28

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/09/2018
Date Data Arrived at EDR: 05/11/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 34

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/16/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 04/16/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 60

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/16/2018
Date Data Arrived at EDR: 04/17/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 63

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/17/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 05/14/2018
Number of Days to Update: 13

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 04/17/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 63

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/17/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/11/2018
Next Scheduled EDR Contact: 07/30/2018
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: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/18/2018
Number of Days to Update: 13

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
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: 02/21/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 40

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 03/30/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 28

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/12/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 15

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/22/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/27/2018
Date Data Arrived at EDR: 03/29/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 18

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
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: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/22/2018
Next Scheduled EDR Contact: 09/10/2018
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: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 30

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/22/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/01/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 45

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/25/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 05/11/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 42

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 05/11/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 45

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/07/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/08/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/15/2018
Date Data Arrived at EDR: 03/19/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 46

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 50

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/18/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 04/05/2018
Date Data Arrived at EDR: 04/10/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 24

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/18/2018
Next Scheduled EDR Contact: 10/01/2018
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: 02/02/2018
Date Data Arrived at EDR: 04/04/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 71

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/02/2018
Date Data Arrived at EDR: 04/04/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017
Date Data Arrived at EDR: 11/03/2017
Date Made Active in Reports: 11/17/2017
Number of Days to Update: 14

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

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: 04/09/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 69

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 08/20/2018
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: 03/05/2018
Date Data Arrived at EDR: 03/07/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 40

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/23/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 11
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
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: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/07/2017
Date Made Active in Reports: 12/19/2017
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/02/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 03/20/2018
Date Data Arrived at EDR: 03/22/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 43
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/14/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/16/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/18/2017
Number of Days to Update: 31

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
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: 03/14/2018
Date Data Arrived at EDR: 03/20/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 45

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/15/2018
Date Data Arrived at EDR: 03/20/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 45

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 27

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/22/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/04/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 42
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/16/2018
Next Scheduled EDR Contact: 09/03/2018
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: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 52
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 16
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 04/16/2018
Number of Days to Update: 20

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/21/2018
Next Scheduled EDR Contact: 10/08/2018
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: 04/03/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 05/09/2018
Number of Days to Update: 33

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/21/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/11/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 35

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/16/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 29

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List
Cupa facilities

Date of Government Version: 01/26/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/22/2018
Date Made Active in Reports: 04/17/2018
Number of Days to Update: 26

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 06/18/2018
Next Scheduled EDR Contact: 08/20/2018
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/18/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 58

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/23/2018
Next Scheduled EDR Contact: 08/06/2018
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
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: 05/09/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/23/2018
Next Scheduled EDR Contact: 08/06/2018
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: 02/28/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 16
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/13/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/27/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 05/04/2018
Number of Days to Update: 31
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 05/10/2018
Date Data Arrived at EDR: 05/15/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 31
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/25/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/23/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/03/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/03/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/12/2018
Next Scheduled EDR Contact: 07/30/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/11/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

RESIDENTIAL PROPERTY
31479 AVENUE E
YUCAIPA, CA 92399

TARGET PROPERTY COORDINATES

Latitude (North):	34.026709 - 34° 1' 36.15''
Longitude (West):	117.116993 - 117° 7' 1.17''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	489199.1
UTM Y (Meters):	3764929.0
Elevation:	2083 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5630639 YUCAIPA, CA
Version Date:	2012
Northwest Map:	5630631 REDLANDS, CA
Version Date:	2012

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).

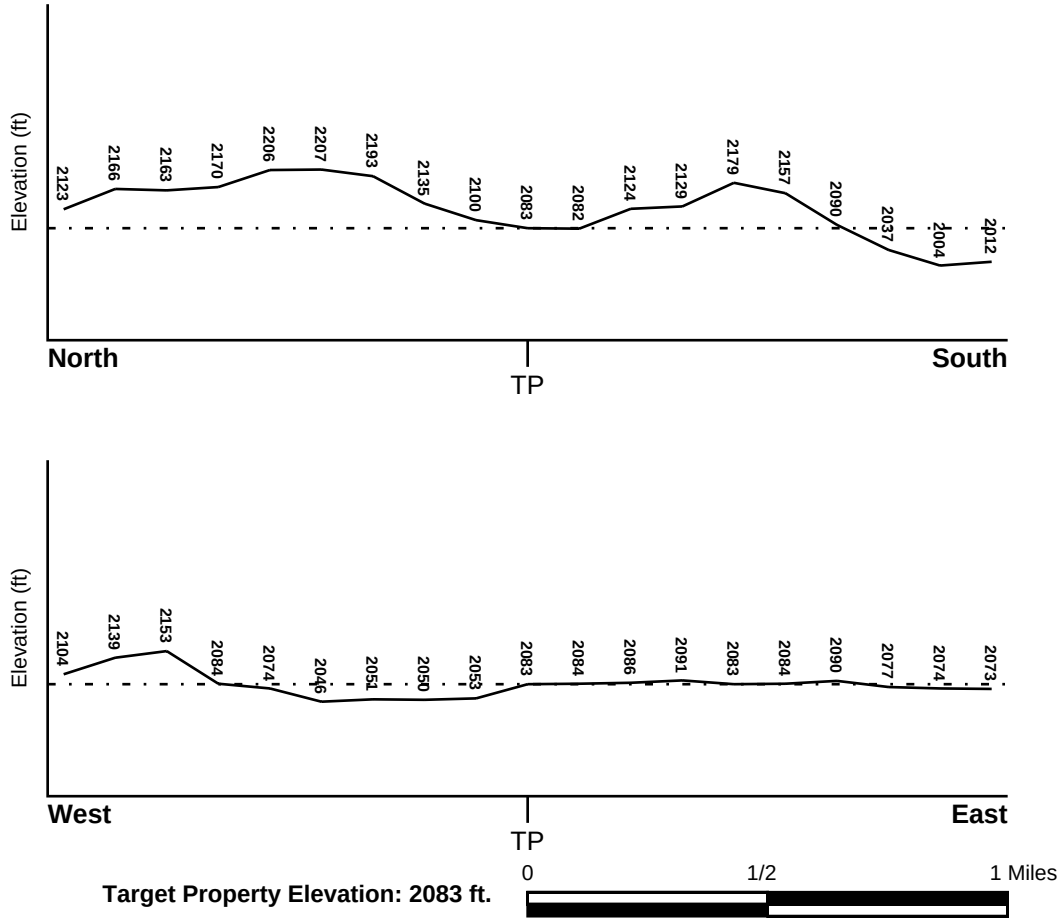
TOPOGRAPHIC INFORMATION

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 SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



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.

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

Flood Plain Panel at Target Property	FEMA Source Type
06071C8740H	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06071C8717H	FEMA FIRM Flood data
06071C8719H	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
NOT AVAILABLE	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*:

Search Radius:	1.25 miles
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	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/8 - 1/4 Mile NW	WSW
1G	1/8 - 1/4 Mile NW	WSW

For additional site information, refer to Physical Setting Source Map Findings.

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

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 quickly 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

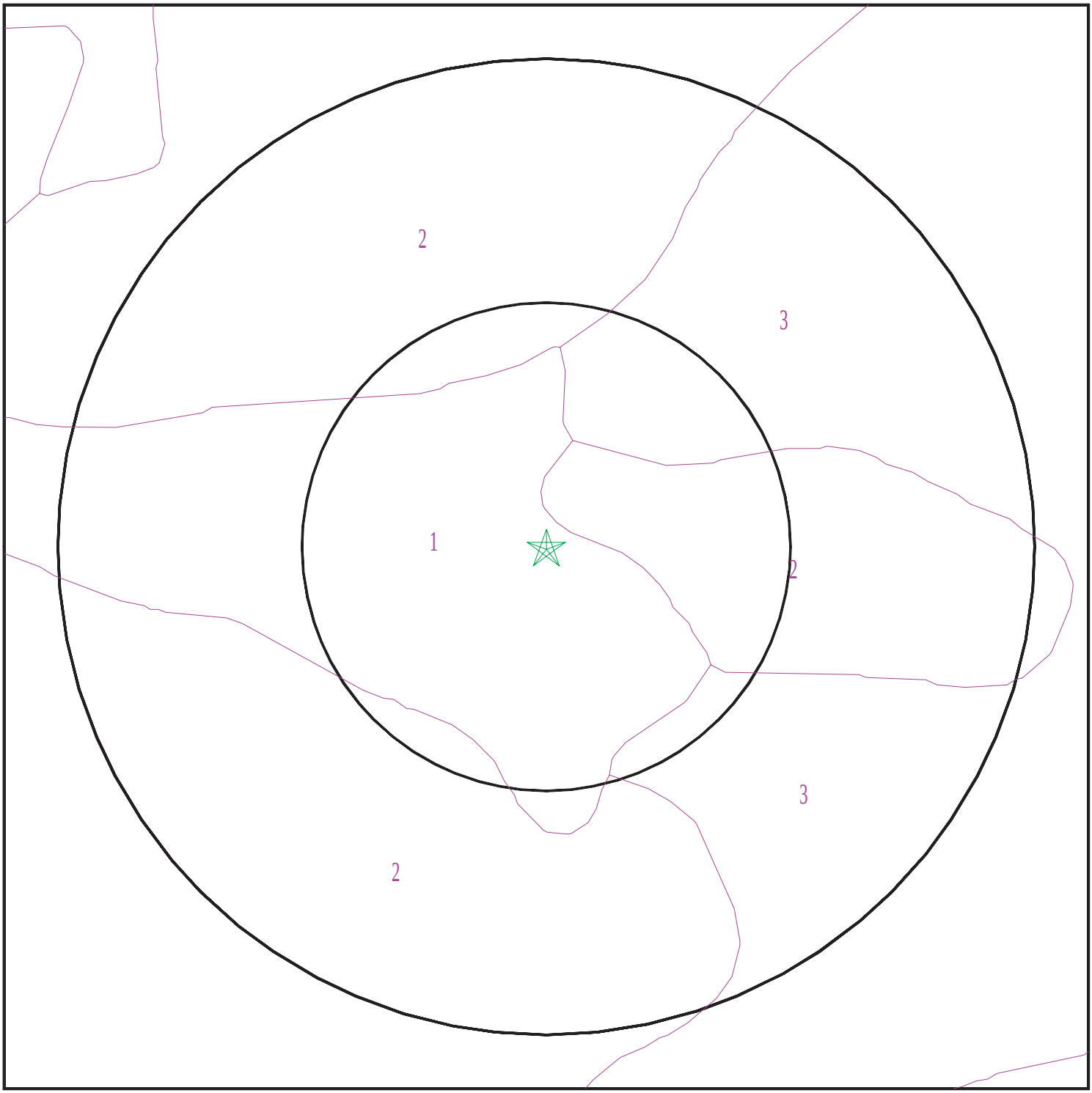
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

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).

SSURGO SOIL MAP - 5347105.21s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Residential Property	CLIENT:	The Reynolds Group
ADDRESS:	31479 Avenue E Yucaipa CA 92399	CONTACT:	Rosanne Fischer
		INQUIRY #:	5347105.21s
LAT/LONG:	34.026709 / 117.116993	DATE:	June 27, 2018 6:04 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Hanford

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1
2	11 inches	59 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6

Soil Map ID: 2

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6.5 Min: 5.6
2	22 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6
3	31 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6
4	53 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6.3 Min: 5.6
2	22 inches	31 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.8 Min: 6.6
3	31 inches	53 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.8 Min: 6.6
4	53 inches	59 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

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.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000139882	1/4 - 1/2 Mile East
4	USGS40000139964	1/2 - 1 Mile North
5	USGS40000139971	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

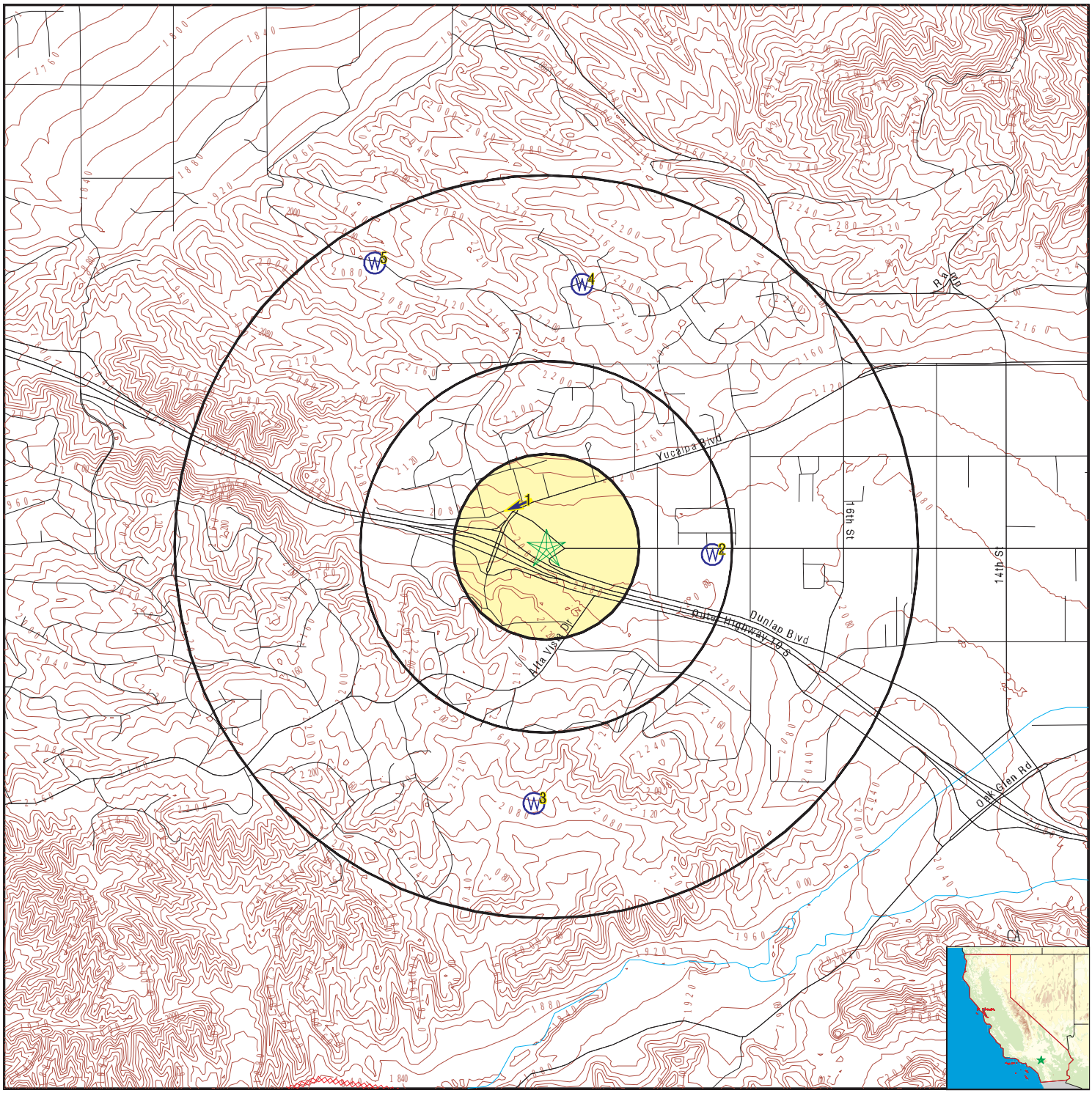
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	2400	1/2 - 1 Mile South

PHYSICAL SETTING SOURCE MAP - 5347105.21s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Residential Property	CLIENT: The Reynolds Group
ADDRESS: 31479 Avenue E Yucaipa CA 92399	CONTACT: Rosanne Fischer INQUIRY #: 5347105.21s
LAT/LONG: 34.026709 / 117.116993	DATE: June 27, 2018 6:03 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

			Database	EDR ID Number
1 **NW** **1/8 - 1/4 Mile** **Higher**	Site ID:	083602839T	**AQUIFLOW**	**50239**
	Groundwater Flow:	WSW		
	Shallow Water Depth:	150		
	Deep Water Depth:	175		
	Average Water Depth:	Not Reported		
	Date:	09/04/1996		

2
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000139882**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340135117063001		
Monloc name:	002S002W05K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0264034
Longitude:	-117.1092007	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		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	690
Welldepth units:	ft	Wellholedepth:	690
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

3
South
1/2 - 1 Mile
Higher

CA WELLS **2400**

Water System Information:

Prime Station Code:	02S/02W-05K01 S	User ID:	TAN
FRDS Number:	3610053009	County:	San Beernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340100.0 1170700.0	Precision:	Undefined
Source Name:	WELL 10		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System Number: 3610053
System Name: WESTERN HEIGHTS WATER COMPANY
Organization That Operates System:
32352 AVENUE D
YUCAIPA, CA 92399
Pop Served: 5000 Connections: 2165
Area Served: WESTERN HACAIDA VICINITY

Sample Collected:	07-MAY-12	Findings:	510. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07-MAY-12	Findings:	7.6
Chemical:	PH, LABORATORY		
Sample Collected:	07-MAY-12	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07-MAY-12	Findings:	190. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07-MAY-12	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07-MAY-12	Findings:	49. MG/L
Chemical:	CALCIUM		
Sample Collected:	07-MAY-12	Findings:	8.3 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	07-MAY-12	Findings:	53. MG/L
Chemical:	SODIUM		
Sample Collected:	07-MAY-12	Findings:	2.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07-MAY-12	Findings:	20. MG/L
Chemical:	CHLORIDE		
Sample Collected:	07-MAY-12	Findings:	41. MG/L
Chemical:	SULFATE		
Sample Collected:	07-MAY-12	Findings:	0.49 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07-MAY-12	Findings:	6.4 UG/L
Chemical:	VANADIUM		
Sample Collected:	07-MAY-12	Findings:	330. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-MAY-12	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07-MAY-12	Findings:	6000. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	06-MAY-13	Findings:	26. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05-MAY-14	Findings:	27. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAY-15	Findings:	520. US
Chemical:	SPECIFIC CONDUCTANCE		

Sample Collected:	26-MAY-15	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	26-MAY-15	Findings:	160. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	26-MAY-15	Findings:	200. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	26-MAY-15	Findings:	150. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	26-MAY-15	Findings:	48. MG/L
Chemical:	CALCIUM		
Sample Collected:	26-MAY-15	Findings:	7.6 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	26-MAY-15	Findings:	52. MG/L
Chemical:	SODIUM		
Sample Collected:	26-MAY-15	Findings:	2.7 MG/L
Chemical:	POTASSIUM		
Sample Collected:	26-MAY-15	Findings:	18. MG/L
Chemical:	CHLORIDE		
Sample Collected:	26-MAY-15	Findings:	44. MG/L
Chemical:	SULFATE		
Sample Collected:	26-MAY-15	Findings:	0.45 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	26-MAY-15	Findings:	6.1 UG/L
Chemical:	VANADIUM		
Sample Collected:	26-MAY-15	Findings:	360. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	26-MAY-15	Findings:	29. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	26-MAY-15	Findings:	6600. MG/L
Chemical:	NITRATE + NITRITE (AS N)		
Sample Collected:	25-JUL-16	Findings:	7.3 MG/L
Chemical:	NITRATE (AS N)		
Sample Collected:	15-MAY-17	Findings:	7.1 MG/L
Chemical:	NITRATE (AS N)		

4
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000139964**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340213117065201		
Monloc name:	001S002W32P001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0369586
Longitude:	-117.1153123	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2216.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670101	Welldepth:	378
Welldepth units:	ft	Wellholedepth:	513
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

5
NNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000139971**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-340216117072701		
Monloc name:	001S002W31R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070203	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.0377919
Longitude:	-117.125035	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2040.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670101	Welldepth:	315
Welldepth units:	ft	Wellholedepth:	327
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

1G
NW
1/8 - 1/4 Mile
Lower

AQUIFLOW **50239**

Site ID:	083602839T
Groundwater Flow:	WSW
Shallow Water Depth:	150
Deep Water Depth:	175
Average Water Depth:	Not Reported
Date:	09/04/1996

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92399	13	0

Federal EPA Radon Zone for SAN BERNARDINO County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN BERNARDINO COUNTY, CA

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.678 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	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.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} 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. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
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 Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, 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 Public Health
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 Database 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 at 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 elevated 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 D

SANBORN MAP FINDINGS, CITY DIRECTORY SEARCH, AND ENVIRONMENTAL LIEN SEARCH

Residential Property

31479 Avenue E

Yucaipa, CA 92399

Inquiry Number: 5347105.22

June 27, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/27/18

Site Name:

Residential Property
31479 Avenue E
Yucaipa, CA 92399
EDR Inquiry # 5347105.22

Client Name:

The Reynolds Group
520 West 1st Street
Tustin, CA 92780
Contact: Rosanne Fischer

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by The Reynolds Group were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # F631-4193-93F8

PO # 8475-A

Project 8475-A 31479 Avenue E

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.

Sanborn® Library search results

Certification #: F631-4193-93F8

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Residential Property
31479 Avenue E
Yucaipa, CA 92399

Inquiry Number: 5347105.24
June 29, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

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 Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2010	☑	☑	Haines Criss-Cross Directory
2005	☑	☑	Haines Criss-Cross Directory
2000	☑	☑	Haines Criss-Cross Directory
1995	☑	☑	Haines Criss-Cross Directory
1990	☑	☑	Haines Criss-Cross Directory
1985	☑	☑	Haines Criss-Cross Directory
1980	☑	☑	Haines Criss-Cross Directory
1975	☑	☑	Haines Criss-Cross Directory
1972	☑	☑	Polk's City Directory
1965	☑	☑	Luskey City Directory

FINDINGS

TARGET PROPERTY STREET

31479 Avenue E
Yucaipa, CA 92399

Year	*CD Image*	*Source*
AVENUE E		
2010	pg A1	Haines Criss-Cross Directory
2005	pg A3	Haines Criss-Cross Directory
2000	pg A5	Haines Criss-Cross Directory
1995	pg A7	Haines Criss-Cross Directory
1990	pg A9	Haines Criss-Cross Directory
1985	pg A11	Haines Criss-Cross Directory
1980	pg A13	Haines Criss-Cross Directory
1975	pg A15	Haines Criss-Cross Directory
1972	pg A17	Polk's City Directory
1965	pg A19	Luskey City Directory

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
DUNLAP BLVD		
2010	pg. A2	Haines Criss-Cross Directory
2005	pg. A4	Haines Criss-Cross Directory
2000	pg. A6	Haines Criss-Cross Directory
1995	pg. A8	Haines Criss-Cross Directory
1990	pg. A10	Haines Criss-Cross Directory
1985	pg. A12	Haines Criss-Cross Directory
1980	pg. A14	Haines Criss-Cross Directory
1975	pg. A16	Haines Criss-Cross Directory
1972	pg. A18	Polk's City Directory
1965	pg. A20	Luskey City Directory

City Directory Images

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 2010



AVENUE E 92399
YUCAIPA

WEALTH CODE 1.5

X YUCAIPA BLVD

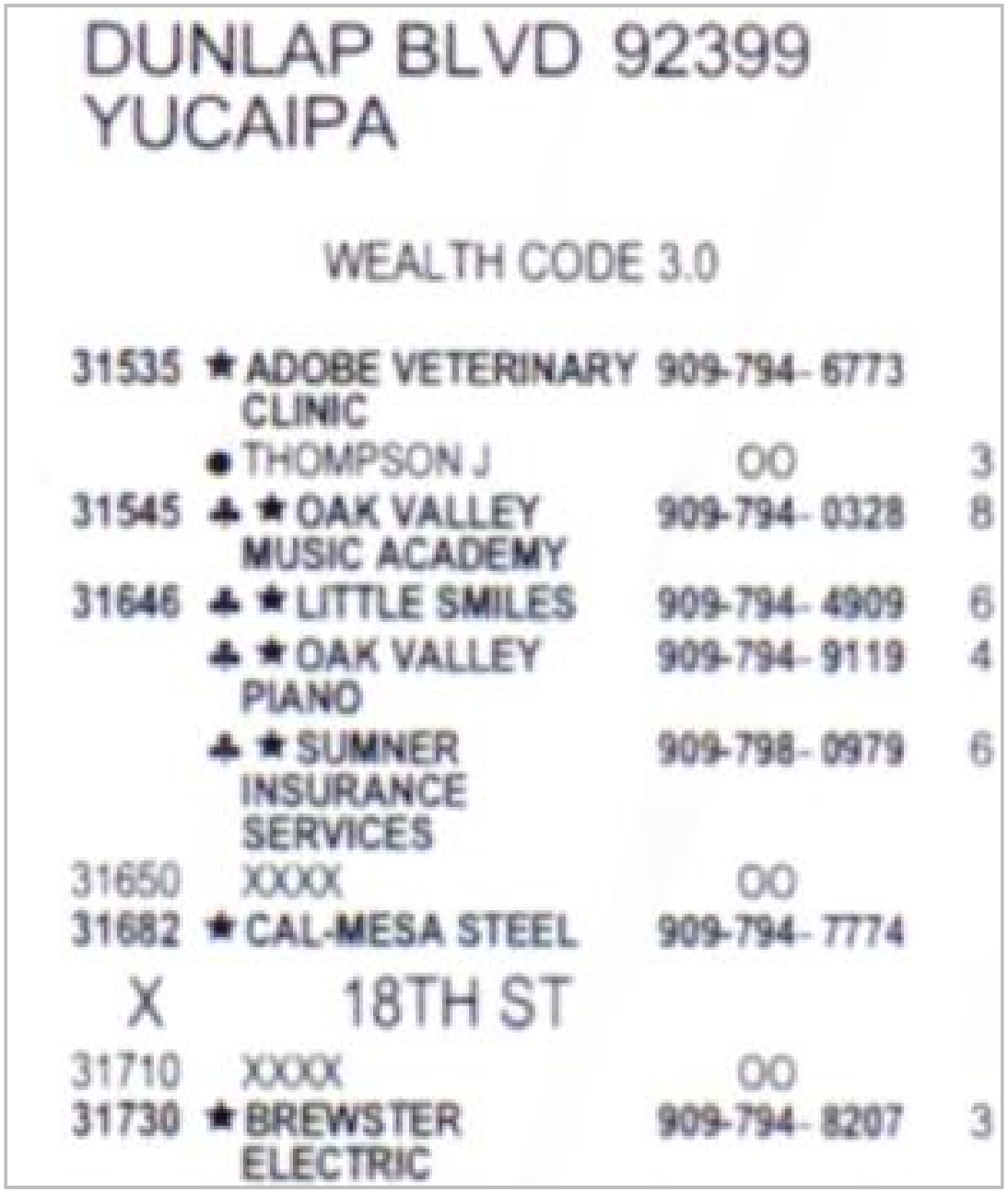
31479 XXXX OO

X DUNLAP BLVD

31514 XXXX OO
31535 XXXX OO
31548 ★ TOWER FOUNDATIONS INC 909-389-7701 +0
31560 ★ DYNAMIC DIESEL 909-389-0123 5
● SUNDEN David OO 8
31580 ♣● STENHOUSE Laura OO 3
31622 ● RUDDY Anthony OO
31635 ● CORDER Elizabeth L 909-794-2785

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 2010



DUNLAP BLVD 92399
YUCAIPA

WEALTH CODE 3.0

31535	★ ADOBE VETERINARY CLINIC	909-794-6773	
	● THOMPSON J	OO	3
31545	♣ ★ OAK VALLEY MUSIC ACADEMY	909-794-0328	8
31646	♣ ★ LITTLE SMILES	909-794-4909	6
	♣ ★ OAK VALLEY PIANO	909-794-9119	4
	♣ ★ SUMNER INSURANCE SERVICES	909-798-0979	6
31650	XXXX	OO	
31682	★ CAL-MESA STEEL	909-794-7774	
X	18TH ST		
31710	XXXX	OO	
31730	★ BREWSTER ELECTRIC	909-794-8207	3

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 2005



AVENUE E 92399
YUCAIPA

WEALTH CODE 1.4

X HAMPTON RD

31479	● STRONG Gudrun	OO	0

X DUNLAP BLVD

31514	XXXX	OO	
31535	● DURBIN Harold	909-794-4672	0
31548	● STANTON Sherri	OO	+5
31560	● ALBERTSON Forest	OO	0
31580	● STENHOUSE Laura	OO	3
31622	● RUDDY Anthony	OO	0
31635	● CORDER Dale E	909-794-2785	
	● CORDER Elizabeth L	909-794-2785	

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 2005

DUNLAP BLVD 92399
YUCAIPA

WEALTH CODE 1

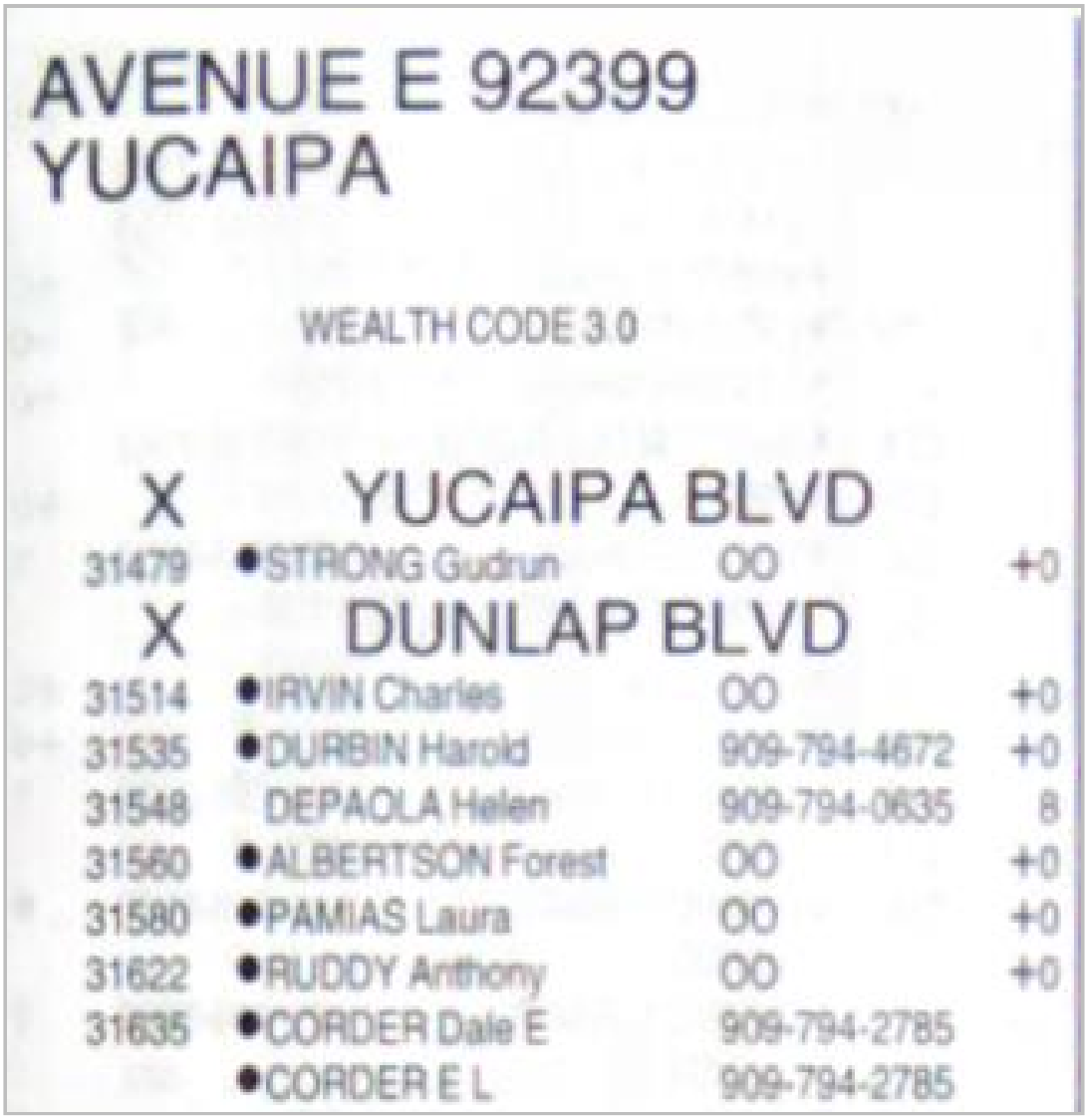
31470		XXXX	OO	
31535	★	ADOBE VETERINARY CLINIC	909-794-6773	
	★	EMPIRE EQUINE	909-794-6773	
	●	THOMPSON J	OO	3
	★	THOMPSON J WARD DVM	909-794-6773	

X 18TH ST

31646	★	ALL VALLEY BBQ SPA & PATIO	909-389-7507	+5
	★	OAK VALLEY PIANO	909-794-9119	+5
31650		XXXX	OO	
31682	★	CAL-MESA STEEL	909-794-7774	
31730	★	BREWSTER ELECTRIC	909-794-8207	3
31740	★	GREEN LEE HORSESHOEING	909-794-3455	
	★	SHOEIN' SHOP THE	909-794-3455	
31838	★	ALPINE STORAGE	909-794-2100	4

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 2000



AVENUE E 92399
YUCAIPA

WEALTH CODE 3.0

X YUCAIPA BLVD

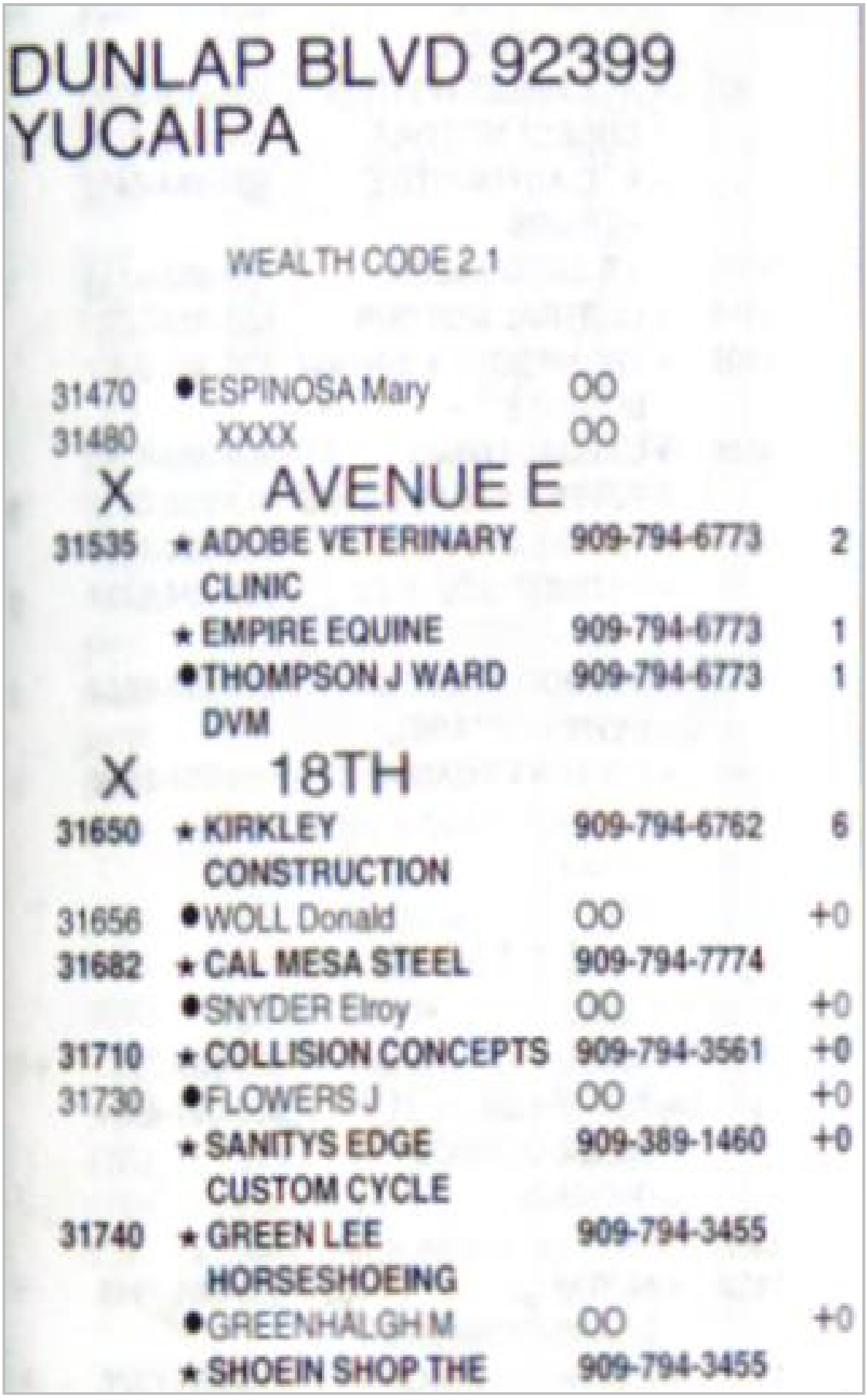
31479	●STRONG Gudrun	OO	+0

X DUNLAP BLVD

31514	●IRVIN Charles	OO	+0
31535	●DURBIN Harold	909-794-4672	+0
31548	DEPAOLA Helen	909-794-0635	8
31560	●ALBERTSON Forest	OO	+0
31580	●PAMIAS Laura	OO	+0
31622	●RUDDY Anthony	OO	+0
31635	●CORDER Dale E	909-794-2785	
	●CORDER E L	909-794-2785	

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 2000



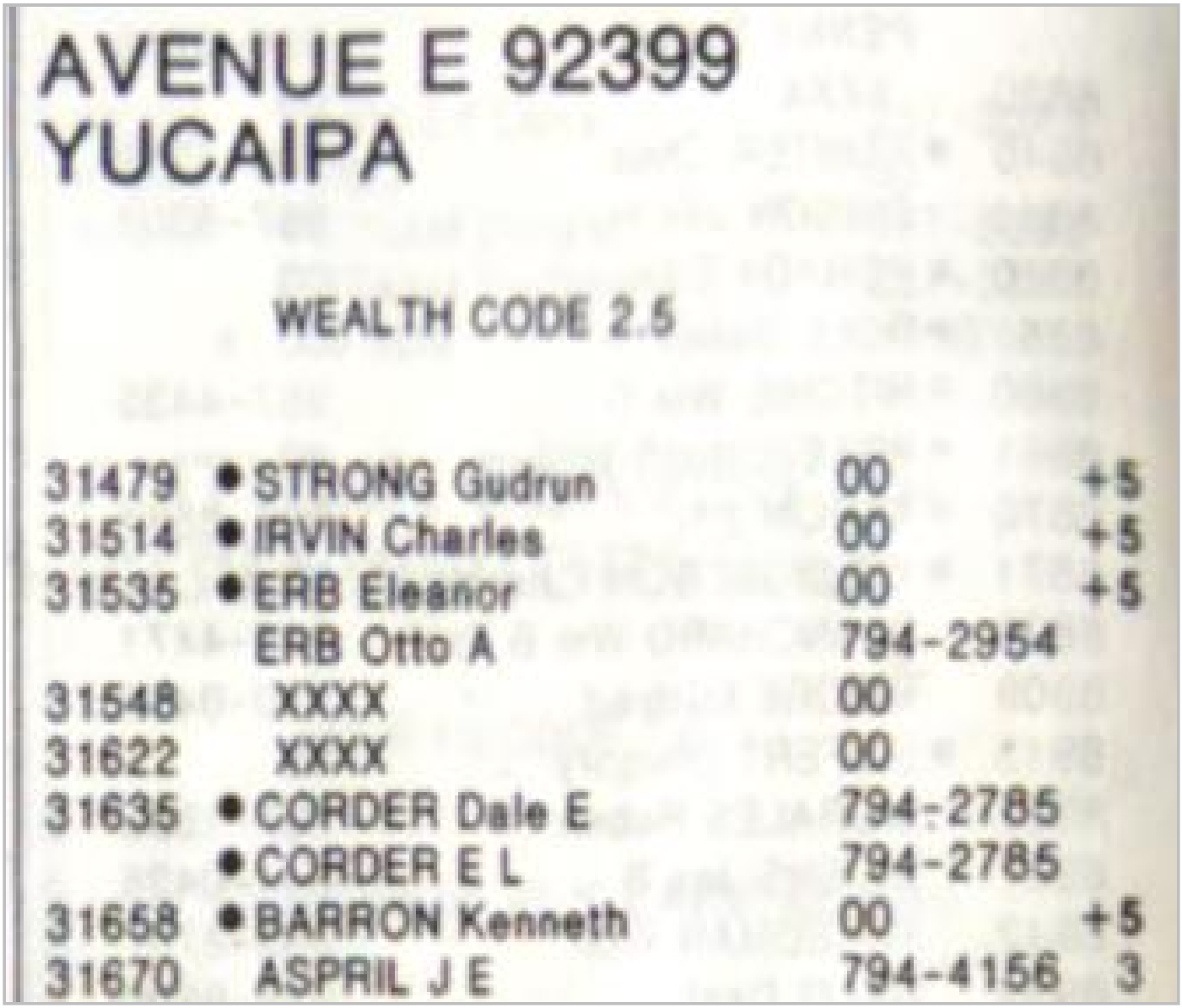
DUNLAP BLVD 92399
YUCAIPA

WEALTH CODE 2.1

31470	●ESPINOSA Mary	OO	
31480	XXXX	OO	
X	AVENUE E		
31535	★ADOBE VETERINARY CLINIC	909-794-6773	2
	★EMPIRE EQUINE	909-794-6773	1
	●THOMPSON J WARD DVM	909-794-6773	1
X	18TH		
31650	★KIRKLEY CONSTRUCTION	909-794-6762	6
31656	●WOLL Donald	OO	+0
31682	★CAL MESA STEEL	909-794-7774	
	●SNYDER Elroy	OO	+0
31710	★COLLISION CONCEPTS	909-794-3561	+0
31730	●FLOWERS J	OO	+0
	★SANITYS EDGE CUSTOM CYCLE	909-389-1460	+0
31740	★GREEN LEE HORSESHOEING	909-794-3455	
	●GREENHALGH M	OO	+0
	★SHOEIN SHOP THE	909-794-3455	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 1995



AVENUE E 92399
YUCAIPA

WEALTH CODE 2.5

31479	• STRONG Gudrun	00	+5
31514	• IRVIN Charles	00	+5
31535	• ERB Eleanor	00	+5
	ERB Otto A	794-2954	
31548	XXXX	00	
31622	XXXX	00	
31635	• CORDER Dale E	794-2785	
	• CORDER E L	794-2785	
31658	• BARRON Kenneth	00	+5
31670	ASPRIL J E	794-4156	3

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 1995



DUNLAP BLVD 92399
YUCAIPA

WEALTH CODE 2.0

31470	•ESPINOSA Mary	00	
31480	XXXX	00	
31535	★ADOBE VETRNRN CLNC	794-6773	2
	★EMPIRE EQUINE	794-6773	1
	★THOMPSON J W DVM	794-6773	1
31650	XXXX	00	
31682	★CAL MESA STEEL	794-7774	6
31710	★TRUCK&RV TOYS	794-7020	4
	★WORK TRUCK TOYS	794-7020	+5
31730	★A A A AUTOMOTIVE	794-7196	
31740	★GREEN LEE HORSESHNG	794-3455	
	★SHOEIN SHOP THE	794-3455	
31772	BRICENO Marcos	794-7261	4
	MARTINEZ Teresa	794-7776	2
	MARTINEZ Teresa	794-6383	+5
	MENDIOLA Pablo	794-1491	+5

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 1990



AVENUE E 92399
YUCAIPA

31479	XXXX	00
31535	ERB Otto A	794-2954
31548	SPILLMANN Adolph C	794-3386
31592	STUDLEY W A	794-2974
31608	XXXX	00
31622	ASPRIL J E	794-4156
31635	CORDER Dale E	794-2785 +0
	CORDER E L	794-2785 +0

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 1990

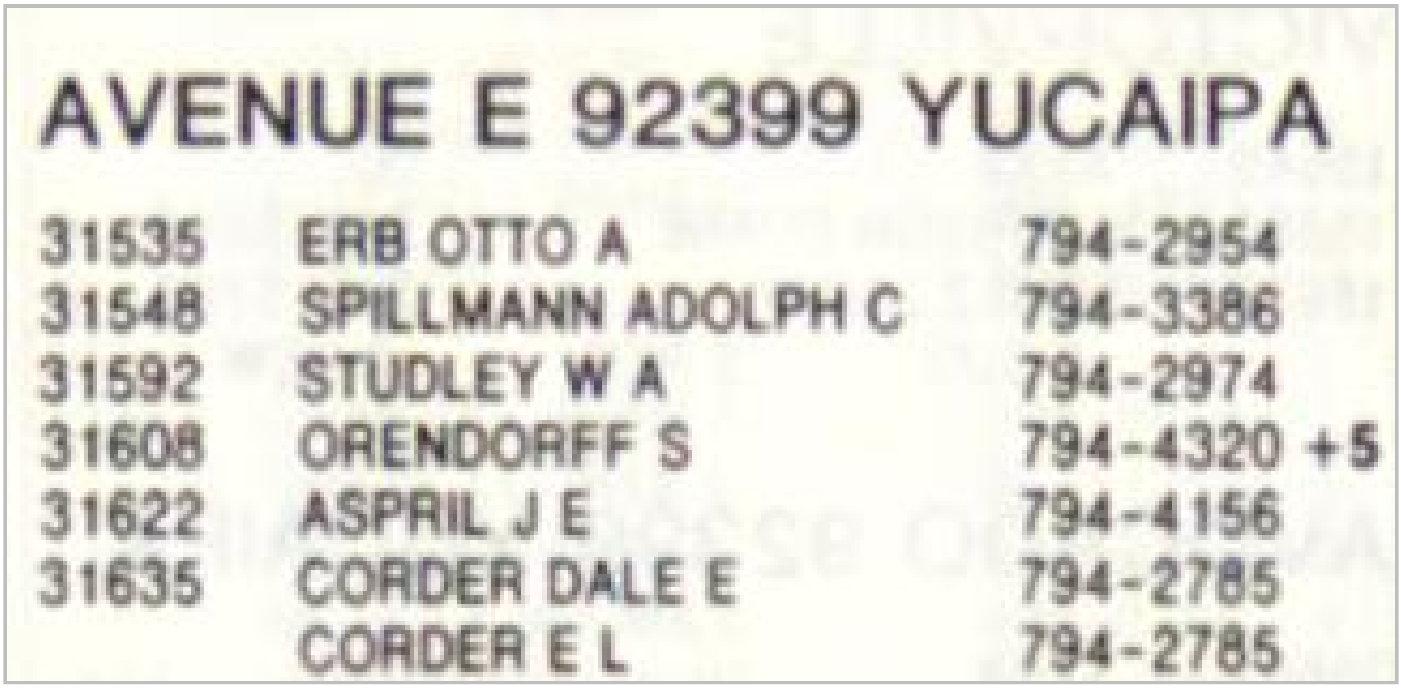


DUNLAP BLVD 92399
YUCAIPA

31470	XXXX	00	
31480	XXXX	00	
31535	XXXX	00	
31650	★WOLL D FRAMING	794-5530	6
31682	★CAL MESA STEEL	794-7774	6
31710	★PRECISION MARINE	794-7855	9
31730	★A A A AUTOMOTIVE	794-7196	5
31740	★GREEN LEE HORSESHNG	794-3455	
	★SHOEIN SHOP THE	794-3455	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 1985

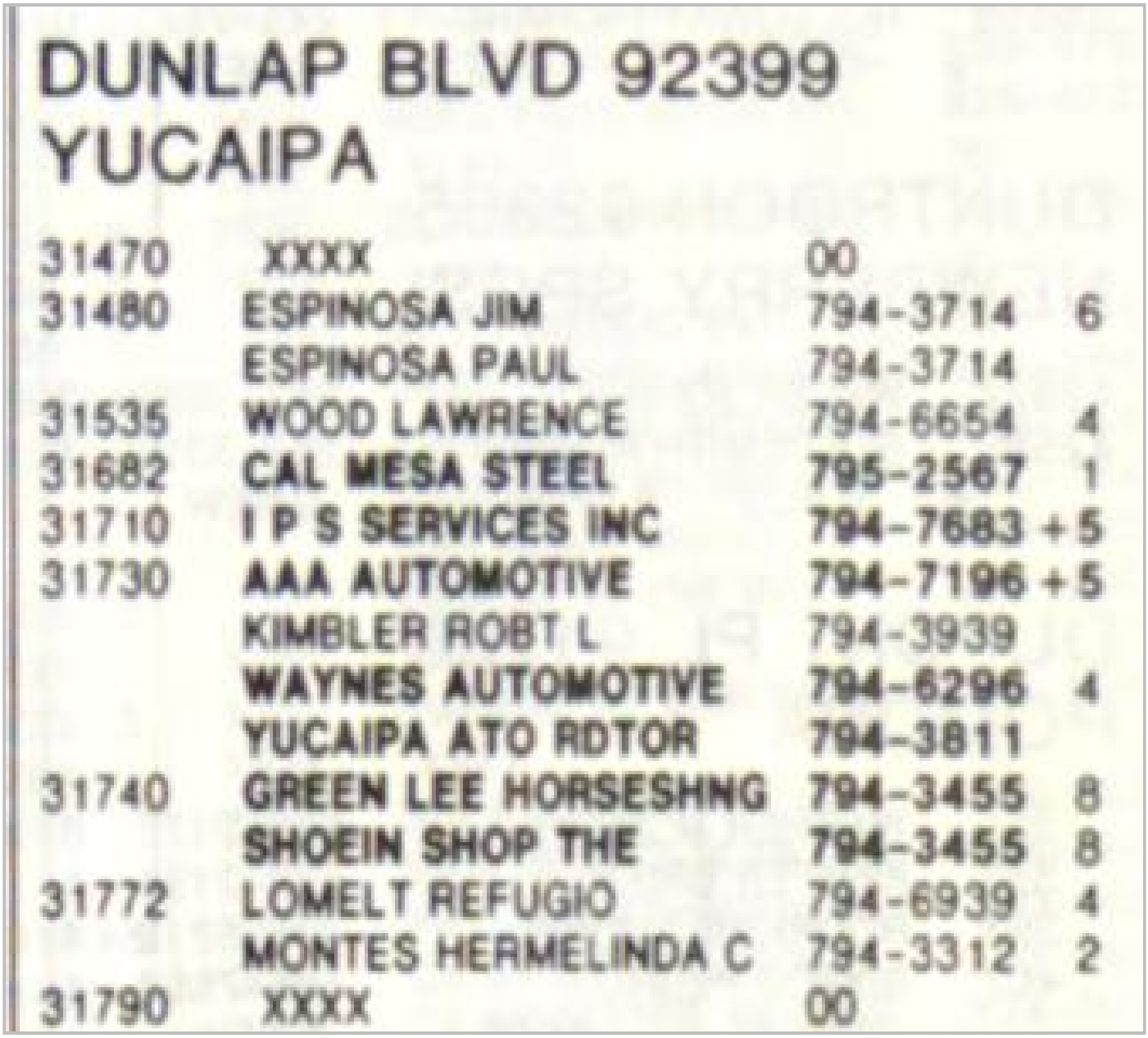


AVENUE E 92399 YUCAIPA

31535	ERB OTTO A	794-2954
31548	SPILLMANN ADOLPH C	794-3386
31592	STUDLEY W A	794-2974
31608	ORENDORFF S	794-4320 +5
31622	ASPRIL J E	794-4156
31635	CORDER DALE E	794-2785
	CORDER E L	794-2785

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 1985

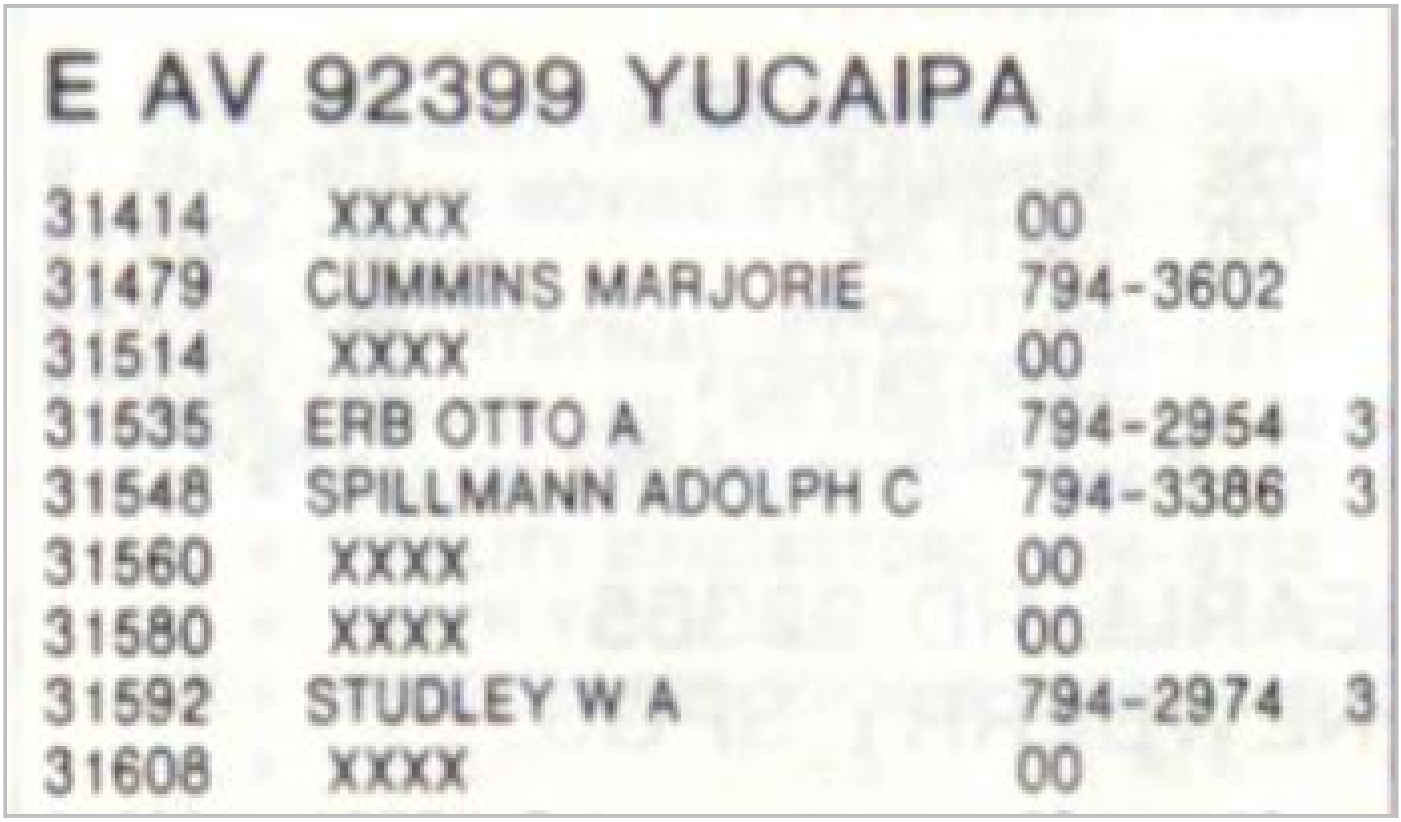


DUNLAP BLVD 92399
YUCAIPA

31470	XXXX	00	
31480	ESPINOSA JIM	794-3714	6
	ESPINOSA PAUL	794-3714	
31535	WOOD LAWRENCE	794-6654	4
31682	CAL MESA STEEL	795-2567	1
31710	I P S SERVICES INC	794-7683	+5
31730	AAA AUTOMOTIVE	794-7196	+5
	KIMBLER ROBT L	794-3939	
	WAYNES AUTOMOTIVE	794-6296	4
	YUCAIPA ATO RDTOR	794-3811	
31740	GREEN LEE HORSESHNG	794-3455	8
	SHOEIN SHOP THE	794-3455	8
31772	LOMELT REFUGIO	794-6939	4
	MONTES HERMELINDA C	794-3312	2
31790	XXXX	00	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 1980



E AV 92399 YUCAIPA

31414	XXXX	00	
31479	CUMMINS MARJORIE	794-3602	
31514	XXXX	00	
31535	ERB OTTO A	794-2954	3
31548	SPILLMANN ADOLPH C	794-3386	3
31560	XXXX	00	
31580	XXXX	00	
31592	STUDLEY W A	794-2974	3
31608	XXXX	00	

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 1980

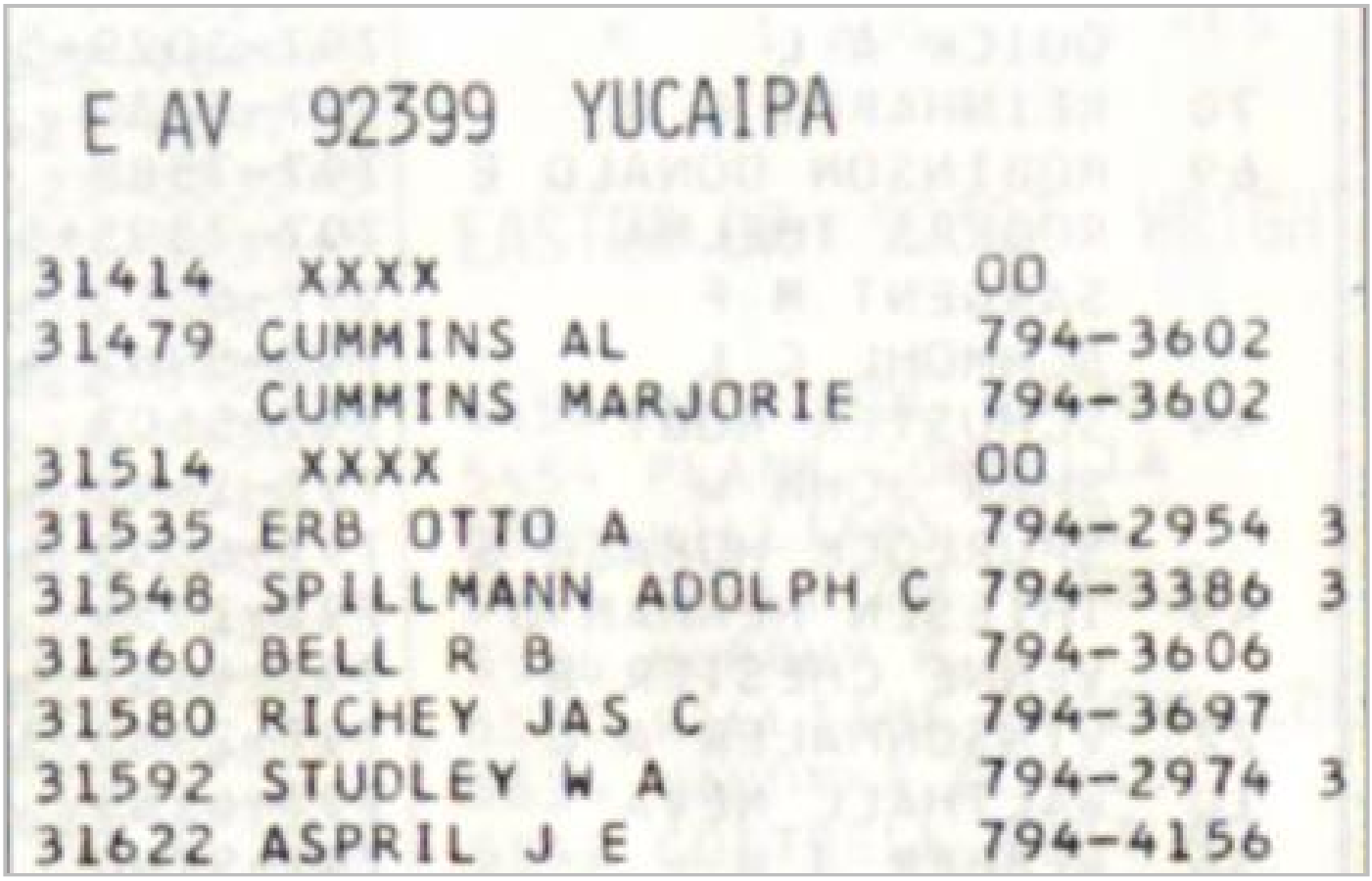


DUNLAP BLVD 92399
YUCAIPA

31470	ESPINOSA JIM	794-5827	+0
31480	ESPINOSA PAUL	794-3714	6
★	P M LIGHTING MFG CO	794-3714	6
31535	HOLZ CHAS E	794-1832	7
31710★	CARBIDE PRODCTS LTD	794-5555	+0
★	INLAND POWER SWEEPG	797-5587	+0
★	INLAND POWER SWPNG	797-5587	+0
31730	FOREMAN WAYNE	794-3350	+0
	KIMBLER ROBT L	794-3939	
★	YUCAIPA ATO RDTOR	794-3811	
31740★	GREEN LEE HORSESHNG	794-3455	8
★	SHOEIN SHOP THE	794-3455	8
31772	CARTER JACK L JR	794-1885	5
	PERHACS JOE	794-4076	+0
31790	XXXX	00	
31900	XXXX	00	

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

AVENUE E 1975

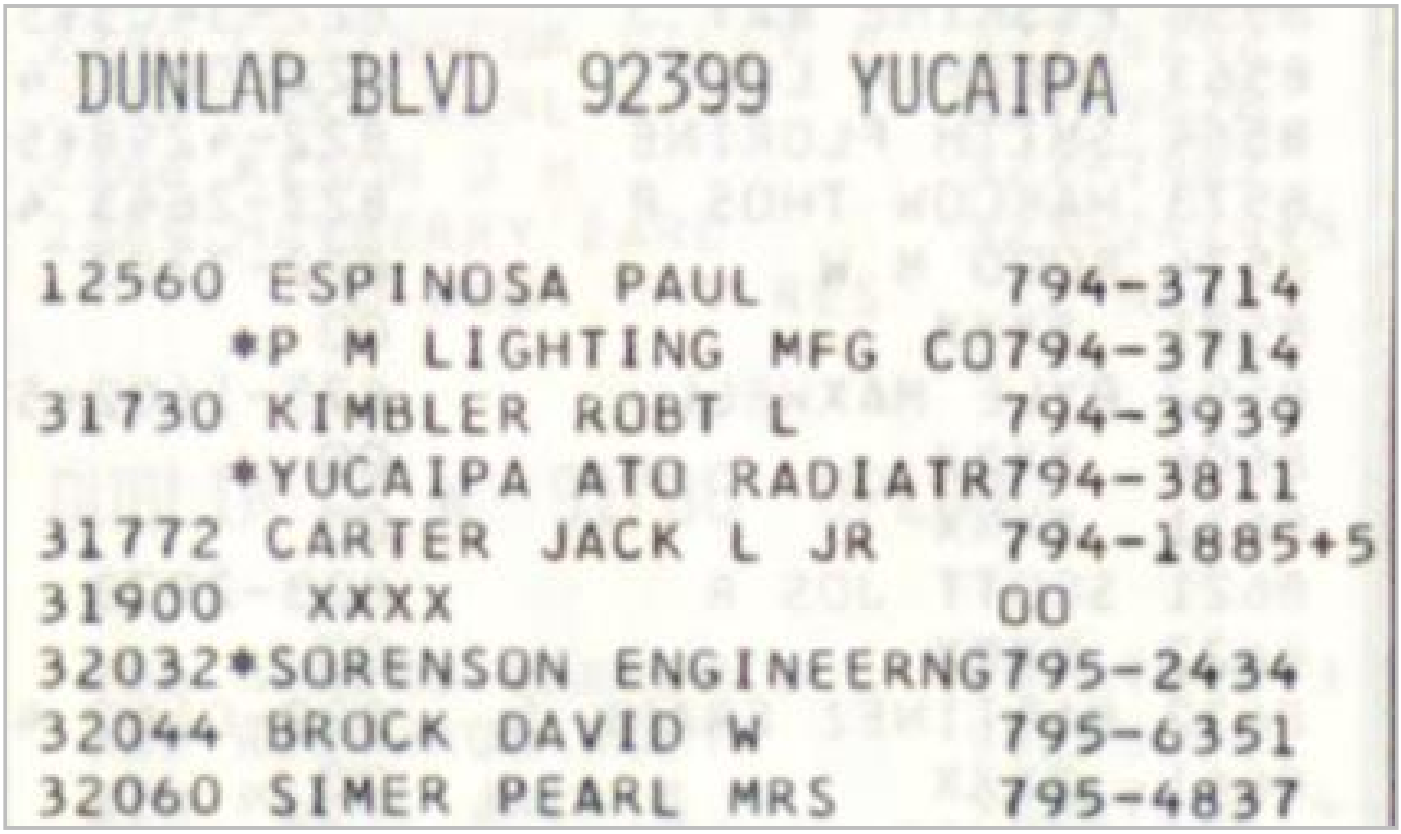


E AV 92399 YUCAIPA

31414	XXXX	OO	
31479	CUMMINS AL	794-3602	
	CUMMINS MARJORIE	794-3602	
31514	XXXX	OO	
31535	ERB OTTO A	794-2954	3
31548	SPILLMANN ADOLPH C	794-3386	3
31560	BELL R B	794-3606	
31580	RICHEY JAS C	794-3697	
31592	STUDLEY W A	794-2974	3
31622	ASPRIL J E	794-4156	

Target Street	Cross Street	Source
-	✓	Haines Criss-Cross Directory

DUNLAP BLVD 1975



DUNLAP BLVD 92399 YUCAIPA

12560 ESPINOSA PAUL 794-3714
*P M LIGHTING MFG CO 794-3714
31730 KIMBLER ROBT L 794-3939
*YUCAIPA ATO RADIATR 794-3811
31772 CARTER JACK L JR 794-1885+5
31900 XXXX OO
32032*SORENSON ENGINEERNG 795-2434
32044 BROCK DAVID W 795-6351
32060 SIMER PEARL MRS 795-4837

Target Street	Cross Street	Source
✓	-	Polk's City Directory

AVENUE E 1972

AVENUE E 92399

31479	CUMMINS, MARJORIE	794-3602
31514	IRVIN, DR CHARLES E	794-3593
31535	ERB, OTTO A	794-2954
31548	SPILLMANN, ADOLPH C	794-3386
31560	BELL, R B	794-3606
31580	RICHEY, JAMES C	794-3697
31592	STUDLEY, W A	794-2974
31622	ASPRIL, J E	794-4156

Target Street	Cross Street	Source
-	✓	Polk's City Directory

DUNLAP BLVD 1972

DUNLAP BL 92399

12560		▫P M LIGHTING MFG CO	794-3714
31730		KIMBLER, ROBT. L	794-3939
31730		▫YUC ATO RAOTR&AR COND	794-3811
31772	+	APARTMENT	
31772	+	DAVIS, GEO. W	794-4451
3*	+	COOPER, CHAS. K	794-3207
5*	+	BROWN, HELEN	794-4390
32032		▫SORENSON ENGINEERING	795-2434
32044		BROCK, DAVID W	795-6351
32060		SIMER, MRS PEARL	795-4837
32074		▫NATCOL CRAFTS INC.	795-2407

Target Street	Cross Street	Source
✓	-	Luskey City Directory

AVENUE E 1965

AVENUE E (YUC) – FROM 31400 YUCAIPA BL. EAST (92399)

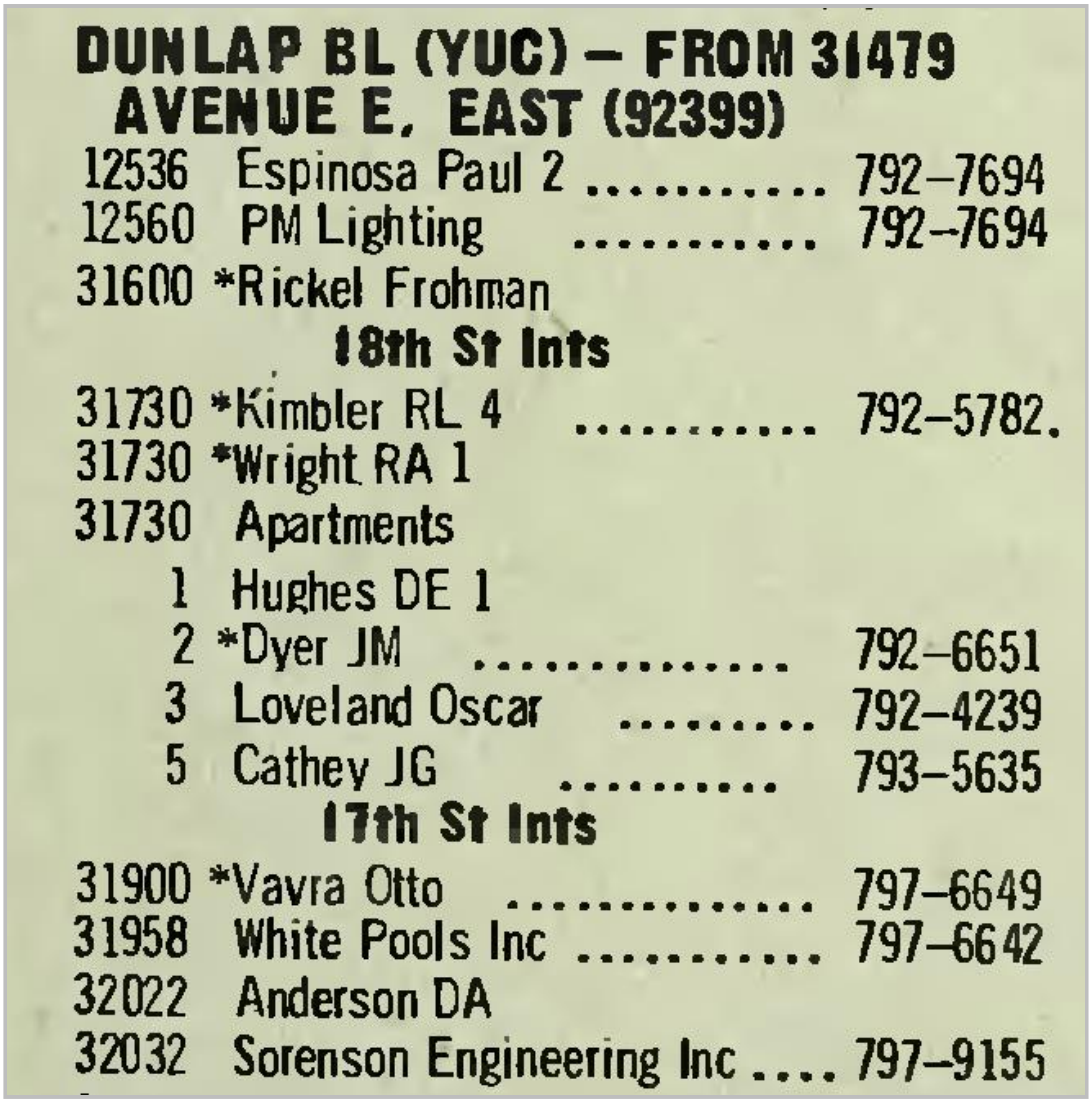
31395 Barnett Chas 792–3920
31479 *Cummins Al 1..... 797–4972

Dunlap Bl Int s

31514 *Irvin CE 2 793–1693
31535 Erb's Ceramics 792–6773
31535 * Erb OA..... 792–6773
31548 Spillmann AC cement finisher. 792–4816
31548 *Spillmann AC 1 792–4816
31560 Bell Bertie 792–2006
31580 Ponder JC 2 793–1024
31592 *Reimer Jack 792–4287
31607 A&M Custom Grading contrditch 793–1746
31607 Burrows AD 2 793–1746

Target Street	Cross Street	Source
-	✓	Luskey City Directory

DUNLAP BLVD 1965



DUNLAP BL (YUC) – FROM 31479 AVENUE E, EAST (92399)

12536 Espinosa Paul 2 792–7694
12560 PM Lighting 792–7694
31600 *Rickel Frohman

18th St Ints

31730 *Kimbler RL 4 ..... 792–5782.
31730 *Wright RA 1
31730 Apartments
1 Hughes DE 1
2 *Dyer JM 792–6651
3 Loveland Oscar 792–4239
5 Cathey JG 793–5635

17th St Ints

31900 *Vavra Otto 797–6649
31958 White Pools Inc 797–6642
32022 Anderson DA
32032 Sorenson Engineering Inc 797–9155

Residential Property
31479 Avenue E
Yucaipa, CA 92399

Inquiry Number: 5347105.26
June 28, 2018

EDR Environmental Lien and AUL Search

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.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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EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

31479 Avenue E
Residential Property
Yucaipa, CA 92399

RESEARCH SOURCE

Source 1:

San Bernardino Recorder
San Bernardino, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	Gudrun G Strong Trustee
Title received from:	Gudrun G Strong
Deed Dated	7/31/2006
Deed Recorded:	8/17/2006
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	Gudrun G Strong Trustee
Parcel # / Property Identifier:	0300-192-07
Comments:	See Exhibit

Deed 2:

Type of Deed:	deed
Title is vested in:	Gudrun G Strong Trustee
Title received from:	Gudrun G Strong
Deed Dated	7/31/2006
Deed Recorded:	8/17/2006
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	

EDR Environmental Lien and AUL Search

Miscellaneous Comments:

Legal Description: See Exhibit

Legal Current Owner: Gudrun G Strong Trustee

Parcel # / Property Identifier: 0300-192-08

Comments: See Exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

Deed Exhibit 1

Recorded in Official Records, County of San Bernardino

8/17/2006
1:14 PM
LJ

LARRY WALKER
Auditor/Controller – Recorder

P Counter

Doc#: 2006–0563574

Titles: 1 Pages: 5

Fees	18.00
Taxes	0.00
Other	1.00
PAID	$19.00

RECORDING REQUESTED BY
Kathleen B. Albrektson

WHEN RECORDED MAIL THIS DEED
AND MAIL TAX STATEMENTS TO
NAME: Gudrun G. Strong
ADDRESS: 37093 Oak Glen Road
CITY: Yucaipa
STATE & ZIP: CA 92399

(Above space for Recorder's use)

QUITCLAIM DEED

APN: 0300-192-07-0000

THE UNDERSIGNED GRANTOR(S) DECLARE(S):

Documentary transfer tax is $__-0-___ transfer is a gift
☐ computed on full value of property conveyed, or
☐ computed on full value less value of liens or encumbrances remaining at time of sale.
☐ unincorporated area ☐ city of__Yucaipa__, AND

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Gudrun G. Strong, a widow

hereby REMISES, RELEASES AND FOREVER QUITCLAIMS their interest as follows:

Gudrun G. Strong, trustee of the Gudrun G. Strong Trust dated July 31, 2006

the following described real property in the County of San Bernardino, State of California:

That portion of Block 4, Subdivision No. 5 of a part of Dunlap Ranch, as per plat recorded in Book 23 of Maps, Page 57 and 58, records of said County, described as follows:

Beginning at a point on the Northeasterly line of said Block 4 in the center line of Avenue "E" (Formerly Arizona Street) which is South 49 degrees 56' East 416.68 feet from the center line intersection of said Avenue "E" and Yucaipa Boulevard (Formerly Redlands Boulevard); said point being the most Northerly corner of the property conveyed to Elford Virgil Cummins, ET UX, by deed recorded as Instrument No. 147 on August 16, 1955 in Book 3717 of Official Records, Page 72; thence along the Westerly line of said property so conveyed, South 4 degrees 31' West 205.37 feet; thence North 66 degrees 04' East 128.5 feet; thence South 88 degrees 41' East 82.5 feet to aforesaid center line of Avenue "E"; thence along said center line North 49 degrees 56' West 240.05 feet to the point of beginning.

Together with an easement for road purposes only, over, upon and across that portion of the Westerly 15 feet of the aforesaid property conveyed to Elford Virgil Cummins, ET UX, by deed dated August 16, 1955 recorded in Book 3717, Page 72 of the Official Records, which lies Southerly of the property hereby conveyed to Rebecca Lee Lukei.

Commonly known as: 31479 Avenue E., Yucaipa, CA 92399
See attached Exhibit "A" for Certificate of Trust
See attached Exhibit "B" for Declaration of Exemption

MAIL TAX STATEMENTS AS DIRECTED ABOVE

DATED: July 31, 2006

Gudrun G. Strong

ACKNOWLEDGMENT

COUNTY OF SAN BERNARDINO)
STATE OF CALIFORNIA)

On July 31, 2006, before me, K. B. Albrektson, Notary Public, personally appeared Gudrun G. Strong, personally known to me (or 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.

WITNESS my hand and official seal.

Signature of Notary Public (Seal)

K. B. ALBREKTSON
Commission # 1424934
Notary Public - California
San Bernardino County
My Comm. Expires Jul 13, 2007

Exhibit "A"

CERTIFICATE OF TRUST

The undersigned settlor hereby certifies the following:

1. This Certificate of Trust relates to GUDRUN G. STRONG TRUST DATED JULY 31, 2006 (the "trust") created by trust agreement (the "trust agreement") executed by GUDRUN G. STRONG.

2. The name of the settlor is GUDRUN G. STRONG.

3. The name of the original trustee is GUDRUN G. STRONG. This authority is provided by the following provision in the Declaration of Trust: "I hereby designate myself as the primary trustee of this trust. I may exercise dominion and control over any and all of the trust assets."

4. The name and address of each trustee empowered to act under the trust agreement at the time of the execution of this Certificate of Trust is:

Primary:	GUDRUN G. STRONG 37093 Oak Glen Road, Yucaipa, California 92399
Successor:	NICOLE BRIGITTE ZIMMERMAN 740 Holly Springs Drive, Conroe, Texas 77302
Alternate Successor:	BONNIE LINDER WARREN 1083 E. 27th Street, San Bernardino, California 92404

Authority of the successor trustee(s) is provided by the following provisions in the Declaration of Trust: "I designate NICOLE BRIGITTE ZIMMERMAN as the successor trustee of this trust. My successor trustee is to assume the duties as trustee hereunder upon my resignation, death, or disappearance, or if I am certified in writing to be incompetent as provided under Article Five of this Declaration of Trust. Except as otherwise specified within the provisions of this Declaration of Trust, in the event of my incompetency or resignation, my successor trustee is to use the income and assets of this trust exclusively for my health, education, support, and maintenance.

If NICOLE BRIGITTE ZIMMERMAN is unable or unwilling to act as successor trustee, I designate BONNIE LINDER WARREN as successor trustee to serve with all rights and responsibilities given to the original successor trustee."

5. The trustee(s) are authorized by the trust agreement to have all the rights, powers and authority to deal with and manage the assets of this trust that an individual owner would have if there were no trust and the trustee(s) were acting as legally competent individual(s) dealing with their own property. This includes, but is by no means limited to the right to borrow against or pledge any of the trust assets, including the right to mortgage real estate and margin stocks or other securities owned by the trustee(s) of the trust. This includes all powers now or hereafter conferred upon trustee(s) by applicable state law, and also those powers appropriate to the orderly and effective administration of the trust.

6. The undersigned conveyed to the trust the following described real estate in the County of San Bernardino, State of California:

That portion of Block 4, Subdivision No. 5 of a part of Dunlap Ranch, as per plat recorded in Book 23 of Maps, Page 57 and 58, records of said County, described as follows:

Beginning at a point on the Northeasterly line of said Block 4 in the center line of Avenue "E" (Formerly Arizona Street) which is South 49 degrees 56' East 416.68 feet from the center line intersection of said Avenue "E" and Yucaipa Boulevard (Formerly Redlands Boulevard); said point being the most Northerly corner of the property conveyed to Elford Virgil Cummins, ET UX, by deed recorded as Instrument No. 147 on August 16, 1955 in Book 3717 of Official Records, Page 72; thence along the Westerly line of said property so conveyed, South 4 degrees 31' West 205.37 feet; thence North 66 degrees 04' East 128.5 feet; thence South 88 degrees 41' East 82.5 feet to aforesaid center line of Avenue "E"; thence along said center line North 49 degrees 56' West 240.05 feet to the point of beginning.

Together with an easement for road purposes only, over, upon and across that portion of the Westerly 15 feet of the aforesaid property conveyed to Elford Virgil Cummins, ET UX, by deed dated August 16, 1955 recorded in Book 3717, Page 72 of the Official Records, which lies Southerly of the property hereby conveyed to Rebecca Lee Lukei.

7. The undersigned hereby represents that the statements contained in this Certificate of Trust are true and correct, and that there are no other provisions in the trust agreement or amendments to it that limit the powers of the trustee(s) to sell, convey, pledge, mortgage, lease, manage, operate, control, transfer title, divide, convert, allot or sell upon deferred payments trust property, including real and personal property, that would create liability for any third party relying on this document as authorization for trustee(s)' authority.

8. This trust has not been revoked, modified, or amended in any manner which would cause the representations in this certification of trust to be incorrect. This Certificate of Trust is being signed by all currently acting trustees of the trust.

Gudrun G Strong

GUDRUN G. STRONG

State of California)
County of San Bernardino)

On July 31, 2006 before me, K. B. Albrektson, Notary Public (here insert name and title of the officer), personally appeared GUDRUN G. STRONG, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature K. B. Albrektson (Seal)

K. B. ALBREKTSON
Commission # 1424934
Notary Public - California
San Bernardino County
My Comm. Expires Jul 13, 2007

Exhibit "B"

DECLARATION OF EXEMPTION FROM DOCUMENTARY TRANSFER TAX: TRANSFERS RESULTING SOLELY IN A CHANGE IN THE METHOD OF HOLDING TITLE TO REALTY.

APN: 0300-192-07-0000
Address: 31479 Avenue E, Yucaipa, California 92399

Grantor has not received and will not receive any consideration (money) from grantee for the transfer made by the attached deed. This is a transfer from an existing owner to the existing owner's revocable living trust. Therefore, under Revenue and Taxation Code Sec. 11925 & 11930, the transfer is not subject to the Documentary Transfer Tax since this is solely a change in the method of holding title to realty.

In accordance with Revenue and Taxation Code Sec. 11933 I am the person that determined no tax was due.

I declare under penalty of perjury under the laws of California that the foregoing is true and correct.

Gudrun G Strong
GUDRUN G. STRONG

Date: July 31, 2006, Redlands, California

State of California)
)
County of San Bernardino)

On July 31, 2006, before me, K. B. Albrektson, Notary Public, personally appeared GUDRUN G. STRONG, personally known to me (or 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.

WITNESS my hand and official seal.

Signature K. B. Albrektson (Seal)

K. B. ALBREKTSON
Commission # 1424934
Notary Public - California
San Bernardino County
My Comm. Expires Jul 13, 2007

Deed Exhibit 2

Recorded in Official Records, County of San Bernardino

8/17/2006
1:14 PM
LJ

LARRY WALKER
Auditor/Controller – Recorder

P Counter

Doc#: 2006 – 0563575

Titles: 1 **Pages: 6**

Fees	21.00
Taxes	0.00
Other	1.00
PAID	$22.00

RECORDING REQUESTED BY
Kathleen B. Albrektson

WHEN RECORDED MAIL THIS DEED
AND MAIL TAX STATEMENTS TO
NAME: Gudrun G. Strong
ADDRESS: 37093 Oak Glen Road
CITY: Yucaipa
STATE & ZIP: CA 92399

(Above space for Recorder's use)

QUITCLAIM DEED

APN:0300-192-08-0000

THE UNDERSIGNED GRANTOR(S) DECLARE(S):

Documentary transfer tax is $ -0- transfer is a gift
☐ computed on full value of property conveyed, or
☐ computed on full value less value of liens or encumbrances remaining at time of sale.
☐ unincorporated area ☐ city of Yucaipa, AND

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Gudrun G. Strong, a single woman

hereby REMISES, RELEASES AND FOREVER QUITCLAIMS their interest as follows:

Gudrun G. Strong, trustee of Gudrun G. Strong Trust dated July 31, 2006

the following described real property in the County of San Bernardino, State of California:

Commonly known as: 31479 Avenue E, Yucaipa, CA 92399
See attached Exhibit "A" for legal description
See attached Exhibit "B" Certificate of Trust
See attached Exhibit "C" Declaration of Exemption

DATED: July 31, 2006

Gudrun G Strong
Gudrun G. Strong

ACKNOWLEDGMENT

COUNTY OF SAN BERNARDINO)
STATE OF CALIFORNIA)

On July 31, 2006, before me, K. B. Albrektson, Notary Public, personally appeared Gudrun G. Strong, personally known to me (or 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.

WITNESS my hand and official seal.

K. B. Albrektson
Signature of Notary Public (Seal)

K. B. ALBREKTSON
Commission # 1424934
Notary Public - California
San Bernardino County
My Comm. Expires Jul 13, 2007

MAIL TAX STATEMENTS AS DIRECTED ABOVE

EXHIBIT "A"

LEGAL DESCRIPTION:

ALL THAT PORTION OF BLOCK 4, SUBDIVISION NO. 5 OF A PART OF DUNLAP RANCH, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 23, PAGES 57 AND 58 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDED OF SAID COUNTY, LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY LINE OF THE STATE HIGHWAY AS CONVEYED BY C. L. WILSON TO STATE OF CALIFORNIA, BY DEED RECORDED MARCH 11, 1941, IN BOOK 1433, PAGE 458, OFFICIAL RECORDS, WITH THE NORTHWESTERLY LINE OF 19TH STREET (FORMERLY AVENUE "O"); THENCE NORTH 4 DEG. 31' EAST 545.18 FEET TO A POINT ON THE CENTER LINE OF AVENUE "E" (FORMERLY ARIZONA STREET) WHICH IS SOUTH 49 DEG. 56' EAST 416.68 FEET FROM THE INTERSECTION OF THE CENTER LINE OF YUCAIPA BOULEVARD (FORMERLY REDLANDS BOULEVARD) AND SAID AVENUE "E".

EXCEPT THAT PORTION OF BLOCK 4, SUBDIVISION NO. 5 OF PART OF DUNLAP RANCH, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 23, PAGES 57 AND 58 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY LINE OF THE STATE HIGHWAY AS CONVEYED BY C. L. WILSON TO THE STATE OF CALIFORNIA, BY DEED RECORDED MARCH 11, 1941, IN BOOK 1433, PAGE 458, OFFICIAL RECORDS, WITH THE NORTHWESTERLY LINE OF 19TH STREET (FORMERLY AVENUE "O"); THENCE NORTH 4 DEG. 27' 10" EAST (RECORD NORTH 4 DEG. 31' EAST) 120.51 FEET; THENCE SOUTH 69 DEG. 50' EAST, 118.73 FEET TO SAID NORTHWESTERLY LINE OF 19TH STREET, DISTANT ALONG SAID NORTHWESTERLY LINE NORTH 56 DEG. 45' EAST, 144.46 FEET FROM THE POINT OF BEGINNING; THENCE ALONG SAID NORTHWESTERLY LINE SOUTH 56 DEG. 45' WEST 144.46 FEET TO THE POINT OF BEGINNING.

ALSO EXCEPT THAT PORTION OF BLOCK 4, SUBDIVISION NO. 5 OF PART OF DUNLAP RANCH, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 23, PAGES 57 AND 58 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHEASTERLY LINE OF SAID BLOCK 4 IN THE CENTER LINE OF AVENUE "E" (FORMERLY ARIZONA STREET), WHICH IS SOUTH 49 DEG. 56' EAST, 416.68 FEET FROM THE CENTER LINE INTERSECTION OF SAID AVENUE "E" AND YUCAIPA BOULEVARD (FORMERLY REDLANDS BOULEVARD) SAID POINT BEING THE MOST NORTHERLY CORNER OF THE PROPERTY CONVEYED TO ELFORD VIRGIL CUMMINS, ET UX, BY DEED RECORDED AUGUST 16, 1955, IN BOOK 3717, PAGE 72, OFFICIAL RECORDS; THENCE ALONG THE WESTERLY LINE OF SAID PROPERTY SO CONVEYED SOUTH 4 DEG. 31'

WEST 205.37 FEET; THENCE NORTH 66 DEG. 04' EAST, 128.50 FEET; THENCE SOUTH 88 DEG. 41' EAST, 82.50 FEET TO AFORESAID CENTER LINE OF AVENUE "E"; THENCE ALONG SAID CENTER LINE NORTH 49 DEG. 56' WEST, 240.05 FEET TO THE TRUE POINT OF BEGINNING.

ALSO EXCEPT THAT PORTION OF SAID LAND GRANTED TO THE STATE OF CALIFORNIA BY DEED RECORDED OCTOBER 21, 1986, INSTRUMENT NO. 86-308803, OFFICIAL RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHWESTERLY LINE OF DUNLAP BOULEVARD (FORMERLY 19TH STREET), 60 FEET WIDE, SAID POINT BEING ALSO THE MOST EASTERLY CORNER OF THAT PARCEL OF LAND CONVEYED TO PAUL ESPINOZA, ET UX, BY DIRECTOR'S DEED RECORDED FEBRUARY 15, 1961, IN BOOK 5353, PAGE 344, OFFICIAL RECORDS; THENCE ALONG THE NORTHERLY BOUNDARY OF SAID ESPINOZA PARCEL NORTH 70 DEG. 17' 31" WEST, 118.82 FEET TO THE MOST WESTERLY CORNER OF THAT PARCEL CONVEYED TO FRED A. BERGON, ET AL, BY DEED RECORDED MARCH 10, 1981, INSTRUMENT NO. 81-050007, OFFICIAL RECORDS; THENCE ALONG THE WESTERLY LINE OF SAID BERGON PARCEL NORTH 03 DEG. 57' 23" EAST, 30.64 FEET TO A POINT ON A NON-TANGENT CURVE CONCAVE NORTHERLY AND HAVING A RADIUS OF 2930.00 FEET FROM A TANGENT BEARING OF SOUTH 57 DEG. 42' 07" EAST, THROUGH A CENTRAL ANGLE OF 02 DEG. 35' 18" AND AN ARC DISTANCE OF 132.37 FEET TO A POINT ON THE NORTHWESTERLY LINE OF DUNLAP BOULEVARD (FORMERLY 19TH STREET), 60.00 FEET WIDE; THENCE ALONG THE SAID BOULEVARD SOUTH 56 DEG. 18' 06" WEST, 4.44 FEET TO THE TRUE POINT OF BEGINNING.

ALSO EXCEPT THAT PORTION OF SAID LAND GRANTED TO THE STATE OF CALIFORNIA BY DEED RECORDED NOVEMBER 4, 1986, AS INSTRUMENT NO. 86-326938, OFFICIAL RECORDS OF SAN BERNARDINO COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHWESTERLY LINE OF DUNLAP BOULEVARD (FORMERLY 19TH STREET) 60 FEET WIDE, SAID POINT BEING THE MOST NORTHEASTERLY POINT OF THAT CERTAIN PARCEL OF LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDED OCTOBER 21, 1986 INSTRUMENT NO. 86-308803 OF OFFICIAL RECORDS; THENCE ALONG THE SAID NORTHWESTERLY LINE, NORTH 56° 18' 06" EAST, 22.39 FEET TO A POINT ON A NONTANGENT CURVE CONCAVE NORTHEASTERLY AND HAVING A RADIUS OF 2,910.00 FEET; THENCE NORTHWESTERLY ALONG SAID CURVE FROM A TANGENT BEARING OF NORTH 60° 29' 16" WEST, THROUGH A CENTRAL ANGLE OF 02° 59' 54" AND AN ARC DISTANCE OF 152.28 FEET TO A POINT ON THE WESTERLY LINE OF THAT CERTAIN PARCEL OF LAND AS CONVEYED TO FRED A. BERGON, ET AL, BY DEEDS RECORDED MARCH 13, 1981 AS INSTRUMENT NOS. 81-054275 AND 81-054276 OFFICIAL RECORDS; THENCE ALONG SAID WESTERLY LINE SOUTH 03° 57' 23" WEST, 22.75 FEET TO THE NORTHEASTERLY LINE OF STATE OF CALIFORNIA PARCEL BEING A POINT ON A NONTANGENT CURVE CONCAVE NORTHERLY AND HAVING A RADIUS OF 2,930.00 FEET; THENCE SOUTHEASTERLY ALONG SAID NORTHEASTERLY LINE AND LAST SAID CURVE FROM A TANGENT BEARING OF SOUTH 57° 42' 07" EAST, THROUGH A CENTRAL ANGLE OF 02° 35' 18" AND AN ARC DISTANCE OF 132.37 FEET TO A POINT ON SAID NORTHWESTERLY LINE OF DUNLAP BOULEVARD (FORMERLY 19TH STREET), 60.00 FEET WIDE AND THE POINT OF BEGINNING.

Exhibit "B"

CERTIFICATE OF TRUST

The undersigned settlor hereby certifies the following:

1. This Certificate of Trust relates to GUDRUN G. STRONG TRUST DATED JULY 31, 2006 (the "trust") created by trust agreement (the "trust agreement") executed by GUDRUN G. STRONG.

2. The name of the settlor is GUDRUN G. STRONG.

3. The name of the original trustee is GUDRUN G. STRONG. This authority is provided by the following provision in the Declaration of Trust: "I hereby designate myself as the primary trustee of this trust. I may exercise dominion and control over any and all of the trust assets."

4. The name and address of each trustee empowered to act under the trust agreement at the time of the execution of this Certificate of Trust is:

Primary:	GUDRUN G. STRONG 37093 Oak Glen Road, Yucaipa, California 92399
Successor:	NICOLE BRIGITTE ZIMMERMAN 740 Holly Springs Drive, Conroe, Texas 77302
Alternate Successor:	BONNIE LINDER WARREN 1083 E. 27th Street, San Bernardino, California 92404

Authority of the successor trustee(s) is provided by the following provisions in the Declaration of Trust: "I designate NICOLE BRIGITTE ZIMMERMAN as the successor trustee of this trust. My successor trustee is to assume the duties as trustee hereunder upon my resignation, death, or disappearance, or if I am certified in writing to be incompetent as provided under Article Five of this Declaration of Trust. Except as otherwise specified within the provisions of this Declaration of Trust, in the event of my incompetency or resignation, my successor trustee is to use the income and assets of this trust exclusively for my health, education, support, and maintenance.

If NICOLE BRIGITTE ZIMMERMAN is unable or unwilling to act as successor trustee, I designate BONNIE LINDER WARREN as successor trustee to serve with all rights and responsibilities given to the original successor trustee."

5. The trustee(s) are authorized by the trust agreement to have all the rights, powers and authority to deal with and manage the assets of this trust that an individual owner would have if there were no trust and the trustee(s) were acting as legally competent individual(s) dealing with their own property. This includes, but is by no means limited to the right to borrow against or pledge any of the trust assets, including the right to mortgage real estate and margin stocks or other securities owned by the trustee(s) of the trust. This includes all powers now or hereafter conferred upon trustee(s) by applicable state law, and also those powers appropriate to the orderly and effective administration of the trust.

6. The undersigned conveyed to the trust the following described real estate in San Bernardino County, State of California:

See attached Exhibit "A" for legal description

7. The undersigned hereby represents that the statements contained in this Certificate of Trust are true and correct, and that there are no other provisions in the trust agreement or amendments to it that limit the powers of the trustee(s) to sell, convey, pledge, mortgage, lease, manage, operate, control, transfer title, divide, convert, allot or sell upon deferred payments trust property, including real and personal property, that would create liability for any third party relying on this document as authorization for trustee(s)' authority.

8. This trust has not been revoked, modified, or amended in any manner which would cause the representations in this certification of trust to be incorrect. This Certificate of Trust is being signed by all currently acting trustees of the trust.

Gudrun G Strong

GUDRUN G. STRONG

State of California)
County of San Bernardino)

On July 31, 2006 before me, K. B. Albrektson, Notary Public (here insert name and title of the officer), personally appeared GUDRUN G. STRONG, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature K. B. Albrektson (Seal)

K. B. ALBREKTSON
Commission # 1424934
Notary Public - California
San Bernardino County
My Comm. Expires Jul 13, 2007

This instrument was drafted by
Kathleen B. Albrektson, Attorney-at-Law
414 Tennessee Street, Suite V, Redlands, California 92373-8159

Exhibit "C"

DECLARATION OF EXEMPTION FROM DOCUMENTARY TRANSFER TAX: TRANSFERS RESULTING SOLELY IN A CHANGE IN THE METHOD OF HOLDING TITLE TO REALTY.

APN: 300-192-08
Address: 31479 Avenue E, Yucaipa, California 92399

Grantor has not received and will not receive any consideration (money) from grantee for the transfer made by the attached deed. This is a transfer from an existing owner to the existing owner's revocable living trust. Therefore, under Revenue and Taxation Code Sec. 11925 & 11930, the transfer is not subject to the Documentary Transfer Tax since this is solely a change in the method of holding title to realty.

In accordance with Revenue and Taxation Code Sec. 11933 I am the person that determined no tax was due.

I declare under penalty of perjury under the laws of California that the foregoing is true and correct.

Gudrun G Strong
GUDRUN G. STRONG

Date: July 31, 2006, Redlands, California

State of California)
)
County of San Bernardino)

On July 31, 2006, before me, K. B. Albrektson, Notary Public, personally appeared GUDRUN G. STRONG, personally known to me (or 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.

WITNESS my hand and official seal.

Signature K. B. Albrektson (Seal)

K. B. ALBREKTSON
Commission # 1424934
Notary Public - California
San Bernardino County
My Comm. Expires Jul 13, 2007

APPENDIX E

SELECT FILE REVIEW DOCUMENTATION

SAN BERNARDINO COUNTY FIRE PROTECTION DISTRICT

620 South "E" Street • San Bernardino, CA 92415-0153 • (909) 386-8401 • Fax (909) 386-8460

Office of the Fire Marshal
Hazardous Materials Divisio
sbcfire.org

Mark A. Hartwig
Fire Chief/Fire Warden

Michael A. Horton
Fire Marshal

RECEIVED
JUL 19 2018
BY:

July 13, 2018

18062904 Yucaipa NRL Reynolds

THE REYNOLDS GROUP
520 W. FIRST STREET
TUSTIN, CA 92780

ATTENTION: **ROSANNE FISCHER**

SUBJECT: **CERTIFIED RECORD SEARCH FINDINGS**
31479 AVENUE E, YUCAIPA, CALIFORNIA

This is to confirm that the OFM Hazardous Materials Division (HMD) has searched its records for any file(s) pertaining to the subject property, as described in your request, and finds that no records exist for the above site description(s).

Records maintained by OFM-HMD date back to the mid 1980's. Records searched include:

- facilities with hazardous waste generator permits, hazardous materials handler permits, underground storage tank permits, universal waste permits, tiered permits, EPCRA facilities, RMP facilities, Cal ARP facilities, and/or waste recycling generators, including inactive and/or out of business records, as well as non-permitted facility actions;
- lots of permits issued for the removal, installation, and/or modification of underground storage tanks;
- records and databases pertaining to illicit dumping, spill reports and release notifications, and complaints;
- incidents responded to by the hazardous materials emergency response team;
- and sites undergoing remediation for contaminated soil and/or groundwater.

Donna Juday

DONNA JUDAY
Office Specialist
Office of the Fire Marshal
Hazardous Materials Division

BOARD OF DIRECTORS

Robert A. Lovingood, Chairman, First District | Janice Rutherford, Second District | James Ramos, Third District | Curt Hagman, Vice Chairman, Fourth District | Josie Gonzales, Fifth District | Gary McBride, Chief Executive Officer

Subject	:	RE: 3 Sites - Yucaipa File Review Requests (TRG 8475)
Date	:	Tuesday, August 28, 2018 11:15 am
Linked to	:	Mary Edwards or August Lucas
From	:	WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
To	:	Rosanne Fischer <fischer@reynolds-group.com>
Attachments	:	C:\ProgramData\GoldMine\MailBox\Attach\ROSANNE\2018\~WRD000(48).jpg;

Good morning,

After careful review of our records, we show we have no files for the following sites:
31479 Avenue E, Yucaipa
31528 Yucaipa Blvd., Yucaipa
31558 Yucaipa Blvd., Yucaipa
If we can be of further assistance please do not hesitate to contact us again.

File Review Desk
3737 Main St. Suite 500
Riverside, CA 92501

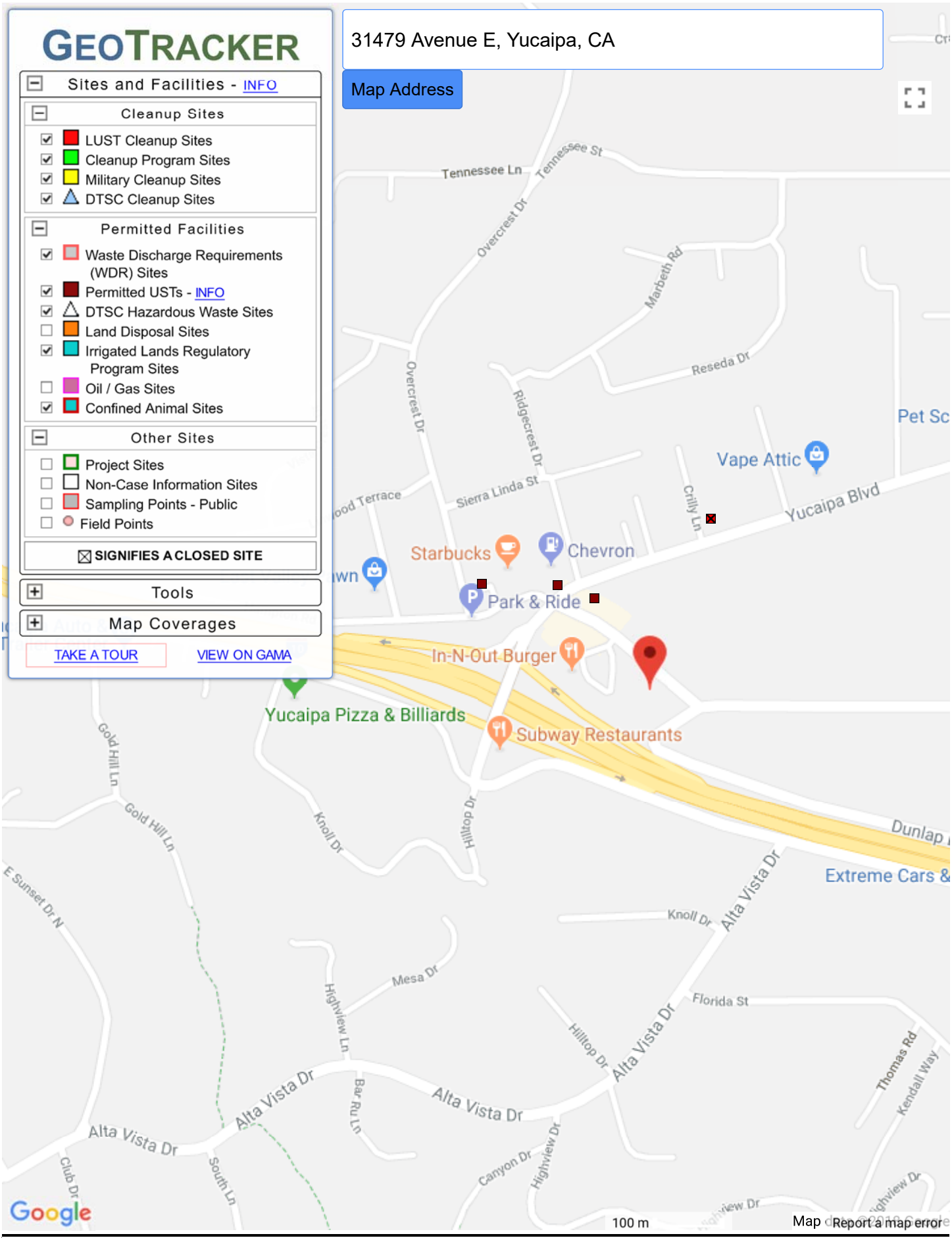
From: Rosanne Fischer [mailto:fischer@reynolds-group.com]
Sent: Monday, August 27, 2018 10:45 AM
To: WB-RB8-FileReview8 <FileReview8@waterboards.ca.gov>
Subject: 3 Sites - Yucaipa File Review Requests (TRG 8475)

I am performing a Phase I Environmental Site Assessment at the following addresses in Yucaipa, all very near eachother. Can you please tell me if you have any records for the Sites? If so, I would like to review them as soon as possible. Thank you!

SUBJECT ADDRESSES: 31479 Avenue E, Yucaipa
31528 Yucaipa Blvd., Yucaipa
31558 Yucaipa Blvd., Yucaipa

Rosanne Fischer
Registered Environmental Property Assessor - 419564
Environmental Consultants
(714) 730-5397 office
(714) 224-2950 cell
P.O. Box 1996,
Tustin, CA 92780-1996
www.reynolds-group.com
fischer@reynolds-group.com

The information contained in this message is intended only for the personal and confidential use of the designated recipients named above. This message may



SITES CURRENTLY VISIBLE ON MAP

Facility INformation Detail (FIND)

Facility INformation Detail provides consolidated access to public information about facilities in the AQMD basin. If you have a Facility ID, Application Number, Notice Number and/or Case Number, you can access detail information directly, OR you can utilize the Facility Search feature as your facility information gateway. Regularly scheduled updates are made to this data at least once per week.

Click here for a detailed map search.

Search

- (•) Find a Facility

Facility Name:

Street Name: 31479 Avenue E

City: Yucaipa

Zip Code:

- ( ) Select Facility ID:
- ( ) Select Application Nbr:
- ( ) Select NOV or NC:
- ( ) Select Hearing Board Case: -

☐ RECLAIM
☐ TITLE V

There are no facilities that match your search criteria. If you think this result is incorrect, call the number below.

Search Reset

If you are having trouble finding a facility, please Click Here for Instructions

For further information or if you have any questions about the data returned by FIND, email: webinquiry@aqmd.gov

V1.54

Division of Oil, Gas & Geothermal Resources - Well Finder

Find By Location

Find My Current Location

or

Street: 31479 Avenue E

City: Yucaipa

Zip: Find

Display a 1500 foot buffer

Buffer radius is limited to 10 mi (52800ft).

Find By API

Find By Lat, Long

Find By PLSS

Find By Oil/Gas Field

Data (Layers):

Notices & Permits

DOGGR Wells

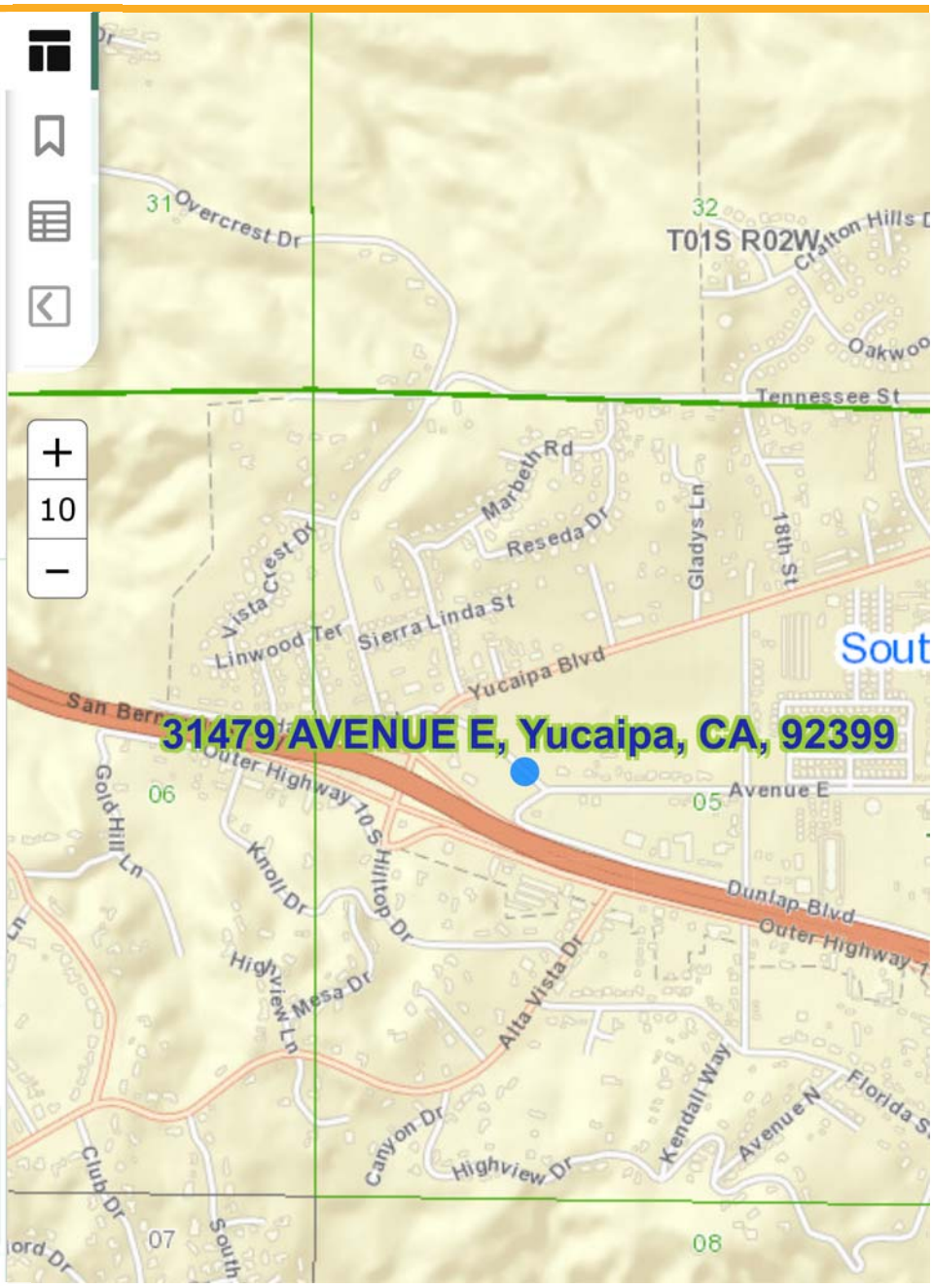
Label: API# Well# Detailed

EPA Wells for Aquifer Exemption Review

Enhanced Oil Recovery Wells

Disposal Wells

TR26 Onshore Seeps



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APPENDIX F

AGRICULTURAL SAMPLING
LABORATORY REPORT

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.: 2576
Expiration Date: 2018
Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:

Mark Noorani

Client:	The Reynolds Group
Laboratory Reference:	TRG 23778
Project Name:	Force Yucaipa
Project Number:	8475-C
Date Received:	8/15/2018
Date Reported:	8/20/2018
Chain of Custody Received:	☑
Analytical Method:	8081A, 8151A,

Mark Noorani, Laboratory Director

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23778
Project Name: Force Yucaipa
Project #: 8475-C

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 25.0ºC.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23778
Project Name: Force Yucaipa
Project #: 8475-C

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Avenue E	23778-001	8/15/2018	8/15/2018	Soil

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23778
Project Name: Force Yucaipa
Project #: 8475-C

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Avenue E	23778-001	8/15/2018	8/15/2018	8/16/2018	8/16/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	64

* Acceptable Recovery: 36-131 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23778
Project Name: Force Yucaipa
Project #: 8475-C

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBAV0816181			8/16/2018	8/16/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	78

* Acceptable Recovery: 36-131 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23778
Project Name: Force Yucaipa
Project #: 8475-C

Chlorinated Herbicides (EPA 8151A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Avenue E	23778-001	8/15/2018	8/15/2018	8/16/2018	8/17/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	84

* Acceptable Recovery: 16-153 %

Dilution Factor: 1

Data Qualifiers: None

Method Blank	MBAV0816182			8/16/2018	8/17/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	106

* Acceptable Recovery: 16-153 %

Dilution Factor: 1

Data Qualifiers: None

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 8/16/2018
Date of Analysis: 8/16/2018
Dup Date of Analysis: 8/16/2018
Laboratory Sample #: 23779-001
MS/MSD Qualifiers: M2,
Reference #: TRG 23778

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Gamma-BHC	0.00	20.0	0.00	0.00	0	0	0	44-130	30	☑
Heptachlor	0.00	20.0	10.1	9.50	50	47	6	47-130	31	☐
Aldrin	0.00	20.0	11.1	10.2	56	51	8	45-130	27	☐
Dieldrin	0.00	50.0	0.00	0.00	0	0	0	39-130	28	☑
Endrin	0.00	50.0	0.00	0.00	0	0	0	42-140	31	☑
DDT	0.00	50.0	12.6	13.9	25	28	10	39-141	32	☑

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	63	54	☐

LCS	LCSD	Qual
77	81	☐

ACP % RC
36-131

Laboratory Control Sample

Date of Extraction: 8/16/2018
Date of Analysis: 8/16/2018
Dup Date of Analysis: 8/16/2018
Laboratory Sample #: AV0816181
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Gamma-BHC	20.0	14.8	13.6	74	68	8	40-130	24	☐
Heptachlor	20.0	14.7	13.2	74	66	11	38-130	25	☐
Aldrin	20.0	14.4	13.1	72	66	9	39-130	25	☐
Dieldrin	50.0	41.5	39.8	83	80	4	43-137	20	☐
Endrin	50.0	44.7	43.2	89	86	3	48-150	20	☐
DDT	50.0	36.8	37.3	74	75	1	47-143	21	☐

QA/QC Report
for
Chlorinated Herbicides (EPA 8151A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 8/16/2018
Date of Analysis: 8/17/2018
Dup Date of Analysis: 8/17/2018
Laboratory Sample #: 23777-001
MS/MSD Qualifiers: M2, R2,
Reference #: TRG 23778

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Dicamba	0.00	500	392	109	78	22	113	24-130	31	☑
Dichloroprop	0.00	500	408	149	82	30	93	20-130	29	☑
2,4-D	0.00	500	326	91.7	65	18	112	16-130	29	☑
2,4,5-TP	0.00	500	394	99.2	79	20	120	21-130	29	☑
2,4,5-T	0.00	500	347	84.8	69	17	121	15-130	28	☑

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
2,4-Dichlorophenylacetic Acid	139	75	☐

LCS	LCSD	Qual
120	113	☐

ACP % RC
16-153

Laboratory Control Sample

Date of Extraction: 8/16/2018
Date of Analysis: 8/17/2018
Dup Date of Analysis: 8/17/2018
Laboratory Sample #: AV0816182
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Dicamba	500	373	368	75	74	1	22-144	32	☐
Dichloroprop	500	370	378	74	76	2	21-130	30	☐
2,4-D	500	319	315	64	63	1	19-130	33	☐
2,4,5-TP	500	369	370	74	74	0	22-130	33	☐
2,4,5-T	500	335	325	67	65	3	17-130	33	☐

Data Qualifier Definitions

Qualifier

M2 = Matrix spike recovery was low, the associated blank spike recovery was acceptable.

23777-001	8151A	2,4,5-TP	MSD
23777-001	8151A	Dicamba	MSD
23779-001	8081A	DDT	MS/MSD
23779-001	8081A	Dieldrin	MS/MSD
23779-001	8081A	Endrin	MS/MSD
23779-001	8081A	Gamma-BHC	MS/MSD

R2 = RPD/RSD exceeded the laboratory acceptance limit.

23777-001	8151A	2,4,5-T	MS/MSD
23777-001	8151A	2,4,5-TP	MS/MSD
23777-001	8151A	2,4-D	MS/MSD
23777-001	8151A	Dicamba	MS/MSD
23777-001	8151A	Dichloroprop	MS/MSD

Definition of terms:

R1	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

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Analysis Request and Chain of Custody Record

Lab Job No: 23778
Page 1 of 1

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

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Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: ____
72 Hours: X 48 Hours: ____ 24 Hours: ____

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	THE REYNOLDS GROUP	PROJECT NAME:	FORCE YUCAIPA
SEND REPORT TO:	ROSANNE FISCHER	NUMBER:	73479 AVENUE E
EMAIL:	FISCHER@REYNOLDS-GROUP.COM	ADDRESS:	& 8475-C YUCAIPA, CA 8475-FORCE
ADDRESS:	520 W. FIRST ST. TUSTIN, CA 92780	P.O. #:	
PHONE:	714-730-5397 FAX: 714-730-6476	SAMPLED BY:	ROSANNE FISCHER

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	ANALYSIS REQUEST / PRESERVATIVE: PESTICIDES / HERBICIDES	REMARKS/PRECAUTIONS
AVENUE E	1	8-15-18	11:30	SOIL	JAR	X	

Total No. of Samples: 1 Method of Shipment: HAND DELIVER Preservative: (1) = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	8-15-18/2pm	Anna Welsh	8-15-18 1:pm
Anna Welsh	8-15-18 1:15pm		
Relinquished By:	Date/Time:	Received By:	Date/Time:
		Received For Lab By: OCAA	8/16/18 1315

Sample Matrix:
GW - Groundwater
WW - Wastewater
SW - Stormwater
DW - Drinking Water
W - Water
SS - Soil/Solid
OT - Other

Sample Integrity:
Intact: ✓ On Ice: Yes (No) @ 25.0°C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample.

Sample Receipt Report

Laboratory Reference: TRG 23778 Logged in by: MM

Received:	08/15/18 13:15	Company Name:	The Reynolds Group
Method of Shipment:	Hand Delivered	Project Manager:	Ms. Rosanne Fischer
Shipping Container:	Cooler	Project Name:	Force Yucaipa
# Shipping Containers:	1	Project #:	8475-C

Sample Quantity
1 Soil

Chain of Custody	Complete ☑	Incomplete ☐	None ☐
Samples On Ice	Yes, Wet ☐	Yes, Blue ☐	No ☑
Temperature	25.0°C		
Shipping Intact	Yes ☑	N/A ☐	No ☐
Shipping Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Samples Intact	Yes ☑		No ☐
Sample Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Custody Seals Signed & Dated	Yes ☐	N/A ☑	No ☐
Proper Test Containers	Yes ☑		No ☐
Proper Test Preservations	Yes ☑		No ☐
Samples Within Hold Times	Yes ☑		No ☐
VOAs Have Zero Headspace	Yes ☐	N/A ☑	No ☐
Sample Labels	Complete ☑	Incomplete ☐	None ☐
Sample Information Matches COC	Yes ☑	N/A ☐	No ☐

Notes

Client Notified _____ By _____ On _____

License # 867264

CONFIDENTIAL AND PRIVILEGED

PHASE II AGRICULTURAL SOIL SAMPLING REPORT

For the Project located at:

23.84 UNDEVELOPED ACRES
SOUTHEAST CORNER OF YUCAIPA & AVENUE E
YUCAIPA, CALIFORNIA

Prepared for:

Mr. Thomas Robinson
Vantage One Real Estate, LLC
4 Corporate Plaza Drive, Suite 210
Newport Beach, CA 92660

Prepared By:

Force Environmental, Inc.
12288 Rancho Heights Road
Pala, CA 92059

June 2018
Force Environmental, Inc.

June 18, 2018
(TRG 8346)

Mr. Leonard Fifer
FORCE ENVIRONMENTAL
41870 Kalmia Street, Suite 115
Murrieta, CA 92562

SITE: **23.84 UNDEVELOPED ACRES**
SOUTHEAST CORNER OF YUCAIPA & AVENUE E
YUCAIPA, CALIFORNIA

SUBJECT: **PHASE II AGRICULTURAL SOIL SAMPLING REPORT**

Dear Mr. Fifer,

EXECUTIVE SUMMARY

In June 2018, The Reynolds Group (TRG) performed Phase II shallow agricultural soil sampling at the subject Site in an attempt to mitigate or confirm the following recognized environmental condition (REC) identified in TRG's *Phase I Environmental Site Assessment (ESA) Report*, dated May 21, 2018:

- "Possible pesticide and/or herbicide impact to shallow soils from approximately 30 years (1938 to 1968) of agricultural use."

As detailed in this report, analytical results of soil samples collected by TRG at the Site on June 4, 2018, were "non-detect" for pesticides and herbicides. As such, the above REC has been mitigated and potential soils impact from historical agricultural use is no longer an issue of concern at the Property.

FIELDWORK

On June 4, 2018, TRG mobilized to the Site (see **Figure 1** - Site Location Map) and collected soil samples at locations shown on **Figure 2.** A total of 24 individual samples were collected from four generally areas of the Site. The 24 samples were composited/consolidated into four samples based on the vicinity where they were collected. Section "A" samples were collected from the western-most area of the Site (Sample IDs 1A through 6A); Section "B" samples were collected from the west-center area (1B through 6B); Section "C" from the east-center area (1C through 6C), and Section "D" samples were collected from the eastern-most area of the Site (1D through 6D).

All soil samples were collected at approximately 6-inches below ground surface (ft bgs), using a hand-auger sampling device. Six soil samples each from Sections A, B, C, and D (24 total) were collected into 6-inch long stainless steel sampling sleeves. The sleeves were end-wrapped with Teflon, sealed with PVC end caps, uniquely identified with the sample location and date, and were placed in an ice-cooled chest for transportation to Orange Coast Analytical, a state-certified laboratory (ELAP #2576) in Tustin, California.

Laboratory analyses and results are addressed in the following section.

LABORATORY ANALYSES AND RESULTS

At TRG's request, Orange Coast Analytical composted/combined the six samples each from Sections A, B, C, and D into four samples identified as "Composite A", "Composite B", "Composite C", and "Composite D". Compositing provides a general idea of soil conditions to determine if more specific soil sample analysis at additional expense is necessary. If any of the composite

samples tested positive for pesticides or herbicides, the individual samples from the area would have been analyzed.

Orange Coast Analytical analyzed Composite samples A through D for Organochlorine Pesticides by EPA Method 8081A, and for Chlorinated Herbicides by EPA Method 8151A. **No pesticides or herbicides were detected in Composite A, Composite B, Composite C, or Composite D. As such, no further analysis of individual soil samples was necessary**.

CONCLUSIONS

Based on soil sample analytical results from TRG's June 4, 2018, investigation, the historical agricultural REC identified in TRG's May 2018 Phase I report has been mitigated.

REGISTERED PROFESSIONAL STATEMENT

All work on this project was performed under the responsible charge of a California Registered Civil Engineer. The licensed professional whose signature and seal appear at the end of this report supervised all work associated with the project.

Please contact me directly with any questions at 714-920-9310 or by email to reynolds@reynolds-group.com. Thank you.

Sincerely,

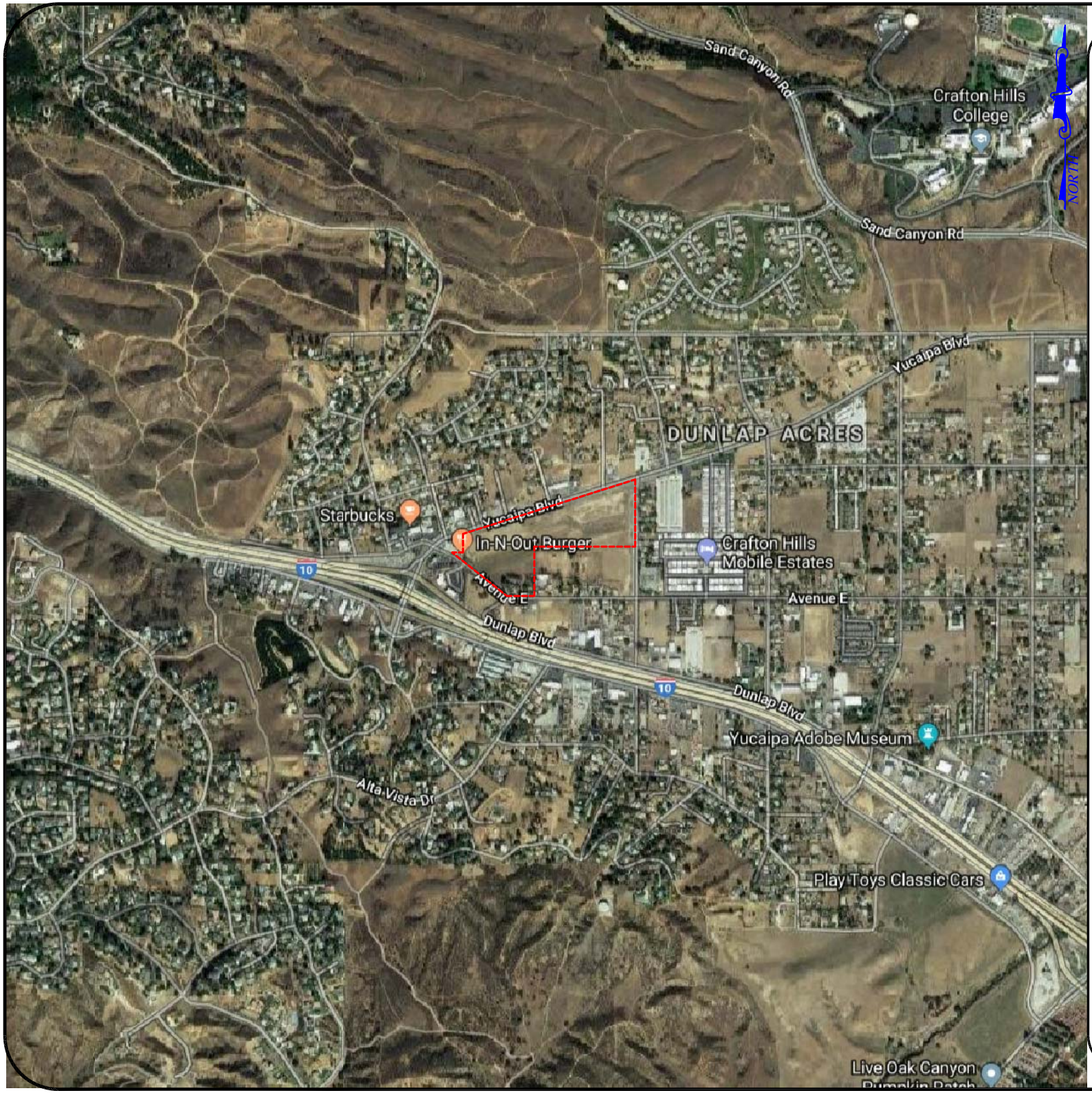
THE REYNOLDS GROUP
a California corporation by:



F. Edward Reynolds, Jr.
California Registered Civil Engineer #38677

Attachments:

Figure 1 -	Site Location Map
Figure 2 -	Site Plan with Soil Sample Locations
Attachment A -	Laboratory Analytical Reports with Chain of Custody



General Notes

- Approximate Property Boundary

Project Details

Name
23 +/- Undeveloped Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460

Figure Details

SITE LOCATION MAP

Figure #
Figure 1

Revise Date
May 2018

*Not To Scale

Scale

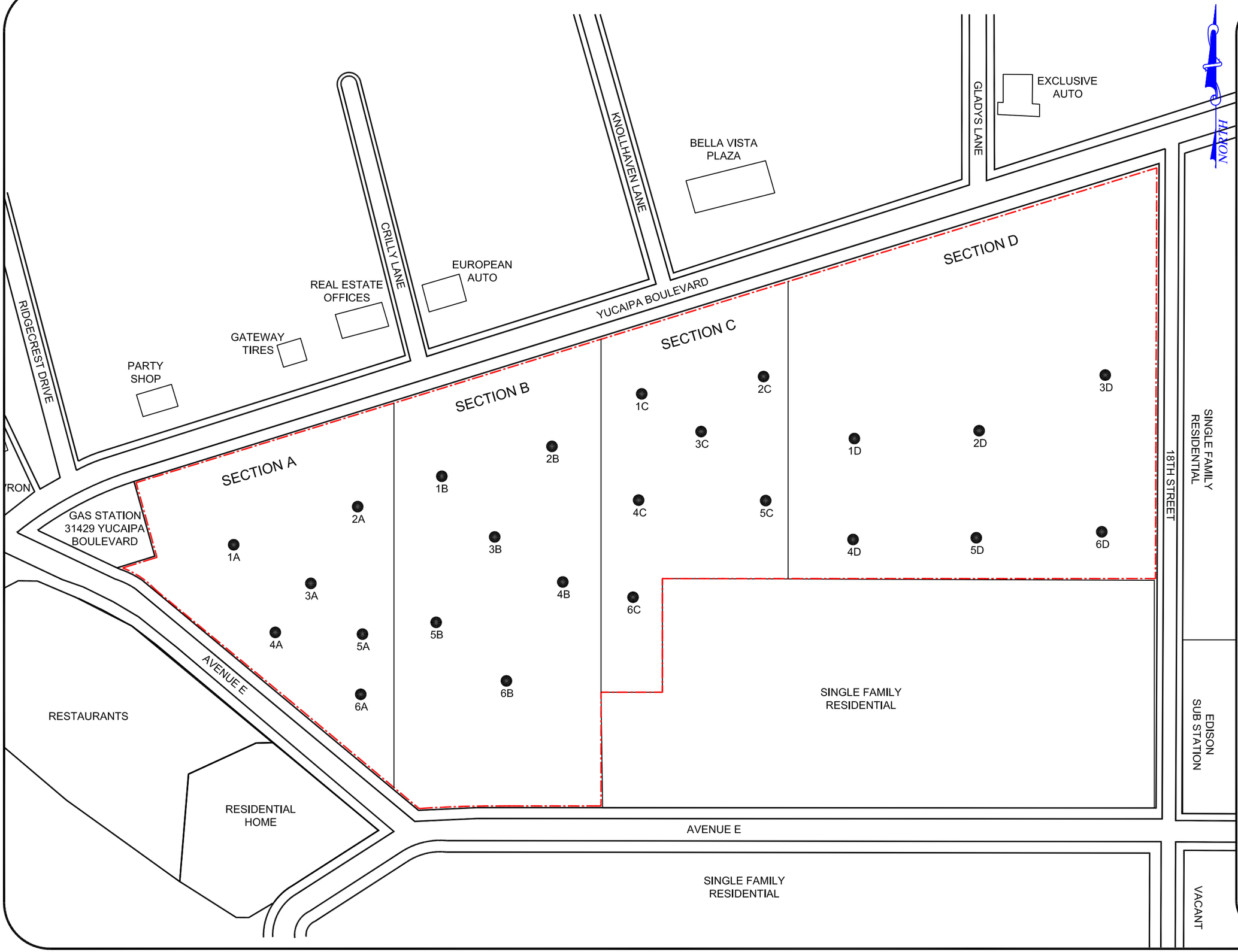
Company Information

Address
520 West 1st Street
Tustin, CA 92780

Telephone
(714) 730-5397

Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES



General Notes

- Property Boundary

1A - Soil Sample Locations

Project Details

Name
23 +/- Undeveloped Acres

Address
S/E Corner of Yucaipa Blvd & Avenue E
Yucaipa, CA

Number
8460

Figure Details

SITE PLOT PLAN WITH
SOIL SAMPLE LOCATIONS

Figure #
Figure 2

Revise Date
June 2018

0' 80' 160'
Approximate Scale

Scale
1"=160'

Company Information

Address
520 West 1st Street
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Fax
(714) 730-6476

THE REYNOLDS GROUP
ENVIRONMENTAL SERVICES

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4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.: 2576
Expiration Date: 2018
Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:

Mark Noorani

Client:	The Reynolds Group
Laboratory Reference:	TRG 23659
Project Name:	Force Yucaipa
Project Number:	8460
Date Received:	6/4/2018
Date Reported:	6/8/2018
Chain of Custody Received:	☑
Analytical Method:	8081A, 8151A,

Mark Noorani, Laboratory Director

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23659
Project Name: Force Yucaipa
Project #: 8460

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 5.8ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23659
Project Name: Force Yucaipa
Project #: 8460

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
1A	23659-001	6/4/2018	6/4/2018	Soil
2A	23659-002	6/4/2018	6/4/2018	Soil
3A	23659-003	6/4/2018	6/4/2018	Soil
4A	23659-004	6/4/2018	6/4/2018	Soil
5A	23659-005	6/4/2018	6/4/2018	Soil
6A	23659-006	6/4/2018	6/4/2018	Soil
Composite A	23659-007	6/4/2018	6/4/2018	Soil

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Ms. Rosanne Fischer
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520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23659
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite A	23659-007	6/4/2018	6/4/2018	6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	96

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23659
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBAV0605182			6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	117

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23659
Project Name: Force Yucaipa
Project #: 8460

Chlorinated Herbicides (EPA 8151A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite A	23659-007	6/4/2018	6/4/2018	6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	66

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

Method Blank	MBAV0605181			6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	95

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: 23657-007
MS/MSD Qualifiers: M2,
Reference #: TRG 23659

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Gamma-BHC	0.00	20.0	0.00	0.00	0	0	0	45-130	31	☑
Heptachlor	0.00	20.0	8.99	8.23	45	41	9	37-130	30	☐
Aldrin	0.00	20.0	10.2	9.34	51	47	9	44-130	27	☐
Dieldrin	0.00	50.0	0.00	0.00	0	0	0	45-137	20	☑
Endrin	0.00	50.0	0.00	0.00	0	0	0	46-149	20	☑
DDT	0.00	50.0	18.9	16.8	38	34	12	44-143	20	☑

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	93	89	☐

LCS	LCSD	Qual
127	126	☐

ACP % RC
33-141

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: AV0605182
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Gamma-BHC	20.0	16.4	17.7	82	89	8	40-130	23	☐
Heptachlor	20.0	16.1	17.5	81	88	8	38-130	22	☐
Aldrin	20.0	16.1	17.9	81	89	11	38-130	25	☐
Dieldrin	50.0	48.8	52.2	98	104	7	42-131	27	☐
Endrin	50.0	59.2	63.6	118	127	7	39-147	28	☐
DDT	50.0	50.3	53.8	101	108	7	37-144	32	☐

QA/QC Report
for
Chlorinated Herbicides (EPA 8151A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: 23656-007
MS/MSD Qualifiers: R2,
Reference #: TRG 23659

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Dicamba	0.00	500	381	324	76	65	16	26-130	30	☐
Dichloroprop	0.00	500	333	350	67	70	5	21-130	30	☐
2,4-D	0.00	500	223	301	45	60	30	16-130	29	☑
2,4,5-TP	0.00	500	367	354	73	71	4	21-130	29	☐
2,4,5-T	0.00	500	288	331	58	66	14	16-130	28	☐

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
2,4-Dichlorophenylacetic Acid	94	63	☐

LCS	LCSD	Qual
90	107	☐

ACP % RC
15-156

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: AV0605181
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Dicamba	500	344	440	69	88	24	23-149	31	☐
Dichloroprop	500	289	353	58	71	20	22-130	29	☐
2,4-D	500	229	284	46	57	21	20-130	32	☐
2,4,5-TP	500	334	390	67	78	15	21-130	32	☐
2,4,5-T	500	253	297	51	59	16	18-130	33	☐

Data Qualifier Definitions

Qualifier

M2 = Matrix spike recovery was low, the associated blank spike recovery was acceptable.

23657-007	8081A	DDT	MS/MSD
23657-007	8081A	Dieldrin	MS/MSD
23657-007	8081A	Endrin	MS/MSD
23657-007	8081A	Gamma-BHC	MS/MSD

R2 = RPD/RSD exceeded the laboratory acceptance limit.

23656-007	8151A	2,4-D	MS/MSD

Definition of terms:

R1	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

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Analysis Request and Chain of Custody Record

Lab Job No: 23659
Page 1 of 1

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

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(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: X
72 Hours: 48 Hours: 24 Hours:

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	THE REYNOLDS GROUP	PROJECT NAME:	FORCE YUCAIPA
SEND REPORT TO:	LABRESULTS@REYNOLDS-GROUP.COM	NUMBER:	8460
EMAIL:	FISCHER@REYNOLDS-GROUP.COM	ADDRESS:	YUCAIPA BLVD/AVENUE
ADDRESS:	520 W. FIRST ST		YUCAIPA, CA
	TUSTIN, CA 92780	P.O. #:	8460
PHONE:	714-730-5397 FAX: 714-730-6476	SAMPLED BY:	JOSHUA MUCKLOW

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	ANALYSIS REQUEST / PRESERVATIVE: PESTICIDES / HERBICIDES	REMARKS/PRECAUTIONS
1A	1	6/14/18	8:00	SOIL	STAINLESS STEEL		COMPOSITE
2A			8:08				
3A			8:17				
4A			8:25				
5A			8:38				
6A			8:45				

Total No. of Samples: 6 Method of Shipment:

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By: Josh Buckholds	Date/Time: 6/14/18 3:15	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By: OCACA	Date/Time: 6/14/18 1515

Sample Matrix: DW - Drinking Water; GW - Groundwater; WW - Wastewater; SS - Soil/Solid; OT- Other

Sample Integrity: Intact ____ On Ice ✓ 5.8 °C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample

Sample Receipt Report

Laboratory Reference: TRG 23659 Logged in by: MM

Received:	06/04/18 15:15	Company Name:	The Reynolds Group
Method of Shipment:	Hand Delivered	Project Manager:	Ms. Rosanne Fischer
Shipping Container:	Cooler	Project Name:	Force Yucaipa
# Shipping Containers:	1	Project #:	8460

Sample Quantity
7 Soil

Chain of Custody	Complete ☑	Incomplete ☐	None ☐
Samples On Ice	Yes, Wet ☑	Yes, Blue ☐	No ☐
Temperature	5.8°C		
Shipping Intact	Yes ☑	N/A ☐	No ☐
Shipping Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Samples Intact	Yes ☑		No ☐
Sample Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Custody Seals Signed & Dated	Yes ☐	N/A ☑	No ☐
Proper Test Containers	Yes ☑		No ☐
Proper Test Preservations	Yes ☑		No ☐
Samples Within Hold Times	Yes ☑		No ☐
VOAs Have Zero Headspace	Yes ☐	N/A ☑	No ☐
Sample Labels	Complete ☑	Incomplete ☐	None ☐
Sample Information Matches COC	Yes ☑	N/A ☐	No ☐

Notes

Client Notified _____ By _____ On _____

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.: 2576
Expiration Date: 2018
Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:

Mark Noorani

Client:	The Reynolds Group
Laboratory Reference:	TRG 23658
Project Name:	Force Yucaipa
Project Number:	8460
Date Received:	6/4/2018
Date Reported:	6/8/2018
Chain of Custody Received:	☑
Analytical Method:	8081A, 8151A,

Mark Noorani, Laboratory Director

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23658
Project Name: Force Yucaipa
Project #: 8460

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 5.8ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23658
Project Name: Force Yucaipa
Project #: 8460

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
1B	23658-001	6/4/2018	6/4/2018	soi
2B	23658-002	6/4/2018	6/4/2018	soi
3B	23658-003	6/4/2018	6/4/2018	soi
4B	23658-004	6/4/2018	6/4/2018	soi
5B	23658-005	6/4/2018	6/4/2018	soi
6B	23658-006	6/4/2018	6/4/2018	soi
Composite B	23658-007	6/4/2018	6/4/2018	Soil

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23658
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite B	23658-007	6/4/2018	6/4/2018	6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	101

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23658
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBAV0605182			6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	117

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23658
Project Name: Force Yucaipa
Project #: 8460

Chlorinated Herbicides (EPA 8151A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite B	23658-007	6/4/2018	6/4/2018	6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	83

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

Method Blank	MBAV0605181			6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	95

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: 23657-007
MS/MSD Qualifiers: M2,
Reference #: TRG 23658

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Gamma-BHC	0.00	20.0	0.00	0.00	0	0	0	45-130	31	☑
Heptachlor	0.00	20.0	8.99	8.23	45	41	9	37-130	30	☐
Aldrin	0.00	20.0	10.2	9.33	51	47	9	44-130	27	☐
Dieldrin	0.00	50.0	0.00	0.00	0	0	0	45-137	20	☑
Endrin	0.00	50.0	0.00	0.00	0	0	0	46-149	20	☑
DDT	0.00	50.0	18.9	16.8	38	34	12	44-143	20	☑

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	93	89	☐

LCS	LCSD	Qual
127	126	☐

ACP % RC
33-141

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: AV0605182
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Gamma-BHC	20.0	16.4	17.7	82	89	8	40-130	23	☐
Heptachlor	20.0	16.1	17.5	81	88	8	38-130	22	☐
Aldrin	20.0	16.1	17.9	81	89	11	38-130	25	☐
Dieldrin	50.0	48.8	52.2	98	104	7	42-131	27	☐
Endrin	50.0	59.2	63.6	118	127	7	39-147	28	☐
DDT	50.0	50.3	53.8	101	108	7	37-144	32	☐

QA/QC Report
for
Chlorinated Herbicides (EPA 8151A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: 23656-007
MS/MSD Qualifiers: R2,
Reference #: TRG 23658

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Dicamba	0.00	500	381	324	76	65	16	26-130	30	☐
Dichloroprop	0.00	500	333	350	67	70	5	21-130	30	☐
2,4-D	0.00	500	223	301	45	60	30	16-130	29	☑
2,4,5-TP	0.00	500	367	354	73	71	4	21-130	29	☐
2,4,5-T	0.00	500	288	331	58	66	14	16-130	28	☐

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
2,4-Dichlorophenylacetic Acid	94	63	☐

LCS	LCSD	Qual
90	107	☐

ACP % RC
15-156

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: AV0605181
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Dicamba	500	344	440	69	88	24	23-149	31	☐
Dichloroprop	500	289	353	58	71	20	22-130	29	☐
2,4-D	500	229	284	46	57	21	20-130	32	☐
2,4,5-TP	500	334	390	67	78	15	21-130	32	☐
2,4,5-T	500	253	297	51	59	16	18-130	33	☐

Data Qualifier Definitions

Qualifier

M2 = Matrix spike recovery was low, the associated blank spike recovery was acceptable.

23657-007	8081A	DDT	MS/MSD
23657-007	8081A	Dieldrin	MS/MSD
23657-007	8081A	Endrin	MS/MSD
23657-007	8081A	Gamma-BHC	MS/MSD

R2 = RPD/RSD exceeded the laboratory acceptance limit.

23656-007	8151A	2,4-D	MS/MSD

Definition of terms:

R1	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

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Analysis Request and Chain of Custody Record

Lab Job No: 236658
Page 1 of 1

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3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: X
72 Hours: _____ 48 Hours: _____ 24 Hours: _____

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	THE REYNOLDS GROUP	PROJECT NAME:	FORCE YUCAIPA
SEND REPORT TO:	LABRESULTS@REYNOLDS-GROUP.COM	NUMBER:	8460
EMAIL:	ASCHER@REYNOLDS-GROUP.COM	ADDRESS:	YUCAIPA BLVD / AVENUE E YUCAIPA, CA
ADDRESS:	520 W. FIRST ST TUSTIN, CA	P.O. #:	8460
PHONE:	714-730-5397 FAX: 714-730-6476	SAMPLED BY:	JOSHUA HUDSKOFF

ANALYSIS REQUEST / PRESERVATIVE: PESTICIDES / HERBICIDES

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	REMARKS/PRECAUTIONS
1B	1	6/4/18	9:20	SOIL	STEEL SLEEVE	COMPOSITE
2B	1	6/4/18	9:31	SOIL	STEEL SLEEVE	
3B	1	6/4/18	9:40	SOIL	STEEL SLEEVE	
4B	1	6/4/18	10:03	SOIL	STEEL SLEEVE	
5B	1	6/4/18	10:17	SOIL	STEEL SLEEVE	
6B	1	6/4/18	10:26	SOIL	STEEL SLEEVE	

Total No. of Samples: 6 Method of Shipment:

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By: Josh Hudskoff	Date/Time: 6/4/18 3:15	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By: OCACA	Date/Time: 6/4/18 1515

Sample Matrix: DW - Drinking Water; GW - Groundwater; WW - Wastewater; SS - Soil/Solid; OT- Other

Sample Integrity: Intact ✓ On Ice ✓ 5.8 °C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample

Sample Receipt Report

Laboratory Reference: TRG 23658

Logged in by: MM

Received:	06/04/18 15:15	Company Name:	The Reynolds Group
Method of Shipment:	Hand Delivered	Project Manager:	Ms. Rosanne Fischer
Shipping Container:	Cooler	Project Name:	Force Yucaipa
# Shipping Containers:	1	Project #:	8460

Sample Quantity

6 soi 1 Soil

Chain of Custody	Complete ☑	Incomplete ☐	None ☐
Samples On Ice	Yes, Wet ☑	Yes, Blue ☐	No ☐
Temperature	5.8°C		
Shipping Intact	Yes ☑	N/A ☐	No ☐
Shipping Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Samples Intact	Yes ☑		No ☐
Sample Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Custody Seals Signed & Dated	Yes ☐	N/A ☑	No ☐
Proper Test Containers	Yes ☑		No ☐
Proper Test Preservations	Yes ☑		No ☐
Samples Within Hold Times	Yes ☑		No ☐
VOAs Have Zero Headspace	Yes ☐	N/A ☑	No ☐
Sample Labels	Complete ☑	Incomplete ☐	None ☐
Sample Information Matches COC	Yes ☑	N/A ☐	No ☐

Notes

Client Notified _____ By _____ On _____

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LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.: 2576
Expiration Date: 2018
Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:

Mark Noorani

Client:	The Reynolds Group
Laboratory Reference:	TRG 23657
Project Name:	Force Yucaipa
Project Number:	8460
Date Received:	6/4/2018
Date Reported:	6/8/2018
Chain of Custody Received:	☑
Analytical Method:	8081A, 8151A,

Mark Noorani, Laboratory Director

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23657
Project Name: Force Yucaipa
Project #: 8460

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 5.8ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23657
Project Name: Force Yucaipa
Project #: 8460

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
1C	23657-001	6/4/2018	6/4/2018	Soil
2C	23657-002	6/4/2018	6/4/2018	Soil
3C	23657-003	6/4/2018	6/4/2018	Soil
4C	23657-004	6/4/2018	6/4/2018	Soil
5C	23657-005	6/4/2018	6/4/2018	Soil
6C	23657-006	6/4/2018	6/4/2018	Soil
Composite C	23657-007	6/4/2018	6/4/2018	Soil

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23657
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite C	23657-007	6/4/2018	6/4/2018	6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	92

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23657
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBAV0605182			6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	117

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23657
Project Name: Force Yucaipa
Project #: 8460

Chlorinated Herbicides (EPA 8151A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite C	23657-007	6/4/2018	6/4/2018	6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	82

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

Method Blank	MBAV0605181			6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	95

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: 23657-007
MS/MSD Qualifiers: M2,
Reference #: TRG 23657

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Gamma-BHC	0.00	20.0	0.00	0.00	0	0	0	45-130	31	☑
Heptachlor	0.00	20.0	8.99	8.23	45	41	9	37-130	30	☐
Aldrin	0.00	20.0	10.2	9.34	51	47	9	44-130	27	☐
Dieldrin	0.00	50.0	0.00	0.00	0	0	0	45-137	20	☑
Endrin	0.00	50.0	0.00	0.00	0	0	0	46-149	20	☑
DDT	0.00	50.0	18.9	16.8	38	34	12	44-143	20	☑

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	93	89	☐

LCS	LCSD	Qual
127	126	☐

ACP % RC
33-141

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: AV0605182
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Gamma-BHC	20.0	16.4	17.7	82	89	8	40-130	23	☐
Heptachlor	20.0	16.1	17.5	81	88	8	38-130	22	☐
Aldrin	20.0	16.1	17.9	81	89	11	38-130	25	☐
Dieldrin	50.0	48.8	52.2	98	104	7	42-131	27	☐
Endrin	50.0	59.2	63.6	118	127	7	39-147	28	☐
DDT	50.0	50.3	53.8	101	108	7	37-144	32	☐

QA/QC Report
for
Chlorinated Herbicides (EPA 8151A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: 23656-007
MS/MSD Qualifiers: R2,
Reference #: TRG 23657

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Dicamba	0.00	500	381	324	76	65	16	26-130	30	☐
Dichloroprop	0.00	500	333	350	67	70	5	21-130	30	☐
2,4-D	0.00	500	223	301	45	60	30	16-130	29	☑
2,4,5-TP	0.00	500	367	354	73	71	4	21-130	29	☐
2,4,5-T	0.00	500	288	331	58	66	14	16-130	28	☐

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
2,4-Dichlorophenylacetic Acid	94	63	☐

LCS	LCSD	Qual
90	107	☐

ACP % RC
15-156

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: AV0605181
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Dicamba	500	344	440	69	88	24	23-149	31	☐
Dichloroprop	500	289	353	58	71	20	22-130	29	☐
2,4-D	500	229	284	46	57	21	20-130	32	☐
2,4,5-TP	500	334	390	67	78	15	21-130	32	☐
2,4,5-T	500	253	297	51	59	16	18-130	33	☐

Data Qualifier Definitions

Qualifier

M2 = Matrix spike recovery was low, the associated blank spike recovery was acceptable.

23657-007	8081A	DDT	MS/MSD
23657-007	8081A	Dieldrin	MS/MSD
23657-007	8081A	Endrin	MS/MSD
23657-007	8081A	Gamma-BHC	MS/MSD

R2 = RPD/RSD exceeded the laboratory acceptance limit.

23656-007	8151A	2,4-D	MS/MSD

Definition of terms:

R1	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

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Analysis Request and Chain of Custody Record

Lab Job No: 236657
Page ____ of 1

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Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: X
72 Hours: ____ 48 Hours: ____ 24 Hours: ____

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	THE REYNOLDS GROUP	PROJECT NAME:	FORCE YUCAIPA
SEND REPORT TO:	LABRESULTS@REYNOLDS-GROUP.COM	NUMBER:	84160
EMAIL:	FISCHER@REYNOLDS-GROUP.COM	ADDRESS:	YUCAIPA BLVD / AVENUE E
ADDRESS:	520 W. FIRST ST		YUCAIPA, CA
	TUSTIN, CA	P.O. #:	84160
PHONE:	714-730-5397 FAX: 714-730-6496	SAMPLED BY:	JOSHUA HUDEKOFF

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	REMARKS/PRECAUTIONS
1C	1	6/4/18		SOIL	STAINLESS STEEL	COMPOSITE
2C						
3C						
4C						
5C						
6C						

ANALYSIS REQUEST / PRESERVATIVE — PESTICIDES / HERBICIDES

Total No. of Samples: 6 Method of Shipment:

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By: Josh Hudekoff	Date/Time: 6/4/18 3:15	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By: OCACA	Date/Time: 6/4/18 1510

Sample Matrix: WW - Wastewater; DW - Drinking Water; SS - Soil/Solid; GW - Groundwater; OT- Other

Sample Integrity: Intact ✓ On Ice ✓ 5.8°C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if failed [illegible]

Sample Receipt Report

Laboratory Reference: TRG 23657

Logged in by: MM

Received:	06/04/18 15:15	Company Name:	The Reynolds Group
Method of Shipment:	Hand Delivered	Project Manager:	Ms. Rosanne Fischer
Shipping Container:	Cooler	Project Name:	Force Yucaipa
# Shipping Containers:	1	Project #:	8460

Sample Quantity
7 Soil

Chain of Custody	Complete ☑	Incomplete ☐	None ☐
Samples On Ice	Yes, Wet ☑	Yes, Blue ☐	No ☐
Temperature	5.8°C		
Shipping Intact	Yes ☑	N/A ☐	No ☐
Shipping Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Samples Intact	Yes ☑		No ☐
Sample Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Custody Seals Signed & Dated	Yes ☐	N/A ☑	No ☐
Proper Test Containers	Yes ☑		No ☐
Proper Test Preservations	Yes ☑		No ☐
Samples Within Hold Times	Yes ☑		No ☐
VOAs Have Zero Headspace	Yes ☐	N/A ☑	No ☐
Sample Labels	Complete ☑	Incomplete ☐	None ☐
Sample Information Matches COC	Yes ☑	N/A ☐	No ☐

Notes

Client Notified _____ By _____ On _____

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3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.: 2576
Expiration Date: 2018
Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:

Mark Noorani

Client:	The Reynolds Group
Laboratory Reference:	TRG 23656
Project Name:	Force Yucaipa
Project Number:	8460
Date Received:	6/4/2018
Date Reported:	6/8/2018
Chain of Custody Received:	☑
Analytical Method:	8081A, 8151A,

Mark Noorani, Laboratory Director

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23656
Project Name: Force Yucaipa
Project #: 8460

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 5.8ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23656
Project Name: Force Yucaipa
Project #: 8460

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
1D	23656-001	6/4/2018	6/4/2018	Soil
2D	23656-002	6/4/2018	6/4/2018	Soil
3D	23656-003	6/4/2018	6/4/2018	Soil
4D	23656-004	6/4/2018	6/4/2018	Soil
5D	23656-005	6/4/2018	6/4/2018	Soil
6D	23656-006	6/4/2018	6/4/2018	Soil
Composite D	23656-007	6/4/2018	6/4/2018	Soil

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Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23656
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite D	23656-007	6/4/2018	6/4/2018	6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	87

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23656
Project Name: Force Yucaipa
Project #: 8460

Organochlorine Pesticides (EPA 8081A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBAV0605182			6/5/2018	6/6/2018	Soil

ANALYTE	CAS #	µg/kg
Aldrin	309-00-2	<2.0
alpha-BHC	319-84-6	<5.0
beta-BHC	319-85-7	<5.0
gamma-BHC (Lindane)	58-89-9	<5.0
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5.0
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2.0
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5.0
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5.0
Heptachlor	76-44-8	<2.0
Heptachlor epoxide	1024-57-3	<5.0
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate:	% RC*
Decachlorobiphenyl	117

* Acceptable Recovery: 33-141 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Rosanne Fischer
The Reynolds Group
520 W. 1st St
Tustin, CA, 92780

Lab Reference #: TRG 23656
Project Name: Force Yucaipa
Project #: 8460

Chlorinated Herbicides (EPA 8151A)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Composite D	23656-007	6/4/2018	6/4/2018	6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	76

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

Method Blank	MBAV0605181			6/5/2018	6/7/2018	Soil

ANALYTE	CAS #	µg/kg
Dicamba	1918-00-9	<100
Dichloroprop	120-36-5	<100
2,4-D	94-75-7	<100
2,4,5-TP (silvex)	93-72-1	<100
2,4,5-T	93-76-5	<100

Surrogate:	% RC*
2,4-Dichlorophenylacetic Acid	95

* Acceptable Recovery: 15-156 %

Dilution Factor: 1

Data Qualifiers: None

QA/QC Report
for
Organochlorine Pesticides (EPA 8081A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: 23657-007
MS/MSD Qualifiers: M2,
Reference #: TRG 23656

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Gamma-BHC	0.00	20.0	0.00	0.00	0	0	0	45-130	31	☑
Heptachlor	0.00	20.0	8.99	8.23	45	41	9	37-130	30	☐
Aldrin	0.00	20.0	10.2	9.34	51	47	9	44-130	27	☐
Dieldrin	0.00	50.0	0.00	0.00	0	0	0	45-137	20	☑
Endrin	0.00	50.0	0.00	0.00	0	0	0	46-149	20	☑
DDT	0.00	50.0	18.9	16.8	38	34	12	44-143	20	☑

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	93	89	☐

LCS	LCSD	Qual
127	126	☐

ACP % RC
33-141

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/6/2018
Dup Date of Analysis: 6/6/2018
Laboratory Sample #: AV0605182
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Gamma-BHC	20.0	16.4	17.7	82	89	8	40-130	23	☐
Heptachlor	20.0	16.1	17.5	81	88	8	38-130	22	☐
Aldrin	20.0	16.1	17.9	81	89	11	38-130	25	☐
Dieldrin	50.0	48.8	52.2	98	104	7	42-131	27	☐
Endrin	50.0	59.2	63.6	118	127	7	39-147	28	☐
DDT	50.0	50.3	53.8	101	108	7	37-144	32	☐

QA/QC Report
for
Chlorinated Herbicides (EPA 8151A)
Reporting units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: 23656-007
MS/MSD Qualifiers: R2,
Reference #: TRG 23656

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Dicamba	0.00	500	381	324	76	65	16	26-130	30	☐
Dichloroprop	0.00	500	333	350	67	70	5	21-130	30	☐
2,4-D	0.00	500	223	301	45	60	30	16-130	29	☑
2,4,5-TP	0.00	500	367	354	73	71	4	21-130	29	☐
2,4,5-T	0.00	500	288	331	58	66	14	16-130	28	☐

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
2,4-Dichlorophenylacetic Acid	94	63	☐

LCS	LCSD	Qual
90	107	☐

ACP % RC
15-156

Laboratory Control Sample

Date of Extraction: 6/5/2018
Date of Analysis: 6/7/2018
Dup Date of Analysis: 6/7/2018
Laboratory Sample #: AV0605181
LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Dicamba	500	344	440	69	88	24	23-149	31	☐
Dichloroprop	500	289	353	58	71	20	22-130	29	☐
2,4-D	500	229	284	46	57	21	20-130	32	☐
2,4,5-TP	500	334	390	67	78	15	21-130	32	☐
2,4,5-T	500	253	297	51	59	16	18-130	33	☐

Data Qualifier Definitions

Qualifier

M2 = Matrix spike recovery was low, the associated blank spike recovery was acceptable.

23657-007	8081A	DDT	MS/MSD
23657-007	8081A	Dieldrin	MS/MSD
23657-007	8081A	Endrin	MS/MSD
23657-007	8081A	Gamma-BHC	MS/MSD

R2 = RPD/RSD exceeded the laboratory acceptance limit.

23656-007	8151A	2,4-D	MS/MSD

Definition of terms:

R1	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

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Analysis Request and Chain of Custody Record

Lab Job No: 236656
Page 1 of 1

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: X
72 Hours: _____ 48 Hours: _____ 24 Hours: _____

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	THE REYNOLDS GROUP	PROJECT NAME:	FORCE YUCAIPA
SEND REPORT TO:	LABRESULTS@REYNOLDS-GROUP.COM	NUMBER:	8460
EMAIL:	FISCHER@REYNOLDS-GROUP.COM	ADDRESS:	YUCAIPA BLVD / AVENUE E YUCAIPA, CA
ADDRESS:	520 W. FIRST ST TUSTIN, CA	P.O. #:	8460
PHONE:	714-730-5397 FAX: 714-730-6476	SAMPLED BY:	JOSH HUDEKOFF

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	ANALYSIS REQUEST / PRESERVATIVE: PESTICIDES / HERBICIDES	REMARKS/PRECAUTIONS
1D	1	6/4/18	12:25	SOIL	STAIN STEEL		COMPOSITE
2D			12:33				
3D			12:47				
4D			1:12				
5D			1:21				
6D			1:35				

Total No. of Samples: 6 Method of Shipment:

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By: Josh Hudekoff	Date/Time: 6/4/18 3:15	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By: OCAA	Date/Time: 6/4/18 1515

Sample Matrix: WW - Wastewater; DW - Drinking Water; SS - Soil/Solid; GW - Groundwater; OT- Other

Sample Integrity: Intact ✓ On Ice ✓ 5.8°C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample.

Sample Receipt Report

Laboratory Reference: TRG 23656 Logged in by: MM

Received:	06/04/18 15:15	Company Name:	The Reynolds Group
Method of Shipment:	Hand Delivered	Project Manager:	Ms. Rosanne Fischer
Shipping Container:	Cooler	Project Name:	Force Yucaipa
# Shipping Containers:	1	Project #:	8460

Sample Quantity
7 Soil

Chain of Custody	Complete ☑	Incomplete ☐	None ☐
Samples On Ice	Yes, Wet ☑	Yes, Blue ☐	No ☐
Temperature	5.8°C		
Shipping Intact	Yes ☑	N/A ☐	No ☐
Shipping Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Samples Intact	Yes ☑		No ☐
Sample Custody Seals Intact	Yes ☐	N/A ☑	No ☐
Custody Seals Signed & Dated	Yes ☐	N/A ☑	No ☐
Proper Test Containers	Yes ☑		No ☐
Proper Test Preservations	Yes ☑		No ☐
Samples Within Hold Times	Yes ☑		No ☐
VOAs Have Zero Headspace	Yes ☐	N/A ☑	No ☐
Sample Labels	Complete ☑	Incomplete ☐	None ☐
Sample Information Matches COC	Yes ☑	N/A ☐	No ☐

Notes

Client Notified _____ By _____ On _____

SALEM
engineering group, inc.

8711 Monroe Court, Suite A
Rancho Cucamonga, CA 91730
(909) 980-6455 Office
(909) 980-6435 Fax

March 8, 2019 **Job No. 3-418-1026**

Mr. Greg Lukosky
VantageOne Real Estate Investments
4 Corporate Plaza, Suite 210
Newport Beach, CA 92660

Subject: **NOISE STUDY**
Proposed Commercial Development
SWC Yucaipa Boulevard and 18th Street
Yucaipa, California

Dear Mr. Lukosky:

At your request and authorization, a Noise Study for the above-referenced project (San Bernardino County Assessor Parcel Numbers [APNs] 0300-191-01; -02; -17; -18; -28; -29; -30; -31 and 0300-192-07; -08) located on the southwest corner of Yucaipa Boulevard and 18th Street in Yucaipa, California (subject property) was conducted. The Noise Study is an analysis of the proposed project's temporarily noise impacts associated with the construction of the project, as well as long-term noise impacts associated with the operation of the proposed project. The Noise Study was prepared utilizing the City of Yucaipa General Plan, Municipal Code as well as the City of Yucaipa's Development Code.

Based on the included report, noise impacts from the construction of the project would generate in short-term noise. As such, construction activities are recommended to adhere to the City's allowable construction hours and not occur between 7:00pm and 7:00am on weekdays and Saturdays; and anytime on Sundays. Additionally, implementation of construction noise reduction measures are recommended (as noted in Section 3.4 Recommendations and Conclusions of included report).

On-site operational noises from HVAC, car wash, parking lot and drive-thru noise would not exceed the City's exterior and interior noise standards for residential or commercial uses. The project would not conflict with the land use compatibility standards contained in the Yucaipa General Plan. In addition, the off-site traffic noise would not be perceptible at nearby sensitive land uses.

We appreciate the opportunity to assist you with this project. If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully submitted,

SALEM Engineering Group, Inc.

Maria G. Ruvalcaba, EP
Project Manager



Yucaipa Point

Noise Study

prepared for

Salem Engineering Group
13355 Noel Road, Suite 1100
Dallas, Texas 75240
Contact: Maria Ruvalcaba

prepared by

Rincon Consultants, Inc.
301 9th Street
Redlands, California 92374

March 2019

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

Yucaipa Point

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March 2019

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

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Appendix A Noise Measurement Data
Appendix B Roadway Construction Noise Model Results
Appendix C Car Wash and HVAC Noise Specifications
Appendix D Yucaipa Point Traffic Impact Analysis Study

1 Project Description

1.1 Introduction

This study analyzes the potential noise impacts of a commercial development proposed at the northeast corner of Yucaipa Boulevard and Interstate 10 (I-10), Assessor Parcel Numbers (APN) 0300-191-01, -02, -17, -18, -28, -29, -30, -31, in the city of Yucaipa, California. Rincon Consultants, Inc. (Rincon) prepared the study under contract to and for use by Salem Engineering Group. The purpose of this report is to analyze the proposed temporary noise impacts associated with project construction and long-term noise impacts associated with project operation.

1.2 Project Summary

The project is a commercial development on two sites separated by Avenue E. The eastern site (Area A) is approximately 22 acres and would involve construction of an approximately 34,000-square foot (sf) health club, approximately 39,000-sf theater with 975 seats, three restaurants approximately 17,900-sf, five fast food restaurants all with a drive-through, an approximately 3,779-sf car wash with a drive-through tunnel and office, and approximately 9,100-sf of shops. A total of 925 parking spaces will be provided for Area A that will be accessed by five driveways, two from Avenue E, one from Yucaipa Boulevard, and two from 18th Street.

The smaller western site (Area C) is a 1.72-acre site. Construction on Area C would involve an approximately 5,000-sf fast food restaurant with drive-through, approximately 2,000-sf retail shop, and approximately 1,000-sf restaurant. A total of 60 parking spaces will be provided for Area C, which will be accessed via a driveway off of Avenue E. The project site (Area A and C) has a zoning designation of Service Commercial (CS). Figure 1 shows the regional location, Figure 2 shows the project site location, and Figure 3 shows the site plan

Figure 1 Regional Location

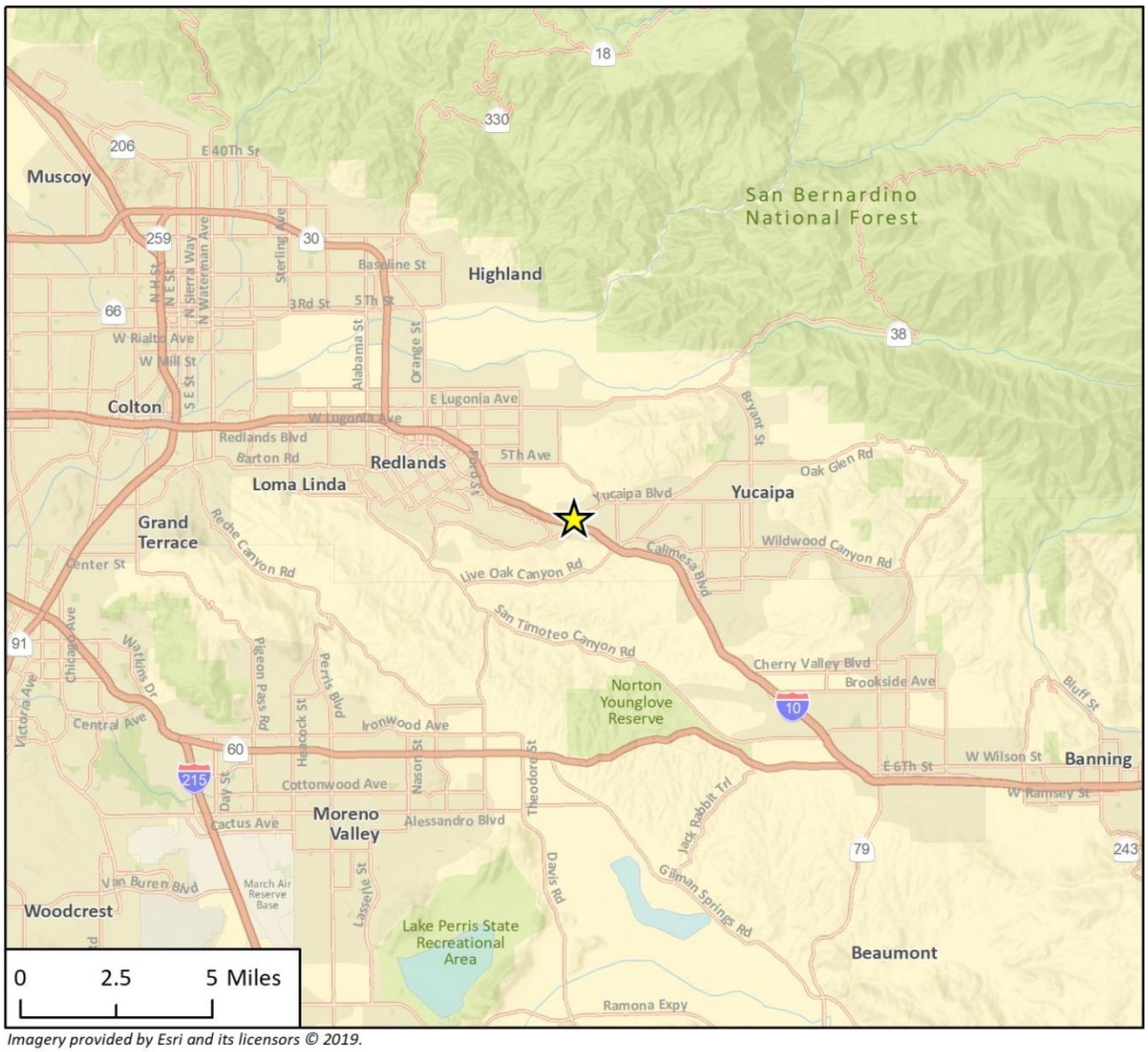
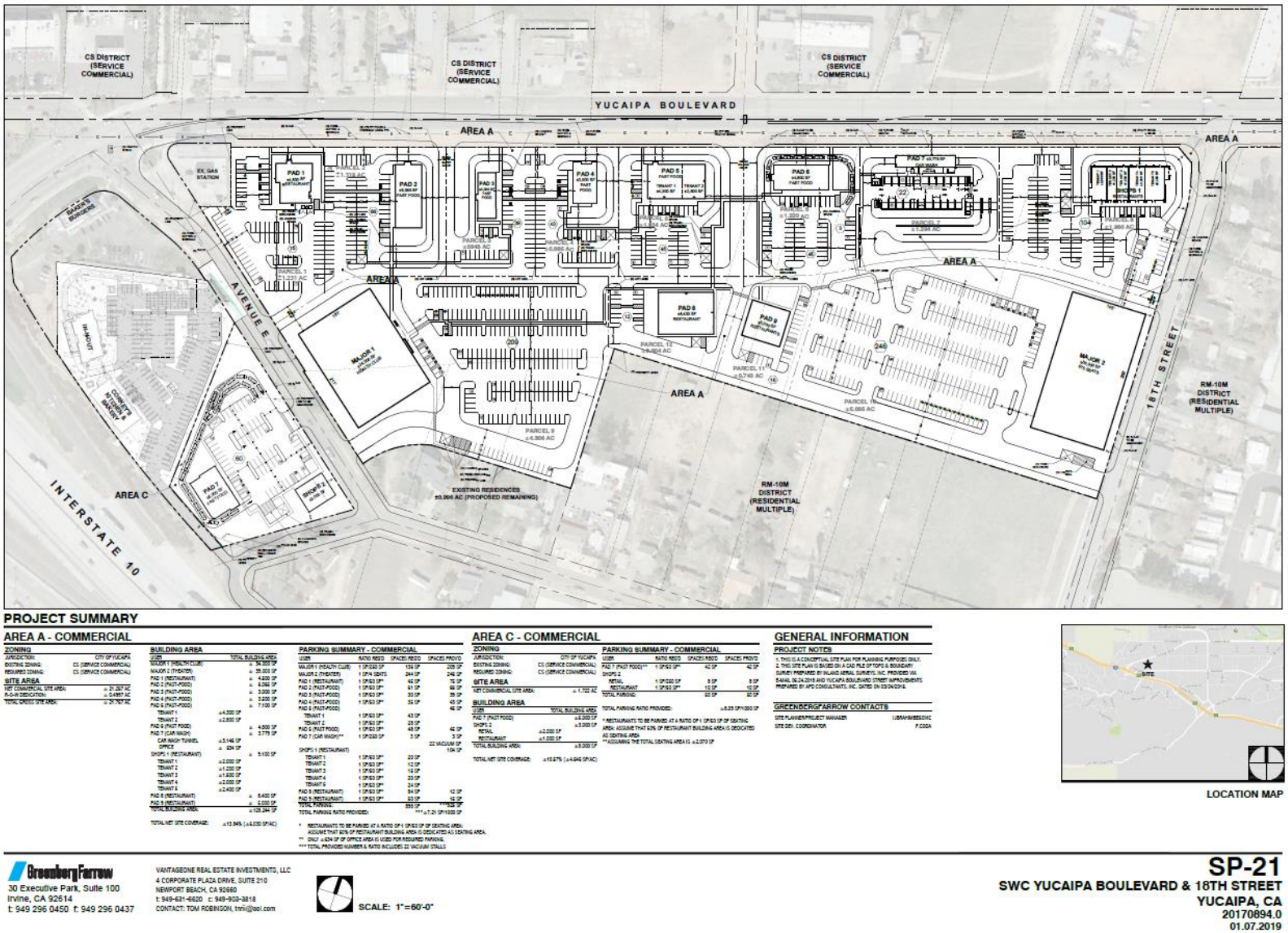




Figure 2 Project Site Location



Figure 3 Site Plan



PROJECT SUMMARY

AREA A - COMMERCIAL

ZONING	
JURISDICTION:	CITY OF YUCAIPA
EXISTING ZONING:	CS (SERVICE COMMERCIAL)
REQUIRED ZONING:	CS (SERVICE COMMERCIAL)
SITE AREA	
NET COMMERCIAL SITE AREA:	± 21.267 AC
R-O-W DEDICATION:	± 0.4567 AC
TOTAL GROSS SITE AREA:	± 21.767 AC

BUILDING AREA	
USES	TOTAL BUILDING AREA
MAJOR 1 (HEALTH CLUB)	± 39,000 SF
MAJOR 2 (THEATER)	± 39,000 SF
PAD 1 (RESTAURANT)	± 4,200 SF
PAD 2 (FAST-FOOD)	± 4,260 SF
PAD 3 (FAST-FOOD)	± 3,000 SF
PAD 4 (FAST-FOOD)	± 3,200 SF
PAD 5 (FAST-FOOD)	± 7,100 SF
TENANT 1	±4,500 SF
TENANT 2	±2,600 SF
PAD 6 (FAST FOOD)	± 4,500 SF
PAD 7 (CAR WASH)	± 3,779 SF
CAR WASH TUNNEL	±3,142 SF
OFFICE	± 624 SF
SHOPS 1 (RESTAURANT)	± 5,100 SF
TENANT 1	±2,000 SF
TENANT 2	±1,200 SF
TENANT 3	±1,600 SF
TENANT 4	±2,000 SF
TENANT 5	±2,400 SF
PAD 8 (RESTAURANT)	± 5,400 SF
PAD 9 (RESTAURANT)	± 5,000 SF
TOTAL BUILDING AREA:	±129,244 SF
TOTAL NET SITE COVERAGE:	±13.94% (±4,030 SF/AC)

PARKING SUMMARY - COMMERCIAL

USES	RATIO REQ'D	SPACES REQ'D	SPACES PROV'D
MAJOR 1 (HEALTH CLUB)	1 SP/250 SF*	156 SP	209 SP
MAJOR 2 (THEATER)	1 SP/4 SEATS	244 SP	248 SP
PAD 1 (RESTAURANT)	1 SP/50 SF**	42 SP	76 SP
PAD 2 (FAST-FOOD)	1 SP/50 SF**	61 SP	66 SP
PAD 3 (FAST-FOOD)	1 SP/50 SF**	30 SP	35 SP
PAD 4 (FAST-FOOD)	1 SP/50 SF**	32 SP	42 SP
PAD 5 (FAST-FOOD)			46 SP
TENANT 1	1 SP/50 SF**	45 SP	
TENANT 2	1 SP/50 SF**	26 SP	
PAD 6 (FAST FOOD)	1 SP/50 SF**	46 SP	46 SP
PAD 7 (CAR WASH)**	1 SP/200 SF	3 SP	3 SP
			22 VACUUM SP
SHOPS 1 (RESTAURANT)			104 SP
TENANT 1	1 SP/50 SF**	20 SP	
TENANT 2	1 SP/50 SF**	12 SP	
TENANT 3	1 SP/50 SF**	16 SP	
TENANT 4	1 SP/50 SF**	20 SP	
TENANT 5	1 SP/50 SF**	24 SP	
PAD 8 (RESTAURANT)	1 SP/50 SF**	54 SP	12 SP
PAD 9 (RESTAURANT)	1 SP/50 SF**	50 SP	50 SP
TOTAL PARKING:		955 SP	1,115 SP
TOTAL PARKING RATIO PROVIDED:			***1:21 SP/1000 SF

* RESTAURANTS TO BE PARKED AT A RATIO OF 1 SP/50 SF OF SEATING AREA. ASSUME THAT 60% OF RESTAURANT BUILDING AREA IS DEDICATED AS SEATING AREA.
** ONLY ±624 SF OF OFFICE AREA IS USED FOR REQUIRED PARKING.
*** TOTAL PROVIDED NUMBER & RATIO INCLUDES 22 VACUUM STALLS

AREA C - COMMERCIAL

ZONING	
JURISDICTION:	CITY OF YUCAIPA
EXISTING ZONING:	CS (SERVICE COMMERCIAL)
REQUIRED ZONING:	CS (SERVICE COMMERCIAL)
SITE AREA	
NET COMMERCIAL SITE AREA:	± 1.722 AC

BUILDING AREA	
USES	TOTAL BUILDING AREA
PAD 7 (FAST FOOD)	± 4,000 SF
SHOPS 2	± 3,000 SF
RETAIL	±2,000 SF
RESTAURANT	±1,000 SF
TOTAL BUILDING AREA:	± 8,000 SF
TOTAL NET SITE COVERAGE:	±12.67% (±4,646 SF/AC)

PARKING SUMMARY - COMMERCIAL

USES	RATIO REQ'D	SPACES REQ'D	SPACES PROV'D
PAD 7 (FAST FOOD)**	1 SP/50 SF*	42 SP	42 SP
SHOPS 2			
RETAIL	1 SP/250 SF	8 SP	8 SP
RESTAURANT	1 SP/50 SF	10 SP	10 SP
TOTAL PARKING:		60 SP	60 SP
TOTAL PARKING RATIO PROVIDED:			±8.25 SP/1000 SF

* RESTAURANTS TO BE PARKED AT A RATIO OF 1 SP/50 SF OF SEATING AREA. ASSUME THAT 60% OF RESTAURANT BUILDING AREA IS DEDICATED AS SEATING AREA.
** ASSUMING THE TOTAL SEATING AREA IS ±2,070 SF

GENERAL INFORMATION

PROJECT NOTES

1. THIS IS A CONCEPTUAL SITE PLAN FOR PLANNING PURPOSES ONLY.
2. THIS SITE PLAN IS BASED ON A CAD FILE OF TOPO & BOUNDARY SURVEY PREPARED BY INLAND AERIAL SURVEYS, INC. PROVIDED VIA EMAIL ON 2.4.2019 AND YUCAIPA BOULEVARD STREET IMPROVEMENTS PREPARED BY APD CONSULTANTS, INC. DATED ON 2/24/2014.

GREENBERG|FARROW CONTACTS

SITE PLANNER/PROJECT MANAGER:	LIBRAHIMBEGOVIC
SITE DEV. COORDINATOR	F.CODA

GreenbergFarrow
30 Executive Park, Suite 100
Irvine, CA 92614
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VANTAGEONE REAL ESTATE INVESTMENTS, LLC
4 CORPORATE PLAZA DRIVE, SUITE 210
NEWPORT BEACH, CA 92660
t: 949-631-6620 c: 949-903-3818
CONTACT: TOM ROBINSON, tmi@aol.com

SCALE: 1"=60'-0"

SP-21
SWC YUCAIPA BOULEVARD & 18TH STREET
YUCAIPA, CA
20170894.0
01.07.2019

2 Background

2.1 Overview of Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013a).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz (Kinsler, et. al. 1999).

Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy. The perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., 2x the sound energy); that a change of 5 dBA is readily perceptible (8x the sound energy); and that an increase (decrease) of 10 dBA sounds twice (half) as loud ((10.5x the sound energy) (Crocker 2007).

Sound changes both in level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner in which noise reduces with distance depends on the important factors, including the type of sources, i.e., point or line, the path the sound will travel, site conditions and obstructions. Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (6dBA/DD) (e.g., construction, industrial machinery, ventilation units, etc.). Noise from a line source (e.g., roadway, pipeline, railroad, etc.) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013a). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site (such as parking lots or smooth bodies of water) receives no additional ground attenuation, and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. A soft site (such as soft dirt, grass, or scattered bushes and trees) receives an additional ground attenuation value of 1.5 dBA per doubling of distance (Caltrans 2013a). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, as well as man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (FHWA 2011).

Structures also can substantially reduce exposure to noise. Based on the Federal Highway Administration's (FHWA) modern building construction generally provides an exterior-to-interior noise level reduction of 20 – 35 dBA with closed windows (FHWA 2011).

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (L_{eq}). The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest RMS (root mean squared) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007).

Since noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (DNL), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013a). Noise levels described by DNL and CNEL usually differ by about 1 dBA. The relationship between the peak hour L_{eq} value and the DNL/CNEL depends on the distribution of traffic during the daytime, evening, and nighttime. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 60+ CNEL range. Normal conversational levels are in the 60 to 65-dBA L_{eq} range, and ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (FTA 2018).

2.2 Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Generally noise sensitive receivers are defined as noise sensitive uses such as residences, hospitals, schools, childcare facilities, and places of assembly.

2.2.1 Project Noise Setting

The most common source of noise in the project site vicinity is vehicular traffic on I-10 and Yucaipa Boulevard. Ambient noise levels are generally highest during the daytime and rush hour unless congestion substantially slows speeds.

To characterize ambient sound levels at and near the project site, three 15-minute sound level measurements were conducted on February 6, 2019 during the between 8:00 a.m. and 8:44 a.m. and 4:52 p.m. and 5:07 p.m. using an Extech, ANSI Type 2 integrating sound level meter.

Figure 4 shows the noise measurement locations, and Table 1 summarizes the results of the noise measurements. Detailed sound level measurement data is included in Appendix A.

Table 1 Project Vicinity Sound Level Monitoring Results

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	Leq (dBA)	Lmin (dBA)	Lmax (dBA)
1	Northwest section of Area A along Yucaipa Boulevard	8:29 – 8:44 a.m.	35 feet to the centerline of Yucaipa Blvd.	68.0	47.4	81.2
2	Southeast section of Area A near 18th Street	8:00 – 8:15 a.m.	550 feet to the centerline of Yucaipa Blvd.	43.6	39.6	53.4
3	South of Area C near I-10	4:52 – 5:07 p.m.	200 feet to centerline of I-10	70.0	60.4	78.2

See Figure 4 for Noise Measurement Locations and Appendix A for measurement results.

Figure 4 Noise Measurement Locations



2.3 Regulatory Setting

2.3.1 Yucaipa General Plan Noise Element

Yucaipa Municipal Code

Chapter 9 of the City of Yucaipa Municipal Code provides performance standards for noise. Section 87.0905(b) provides noise standards for noise from any source as it affects adjacent properties, as shown in Table 2.

Table 2 Yucaipa Noise Standards

Affected Land Use (Receiving Noise)	Noise Level (dBA)	Time Period
Residential	55	7:00 a.m. to 10:00 p.m.
	55	10:00 p.m. to 7:00 a.m.
Professional Services	55	Anytime
Other Commercial	60	Anytime
Industrial	70	Anytime

Source: City of Yucaipa Municipal Code Section 87.0905(b)

The noise limits in Table 2 are for a cumulative period of more than 30 minutes in any hour. Higher noise limits are permitted for shorter periods of time within an hour, but in no case is the noise level permitted to exceed the levels in Table 2 plus 20 dBA. If the measured ambient noise level exceeds any of the noise limits, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the alleged offensive noise consists entirely of impact noise or simple tone noise, the noise levels shall be reduced by 5 dBA. Section 87.0905(b) exempts construction noise between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays.

City of Yucaipa Development Code

The City of Yucaipa Development Code (which is contained within Section 85.020510 of the City of Yucaipa Municipal Code) provides the development standards for land uses within a Noise Hazard Overlay District. The Noise Hazard Overlay District is applied to those areas where the exterior DNL is 65 dB or greater. Ambient noise at the project site was measured as high as 70 dBA L_{eq} at the northern portion of the project site along Yucaipa Boulevard (Table 1). Because DNL is roughly equal to L_{eq} in suburban areas, the DNL on the project site would be as high as 70 dBA (SWRCB 1999). Therefore, the project site is in a Noise Hazard Overlay District and must comply with the standards.

In these districts the interior noise level shall not exceed 45 dB DNL in all single family and multifamily residences and educational institutions. Exterior noise levels in all single family and multifamily residential areas should not exceed 65 dB DNL, and shall not exceed 70 dB DNL. Ability to mitigate exterior noise at residential areas to the levels of 65 dB DNL and 70 dB DNL shall be considered by the City of Yucaipa when determining the actual DNL level with which the residential land use must comply. If, in the opinion of the City of Yucaipa, the mitigation measures necessary to reduce the exterior DNL to 65 dB are reasonable, then the City of Yucaipa will require compliance with a 65 dB DNL standard. However, if, in the opinion of the City of Yucaipa, the mitigation measures necessary to reduce the exterior DNL to 65 dB are unreasonable, then the City of Yucaipa will require compliance with a 70 dB DNL standard.

All non-residential structures within a Noise Hazard Overlay District shall be sound attenuated against the combined input of all present and projected exterior noise to not exceed the standards show in Table 3.

Table 3 City of Yucaipa Development Code Non-Residential Interior Noise Standards

Typical Use	12-hour Average Noise Level, $L_{eq}(12)$ (dBA)
Educational Institutions, libraries, churches, etc.	45
General office, reception, etc.	50
Retail stores, restaurants, etc.	55
Other areas for manufacturing, assembly, test, warehousing, etc.	65

Source: City of Yucaipa Municipal Code Section 85.020510

City of Yucaipa General Plan

The City of Yucaipa General Plan identifies transportation-related DNL noise standards for various land use categories as shown in Table 4.

Table 4 City of Yucaipa General Plan Land Use Criteria Standards

Categories	Exterior[1] dBA DNL	Interior[2] dBA DNL
Residential, hotel, motel	60	45
Commercial, retail, bank, restaurant	–	50
Office building, R&D, offices	65	45
Amphitheater, hall, auditorium, theater	–	45
Hospital, school, church, library	65	45
Park	65	–

[1] Outdoor environment is limited to private patios/balconies, private yards, picnic areas, playgrounds, and recreation areas. 65 dBA DNL will be allowed provided exterior noise levels have been substantially reduced through a reasonable application of the best available technology, and interior noise levels do not exceed 45 dBA DNL with windows closed.

[2] Indoor environment, excluding bathrooms, kitchens, toilets, closest, and corridors.

Source: City of Yucaipa General Plan Noise Element

3 Impact Analysis

3.1 Methodology

3.1.1 Construction Noise

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM) (2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise sensitive receivers near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation of 6 dBA per doubling of distance for stationary equipment.

For construction noise assessment, construction equipment can be considered to operate in two modes: stationary and mobile. As a rule, stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors), or with variable noise operation (e.g., pile drivers, rock drills, and pavement breakers). Mobile equipment moves around the construction site with power applied in cyclic fashion, such as bulldozers, graders, and loaders (FTA 2018). Noise impacts from stationary equipment are assessed from the center of the equipment, while noise impacts for mobile construction equipment are assessed from the center of the equipment activity area (e.g., construction site). For linear construction, such as a roadway or pipeline, construction noise is assessed from the centerline of the alignment based on the distance worked in an hour.

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FHWA 2018).

Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some have high-impact noise levels. The maximum hourly L_{eq} of each phase is determined by combining the L_{eq} contributions from each piece of equipment used in that phase (FHWA 2018). In typical construction projects, grading activities generate the highest noise levels, as grading involves the largest equipment and covers the greatest area.

Typical heavy construction equipment during project grading and site preparation would include bulldozers, excavators, front-end loaders, graders, and stationary equipment, such as compressors and generators. It is assumed that diesel engines would power all construction equipment. For assessment purposes, and to be conservative, the loudest hour has been used for assessment. Noise levels are based on a loader, a dozer, a backhoe, an excavator, and a generator operating simultaneously. Using the FHWA Roadway Construction Noise Model (RCNM) to estimate noise associated with construction equipment maximum hourly noise levels are calculated to be 83 dBA Leq at 50 feet, as measured from the center of the construction site or activity. RCNM Calculations are included in Appendix B.

3.1.2 Land Use Compatibility

Noise levels affecting the project site would be primarily influenced by traffic noise from Yucaipa Boulevard and I-10. As discussed above, to determine ambient noise levels at the project site, Rincon Consultants collected three 15-minute noise measurements. See Figure 4 for noise measurement locations relative to the project site, Table 1 for noise measurement results, and Appendix A for noise measurement data. The noise measurements recorded the L_{eq} at each location. The results of the noise measurements were compared to the City's noise compatibility standards to determine if the site provides a noise environment compatible with the proposed commercial uses.

3.1.3 Operational Noise Sources

Noise sources associated with operation of the project would consist of low speed on-site vehicular noise, landscaping maintenance, general conversations, parking lot noise, mechanical equipment, e.g., heating, ventilation, and air conditioning (HVAC) units, car wash operation, and noise from the proposed drive-through. Due to the distances and low noise levels associated with general site activities, on-site traffic, and landscape maintenance these sources are not considered significant and are not discussed further. The primary noise sources of concern would be the parking lots, HVAC, car wash operation, and fast-food drive-throughs.

On-site Noise Sources

On site-noise sources for mechanical equipment and the car wash were modeled using SoundPlan, a three-dimensional noise modeling software that accounts for the shielding and reflective effects associated with intervening buildings and walls. Propagation of modeled stationary noise sources was based on ISO Standard 9613-2, "Attenuation of Sound during Propagation Outdoors, Part 2: General Method of Calculation." The assessment methodology assumes that all receptors would be downwind of stationary sources. This is a worst-case assumption for total noise impacts, since, in reality, only some receptors will be downwind at any one time.

Parking Lot Noise

Parking noise is typically associated with screeching tires, slamming doors, and vehicle acceleration. Noise levels from parking lot noise sources were estimated at the nearest noise sensitive receptors using noise reference levels for parking lots and standard attenuation rates.

Fast Food Drive-Through

The project would include five fast-food drive-through restaurants that would generate noise from idling passenger vehicles, engine ignition, microphones, and conversation. Drive-through noise was calculated using a reference noise level of 54 dBA Lmax at 30 feet for idling vehicles in a drive-through and 65 dBA Lmax at 30 feet for the drive-through speaker system (Illingworth & Rodkin, Inc. 2010).

Mechanical Equipment

It is not known at this time which manufacturer, brand, or model of unit or units will be selected for use in the project. Based on the square footages of each structure it is estimated that the smaller buildings would require 5 ton HVAC units and larger buildings would require 10 ton HVAC units. Based on a review of published noise level data for Carrier HVAC Units, sound power levels could

range between 78 and 81 dBA. However, various sizes of HVAC units may be used to provide the necessary space conditioning. The noise levels used account for ventilation from the HVAC systems and therefore provide a conservative estimation. All HVAC units were modeled three feet above the roof line and spread out evenly on rooftops. HVAC specification sheets are included in Appendix C.

Car Wash Operation

The project would include a one-lane, drive-through car wash, which would generate noise primarily from operation of drying fans at the exit of the car wash. Blowers and other mechanical equipment would be located within the car wash building, which would dampen and block noise. Car wash noise was conservatively modeled using a reference noise level of 100 dB for each blower. Blowers were modeled nine feet above the ground. Car wash specification sheets are included in Appendix C.

Off-site Traffic Noise

The project would generate vehicle trips, thereby increasing traffic on area roadways as a result of the project. IBI Group prepared a project-specific Traffic Impact Analysis (TIA) to determine existing, future, and existing and future with project traffic conditions on area roadways (IBI 2019, Appendix D). Existing and existing plus project traffic volumes on Yucaipa Boulevard, Avenue E, Dunlap Boulevard, and I-10 were used for the assessment of off-site noise impacts from the project TIA. The noise increase from proposed traffic was calculated assuming that a doubling of traffic would result in a 3 dB increase in noise (FTA 2018).

3.2 Significance Thresholds

3.2.1 Construction Noise

According to Section 87.0905(b) construction noise would have a significant impact if construction would occur between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays. No construction is allowed on Sundays or holidays.

3.2.2 Land Use Compatibility

The City has adopted noise standards that provide exterior and interior noise level limits. The project entails use of the proposed buildings for commercial uses. Based on a review of the City General Plan, the proposed use would be compatible with interior noise levels up to 50 dBA DNL. There are no exterior land use compatibility standards for commercial land uses.

On-site Noise

On-site noise sources, such as HVAC and car wash noise, would be regulated by the Yucaipa Municipal Code as shown in Table 2 and Table 3. Impacts from new stationary noise sources would be significant if they exceed 55 dBA L_{eq} during daytime and nighttime hours at neighboring residential sensitive receivers or 60 dBA L_{eq} at neighboring commercial development to the north. In addition, because the project site is located in a Noise Hazard Overlay District interior noise levels shall not exceed 55 dBA L_{eq} for commercial uses.

Off-site Traffic Noise

The project would add vehicular traffic to both Yucaipa Boulevard and Avenue E. For purposes of this analysis, a significant impact would occur if project-related traffic increases noise levels at nearby sensitive receptors by 5 dB, which is a perceptible noise increase. Although individuals' reactions to changes in noise vary, empirical studies have shown people begin to notice changes in environmental noise levels of around 5 dBA. Thus, average changes in noise levels less than 5 dBA cannot be considered as producing adverse impacts because changes of that magnitude are imperceptible by the vast majority of persons (USEPA 1974).

3.3 Impact Analysis

3.3.1 Construction Noise

The nearest receivers include single-family residences located adjacent to the project site to the south of Area A and single-family residences approximately 50 feet east of the project site Area A across 18th Street. In addition, the Lighthouse Pentecostal Church is located approximately 500 feet south of the project site. While the project site is adjacent to existing residential properties to the south, construction equipment would be continuously moving across the site coming near and then moving further away from individual receivers, due to the dynamic nature of construction maximum hourly noise levels are calculated from the center of the site. The residential receivers south of the project site would be as near as 100 feet and as far as 1,000 feet; this would result in an average distance of 450 feet from construction activity. However construction noise was conservatively analyzed at 100 feet.

As discussed in the methodology, the FHWA RCNM was used to calculate noise associated with construction equipment. Maximum hourly noise levels are calculated to be 83 L_{eq} at 50 feet, as measured from the center of the construction site or activity. At 100 feet from these activities, i.e., the southern property line and at the residences south of the project site, noise levels would attenuate to approximately 77 dBA L_{eq}. RCNM Calculations are included in Appendix B. Although project construction would occur within the hours specified in the Yucaipa Municipal Code, construction noise would be perceptible at nearby receivers, including residences and the Lighthouse Pentecostal Church, and thus the project would require noise abatement measures. Noise recommendations are discussed in Section 3.3, *Recommendations and Conclusions*.

3.3.2 Land Use Compatibility

The relationship between peak hourly L_{eq} values and associated DNL values depends on the distribution of traffic over the entire day. There is no precise way to convert a peak hourly L_{eq} to DNL. However, in urban areas near heavy traffic, the peak hourly L_{eq} is typically 2-4 dBA lower than the daily DNL. In less heavily developed areas, such as suburban areas, the peak hourly L_{eq} is often roughly equal to the daily DNL. For rural areas with little nighttime traffic, the peak hourly L_{eq} value will often be 3-4 dBA greater than the daily DNL value (SWRCB 1999). The project site is located in a suburban area; therefore, the daily DNL value would be equal to the peak hourly L_{eq} value.

To determine ambient noise levels at the project site, Rincon collected three 15-minute noise measurements. The project would introduce a new commercial use on the project site that would be exposed to existing ambient noise levels. Ambient noise on Area A was measured as loud as 68 dBA L_{eq} and noise at Area C was measured as loud as 70 dBA L_{eq}. Therefore, the DNL at Area A and C is 68 DNL and 70 DNL, respectively. Standard construction techniques required under the California

Building Code typically achieve a minimum 25-dBA reduction from exterior sources at interior locations, when the windows are in a closed position. Thus, interior noise levels for the project would be 43 DNL at Area C and 45 DNL at Area A. The project would not exceed the City's interior noise standard of 50 DNL.

3.3.3 Operational Noise Sources

On-Site Operational Noise

The project would result in commercial uses on the site that may periodically subject existing land uses in the project vicinity to noise associated with operation of the project, which includes the car wash, HVAC, fast-food restaurants, and parking lot noise.

Parking Lot Noise

The closest on-site parking stall is located approximately 50 feet to the nearest residential property line to the south. Parking lot activity is assumed to generate instantaneous noise levels up to 63 dBA L_{max} at 100 feet from the source (Gordon Bricken & Associates 1996). Based on an attenuation rate of 6 dBA per doubling of distance, the nearest residential property to the north of the project site would be exposed to noise levels up to 71 dBA L_{max} at 50 feet from the source. Parking lot noise levels would exceed the City's daytime and nighttime noise standards for residential land uses, but would not exceed the standard by more than the allowable 20 dB as specified in Section 87.0905(b)(1) of the Yucaipa Municipal Code. In addition, peak noise levels from parking lot noise would be intermittent when averaged over a one hour period and would be much lower than the existing noise levels in the project vicinity, which are dominated by traffic noise. Therefore, parking lot noise from the project would not be expected to substantially increase existing noise levels at nearby receptors, and would not result in a significant increase in ambient noise levels.

Drive-through Noise

Operation of the project would generate noise through the idling of cars waiting in drive-through lines. The nearest residential property line to idling cars on the project site is located approximately 350 feet northeast of the fast-food restaurant drive-thru lane located in Area C. Idling vehicles are assumed to produce 54 dBA Lmax at a distance of 30 feet from the source (Illingworth & Rodkin, Inc. 2010). With an average noise attenuation of 6 dBA per doubling of distance, idling vehicles on the project site would generate a noise level of approximately 33 dBA Lmax at the nearest residential property line. This noise level is below the City's daytime and nighttime noise standard of 55 dBA for residential land uses. In addition, peak noise levels from idling would be intermittent when averaged over a one hour period and would be much lower. Therefore, noise from idling vehicles would not substantially increase ambient noise at nearby noise sensitive receptors.

Operation of the project would generate noise placement of orders by customers at a microphone at the fast-food drive-throughs. The nearest residential property line to an on-site speaker associated with the proposed fast-food drive-through restaurants is located approximately 350 feet northeast of the fast-food restaurant drive-thru lane located in Area C. The placements of drive-thru orders at a speaker box are assumed to produce 65 dBA Lmax at a distance of 30 feet from the source (Illingworth & Rodkin, Inc. 2010). With an average noise attenuation of 6 dBA per doubling of distance, speaker box noise on the project site would generate a noise level of approximately 43 dBA Lmax at the nearest residential property line. This noise level is below the City's daytime and nighttime noise standard of 55 dBA for residential land uses. In addition, peak noise levels from the

speaker box would be intermittent when averaged over a one hour period and would be much lower. Therefore, noise from speaker boxes at drive-through restaurants would not substantially increase ambient noise at nearby noise sensitive receptors.

Car Wash and HVAC Noise

Noise sources associated with operation of the project would include car wash and HVAC equipment. As a worst case scenario all HVAC and the carwash system were modeled operating at 100 percent. On-site operational noise level contours are provided in Figure 5 for car wash noise, Figure 6 for HVAC noise, and Figure 7 for combined operational noise levels. As shown in Figure 7 and Table 5 noise levels with both HVAC and the car wash active during the same hour would not exceed the City noise level limits of 55 dBA L_{eq} at residential property lines or 60 dBA L_{eq} at nearby commercial property lines. Standard construction techniques required under the California Building Code typically achieve a minimum 25-dBA reduction from exterior sources at interior locations, when the windows are in a closed position. Thus, interior noise levels for the project from proposed operational uses would not exceed 55 dBA L_{eq}. Future on-site noise sources would be consistent with City standards.

Table 5 On-Site Noise Model Summary

Receiver[1]	HVAC Noise (dBA Leq)	Car Wash Noise (dBA Leq)	Combined Noise (HVAC plus Car Wash)
1	39.5	29.9	39.9
2	37.1	27.1	37.5
3	40.4	31.3	41.0
4	39.8	34.2	40.8
5	37.4	34.9	39.3
6	35.4	32.6	37.2
7	33.7	29.8	35.2
8	33.2	29.3	34.7
9	34.3	27.8	35.2
10	35.0	30.1	36.2
11	35.2	25.5	35.6
12	35.4	26.3	35.9
13	36.2	27.0	36.7
14	37.7	27.4	38.1
15	39.6	32.1	40.3
16	40.6	33.4	41.3
17	40.7	33.6	41.5
18	40.5	33.7	41.4
19	40.5	39.7	43.1
20	40.1	35.6	41.4
21	39.4	38.9	42.2
22	40.3	37.6	42.2
23	36.7	46.7	47.1
24	39.5	44.8	45.9
25	41.1	38.3	42.9
26	40.0	33.6	40.9
27	39.7	31.8	40.4
28	39.2	30.8	39.8
29	39.2	30.2	39.7
30	39.2	29.3	39.6
31	37.5	28.3	38.0
32	36.2	27.6	36.8
33	35.3	27.2	35.9
34	33.2	26.2	34.0
35	37.6	23.9	37.7
36	42.9	22.6	42.9
37	40.0	23.7	40.1
38	37.5	29.9	38.2
39	34.3	31.9	36.3

[1] Refer to Figures 5 through 7 for receiver locations

Figure 5 Car Wash Noise

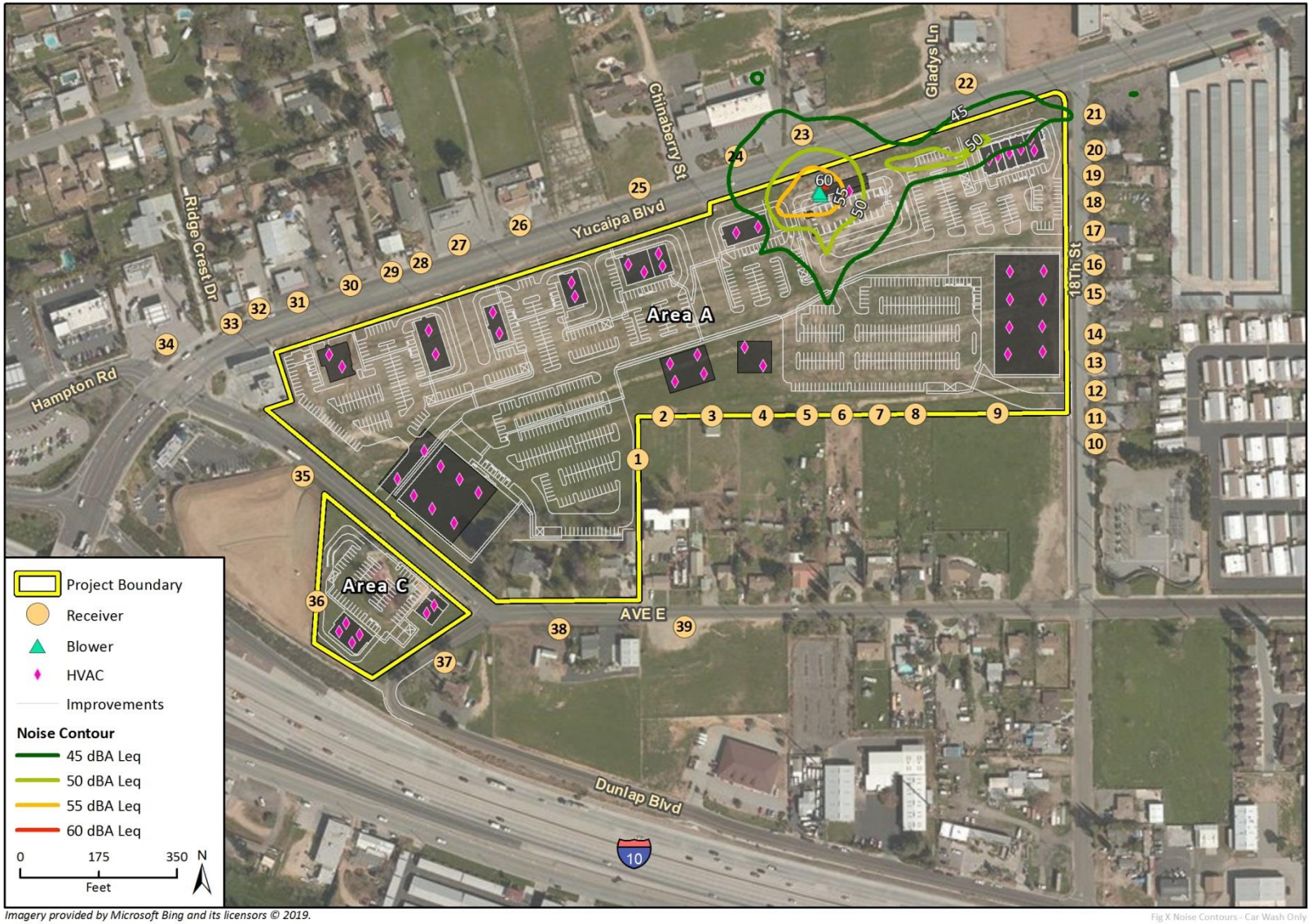


Figure 6 HVAC Noise

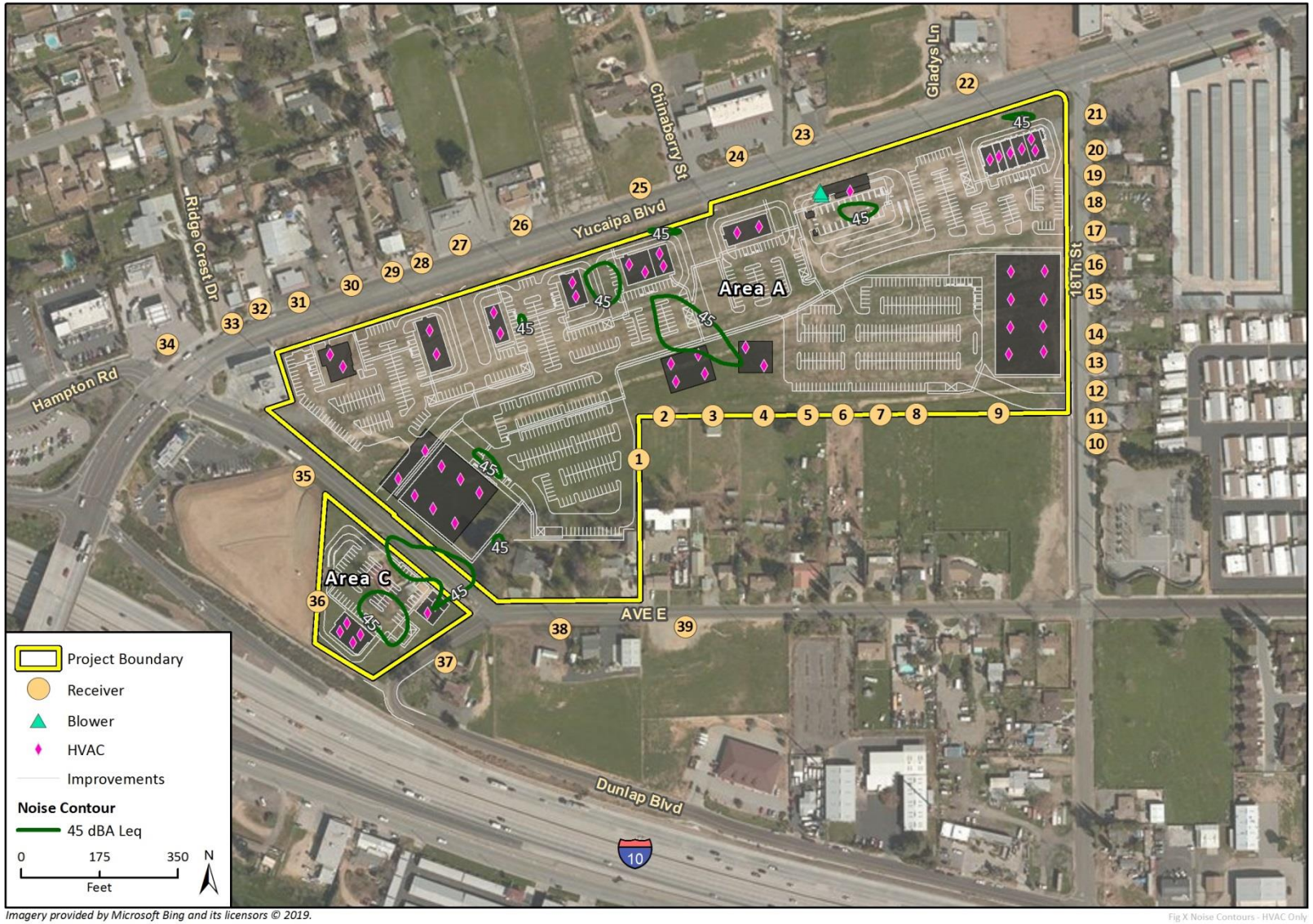
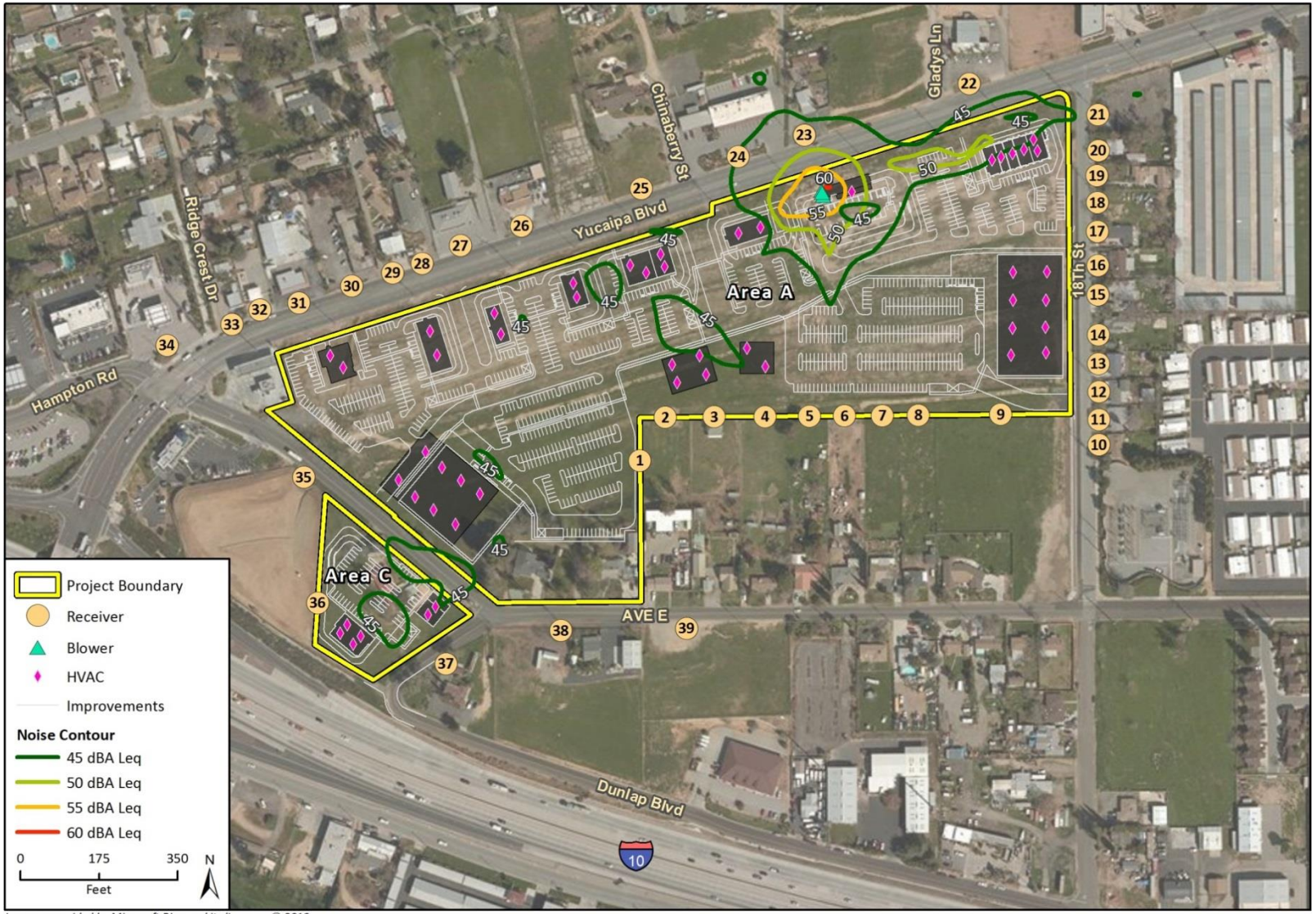


Figure 7 Combined Operational Noise – Car Wash and HVAC



Off-site Traffic Noise

The project would generate new vehicle trips that would use area roadways. As discussed in project-specific Traffic Impact Assessment, the project would generate an estimated 24,179 ADT (IBI Group 2019, see Appendix D). Table 6 shows the existing and future increase in roadway traffic and the associated noise increase. Project traffic on area roadways would increase noise from 0 to 4 dBA. Proposed off-site traffic would not increase ambient noise levels beyond 5 dBA. Therefore, the increase is project related traffic would not be perceptible at nearby sensitive receivers.

Table 6 Project Traffic

Roadway Segment	Existing 2018 Traffic (ADT) [1]	Existing 2018 plus Project Traffic (2018) [2]	Future Year 2020 Traffic (ADT) [3]	Future Year plus Project 2020Traffic (ADT) [4]	Traffic Increase 2018 (ADT) [2-1]	Traffic Increase 2020 (ADT) [3-4]	Existing Noise Increase (dBA) 2018	Future Noise Increase (dBA) 2020
Yucaipa Blvd. – WB I-10 Ramp to Avenue E	23,618	35,736	24,327	36,445	12,118	12,118	2	2
Yucaipa Blvd. – Avenue E to Knollhaven Ln.	20,664	29,980	21,284	30,600	9,316	9,316	2	2
Yucaipa Blvd. – 18th Street to 17th Street	19,926	27,198	20,524	27,796	7,272	7,272	1	1
Avenue E – Yucaipa Blvd. to Dunlap Blvd.	6,619	10,972	6,818	11,171	4,353	4,353	2	2
Dunlap Blvd. – South to Avenue E	1,205	1,689	1,251	1,725	484	474	1	1
Avenue E – Dunlap Blvd. to 18th 4Street	2,239	3,935	2,306	4,002	1,696	1,696	2	2
Avenue E – 18th Street to 17th Street	2,267	5,417	2,335	5,485	3,150	3,150	4	4
I-10 South of Yucaipa Blvd.	123,000	126,690	126,690	129,114	2,424	2,424	0	0
I-10 North of Yucaipa Blvd.	151,000	155,530	155,530	160,378	4,848	4,848	0	0

Source: IBI Group, see Appendix D

3.4 Recommendations and Conclusions

Construction of the project would generate short-term noise. To avoid conflict with City noise regulations (Section 87.0905[b] of the Yucaipa Municipal Code), it is recommended that construction adhere to the City's allowable construction hours and not occur between 7:00 a.m. and 7:00 p.m. on weekdays and Saturday, with no construction occurring on Sundays and implement the construction noise reduction measures as shown below.

Construction Noise Recommendation

The following measures should be followed during project construction:

- **Mufflers.** During all project site excavation and grading, all construction equipment, fixed or mobile, should be operated with closed engine doors and should be equipped with properly operating and maintained mufflers consistent with manufacturers' standards.
- **Stationary Equipment.** All stationary construction equipment should be placed so that emitted noise is directed away from the nearest sensitive receptors.
- **Equipment Staging Areas.** Equipment staging should be located in areas that will create the greatest distance feasible between construction-related noise sources and noise-sensitive receptors.
- **Electrically-Powered Tools and Facilities.** Electrical power should be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers or caretaker facilities.
- **Smart Back-up Alarms.** Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. Alternatively, back-up alarms should be disabled and replaced with human spotters to ensure safety when mobile construction equipment is moving in the reverse direction.

On-site operational noise from HVAC, car wash, parking lot, and drive-through noise would not exceed the City's exterior or interior noise standards for residential or commercial uses. The project would not conflict with the land use compatibility standards contained in the Yucaipa General Plan. In addition, the off-site traffic noise would not be perceptible at nearby sensitive land uses.

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Appendix A

Noise Measurement Data

Noise Measurement 1

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 81.2 - 2019/02/06 08:41:50
- Level Range : 40-100
- SEL : 97.5
- Leq : 68.0
-

No.s	Date Time	(dB)
1	2019/02/06 08:29:29	70.6
2	2019/02/06 08:29:30	69.9
3	2019/02/06 08:29:31	67.5
4	2019/02/06 08:29:32	66.3
5	2019/02/06 08:29:33	64.5
6	2019/02/06 08:29:34	64.7
7	2019/02/06 08:29:35	66.7
8	2019/02/06 08:29:36	67.7
9	2019/02/06 08:29:37	69.0
10	2019/02/06 08:29:38	71.5
11	2019/02/06 08:29:39	77.6
12	2019/02/06 08:29:40	76.2
13	2019/02/06 08:29:41	72.1
14	2019/02/06 08:29:42	68.0
15	2019/02/06 08:29:43	66.1
16	2019/02/06 08:29:44	63.1
17	2019/02/06 08:29:45	62.6
18	2019/02/06 08:29:46	60.4
19	2019/02/06 08:29:47	59.7
20	2019/02/06 08:29:48	60.8
21	2019/02/06 08:29:49	61.2
22	2019/02/06 08:29:50	61.9
23	2019/02/06 08:29:51	64.3
24	2019/02/06 08:29:52	64.2
25	2019/02/06 08:29:53	63.2
26	2019/02/06 08:29:54	60.0
27	2019/02/06 08:29:55	58.8
28	2019/02/06 08:29:56	61.5
29	2019/02/06 08:29:57	64.7
30	2019/02/06 08:29:58	68.3
31	2019/02/06 08:29:59	66.2
32	2019/02/06 08:30:00	64.2
33	2019/02/06 08:30:01	60.1
34	2019/02/06 08:30:02	58.6
35	2019/02/06 08:30:03	56.9
36	2019/02/06 08:30:04	56.6
37	2019/02/06 08:30:05	57.4
38	2019/02/06 08:30:06	54.5
39	2019/02/06 08:30:07	52.3
40	2019/02/06 08:30:08	50.5
41	2019/02/06 08:30:09	50.4
42	2019/02/06 08:30:10	49.7
43	2019/02/06 08:30:11	49.2
44	2019/02/06 08:30:12	48.9
45	2019/02/06 08:30:13	49.4
46	2019/02/06 08:30:14	49.5
47	2019/02/06 08:30:15	47.9
48	2019/02/06 08:30:16	48.7
49	2019/02/06 08:30:17	48.8
50	2019/02/06 08:30:18	50.1
51	2019/02/06 08:30:19	50.3
52	2019/02/06 08:30:20	52.8
53	2019/02/06 08:30:21	54.1
54	2019/02/06 08:30:22	54.8
55	2019/02/06 08:30:23	57.3
56	2019/02/06 08:30:24	60.5
57	2019/02/06 08:30:25	63.5
58	2019/02/06 08:30:26	68.7
59	2019/02/06 08:30:27	69.2
60	2019/02/06 08:30:28	66.3
61	2019/02/06 08:30:29	62.9
62	2019/02/06 08:30:30	62.6
63	2019/02/06 08:30:31	64.7
64	2019/02/06 08:30:32	66.9
65	2019/02/06 08:30:33	67.7
66	2019/02/06 08:30:34	70.0
67	2019/02/06 08:30:35	72.1
68	2019/02/06 08:30:36	69.9
69	2019/02/06 08:30:37	72.4
70	2019/02/06 08:30:38	72.5
71	2019/02/06 08:30:39	72.6
72	2019/02/06 08:30:40	70.5
73	2019/02/06 08:30:41	71.1
74	2019/02/06 08:30:42	71.3
75	2019/02/06 08:30:43	72.7
76	2019/02/06 08:30:44	73.3
77	2019/02/06 08:30:45	72.9
78	2019/02/06 08:30:46	70.7
79	2019/02/06 08:30:47	70.2
80	2019/02/06 08:30:48	71.7
81	2019/02/06 08:30:49	71.2
82	2019/02/06 08:30:50	67.9
83	2019/02/06 08:30:51	67.7
84	2019/02/06 08:30:52	70.2
85	2019/02/06 08:30:53	72.9

86	2019/02/06	08:30:54	73.5
87	2019/02/06	08:30:55	71.1
88	2019/02/06	08:30:56	66.8
89	2019/02/06	08:30:57	63.9
90	2019/02/06	08:30:58	61.6
91	2019/02/06	08:30:59	60.8
92	2019/02/06	08:31:00	59.5
93	2019/02/06	08:31:01	57.6
94	2019/02/06	08:31:02	58.6
95	2019/02/06	08:31:03	61.1
96	2019/02/06	08:31:04	63.0
97	2019/02/06	08:31:05	66.6
98	2019/02/06	08:31:06	72.4
99	2019/02/06	08:31:07	74.9
100	2019/02/06	08:31:08	71.3
101	2019/02/06	08:31:09	66.9
102	2019/02/06	08:31:10	63.4
103	2019/02/06	08:31:11	60.7
104	2019/02/06	08:31:12	59.7
105	2019/02/06	08:31:13	59.4
106	2019/02/06	08:31:14	61.3
107	2019/02/06	08:31:15	63.5
108	2019/02/06	08:31:16	68.1
109	2019/02/06	08:31:17	66.3
110	2019/02/06	08:31:18	63.0
111	2019/02/06	08:31:19	59.2
112	2019/02/06	08:31:20	60.8
113	2019/02/06	08:31:21	64.1
114	2019/02/06	08:31:22	67.5
115	2019/02/06	08:31:23	66.2
116	2019/02/06	08:31:24	65.0
117	2019/02/06	08:31:25	62.0
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120	2019/02/06	08:31:28	64.4
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132	2019/02/06	08:31:40	59.9
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134	2019/02/06	08:31:42	58.1
135	2019/02/06	08:31:43	57.3
136	2019/02/06	08:31:44	56.6
137	2019/02/06	08:31:45	54.8
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278	2019/02/06	08:34:06	53.7
279	2019/02/06	08:34:07	54.9
280	2019/02/06	08:34:08	59.3
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296	2019/02/06	08:34:24	68.0
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299	2019/02/06	08:34:27	62.3
300	2019/02/06	08:34:28	59.1
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302	2019/02/06	08:34:30	58.2
303	2019/02/06	08:34:31	58.8
304	2019/02/06	08:34:32	59.2
305	2019/02/06	08:34:33	62.8
306	2019/02/06	08:34:34	65.1
307	2019/02/06	08:34:35	69.0
308	2019/02/06	08:34:36	68.3
309	2019/02/06	08:34:37	63.2
310	2019/02/06	08:34:38	60.5
311	2019/02/06	08:34:39	59.5
312	2019/02/06	08:34:40	60.5
313	2019/02/06	08:34:41	59.8
314	2019/02/06	08:34:42	61.5
315	2019/02/06	08:34:43	62.8
316	2019/02/06	08:34:44	63.8
317	2019/02/06	08:34:45	67.7
318	2019/02/06	08:34:46	65.8
319	2019/02/06	08:34:47	63.2
320	2019/02/06	08:34:48	59.5
321	2019/02/06	08:34:49	58.0
322	2019/02/06	08:34:50	58.2
323	2019/02/06	08:34:51	58.4
324	2019/02/06	08:34:52	57.2
325	2019/02/06	08:34:53	54.7
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334	2019/02/06	08:35:02	53.8
335	2019/02/06	08:35:03	63.6
336	2019/02/06	08:35:04	51.7
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339	2019/02/06	08:35:07	52.5
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366	2019/02/06	08:35:34	70.8
367	2019/02/06	08:35:35	69.9
368	2019/02/06	08:35:36	70.4
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395	2019/02/06	08:36:03	59.3
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791	2019/02/06	08:42:39	60.9
792	2019/02/06	08:42:40	59.2
793	2019/02/06	08:42:41	59.6
794	2019/02/06	08:42:42	59.0
795	2019/02/06	08:42:43	59.3
796	2019/02/06	08:42:44	61.1
797	2019/02/06	08:42:45	63.7
798	2019/02/06	08:42:46	66.0
799	2019/02/06	08:42:47	64.4
800	2019/02/06	08:42:48	63.6
801	2019/02/06	08:42:49	59.7
802	2019/02/06	08:42:50	59.6
803	2019/02/06	08:42:51	58.0
804	2019/02/06	08:42:52	59.0
805	2019/02/06	08:42:53	58.1
806	2019/02/06	08:42:54	59.3
807	2019/02/06	08:42:55	59.6
808	2019/02/06	08:42:56	62.3
809	2019/02/06	08:42:57	64.8
810	2019/02/06	08:42:58	70.0
811	2019/02/06	08:42:59	71.6
812	2019/02/06	08:43:00	71.9
813	2019/02/06	08:43:01	68.9
814	2019/02/06	08:43:02	69.6
815	2019/02/06	08:43:03	70.5
816	2019/02/06	08:43:04	71.5
817	2019/02/06	08:43:05	69.8
818	2019/02/06	08:43:06	67.3
819	2019/02/06	08:43:07	69.0
820	2019/02/06	08:43:08	70.5
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822	2019/02/06	08:43:10	69.9
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824	2019/02/06	08:43:12	64.6
825	2019/02/06	08:43:13	61.0
826	2019/02/06	08:43:14	60.0
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828	2019/02/06	08:43:16	65.2
829	2019/02/06	08:43:17	66.8
830	2019/02/06	08:43:18	63.7
831	2019/02/06	08:43:19	62.7
832	2019/02/06	08:43:20	66.7
833	2019/02/06	08:43:21	68.3
834	2019/02/06	08:43:22	68.4
835	2019/02/06	08:43:23	72.3
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837	2019/02/06	08:43:25	62.9
838	2019/02/06	08:43:26	60.8
839	2019/02/06	08:43:27	59.0
840	2019/02/06	08:43:28	59.1
841	2019/02/06	08:43:29	58.5
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843	2019/02/06	08:43:31	57.5
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845	2019/02/06	08:43:33	60.9
846	2019/02/06	08:43:34	66.5
847	2019/02/06	08:43:35	69.9
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849	2019/02/06	08:43:37	69.6
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854	2019/02/06	08:43:42	63.5
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856	2019/02/06	08:43:44	60.8
857	2019/02/06	08:43:45	63.5
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874	2019/02/06	08:44:02	64.5
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876	2019/02/06	08:44:04	64.1
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886	2019/02/06	08:44:14	67.2
887	2019/02/06	08:44:15	70.6
888	2019/02/06	08:44:16	70.3
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895	2019/02/06	08:44:23	66.6
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Noise Measurement 2

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 53.4 - 2019/02/06 08:07:08
- Level Range : 40-100
- SEL : 73.1
- Leq : 43.6
-

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2	2019/02/06 08:00:53	44.9
3	2019/02/06 08:00:54	43.1
4	2019/02/06 08:00:55	43.6
5	2019/02/06 08:00:56	44.0
6	2019/02/06 08:00:57	45.3
7	2019/02/06 08:00:58	44.4
8	2019/02/06 08:00:59	43.7
9	2019/02/06 08:01:00	44.6
10	2019/02/06 08:01:01	44.0
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12	2019/02/06 08:01:03	43.9
13	2019/02/06 08:01:04	44.4
14	2019/02/06 08:01:05	45.2
15	2019/02/06 08:01:06	44.3
16	2019/02/06 08:01:07	44.2
17	2019/02/06 08:01:08	44.2
18	2019/02/06 08:01:09	43.7
19	2019/02/06 08:01:10	44.1
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21	2019/02/06 08:01:12	44.1
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32	2019/02/06 08:01:23	44.2
33	2019/02/06 08:01:24	43.4
34	2019/02/06 08:01:25	44.5
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41	2019/02/06 08:01:32	44.6
42	2019/02/06 08:01:33	43.9
43	2019/02/06 08:01:34	43.6
44	2019/02/06 08:01:35	44.2
45	2019/02/06 08:01:36	43.8
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73	2019/02/06 08:02:04	42.4
74	2019/02/06 08:02:05	42.9
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745	2019/02/06	08:13:16	41.4
746	2019/02/06	08:13:17	41.0
747	2019/02/06	08:13:18	40.9
748	2019/02/06	08:13:19	40.2
749	2019/02/06	08:13:20	42.1
750	2019/02/06	08:13:21	43.4
751	2019/02/06	08:13:22	40.5
752	2019/02/06	08:13:23	40.6
753	2019/02/06	08:13:24	40.6
754	2019/02/06	08:13:25	41.4
755	2019/02/06	08:13:26	43.7
756	2019/02/06	08:13:27	41.6
757	2019/02/06	08:13:28	41.3
758	2019/02/06	08:13:29	41.7
759	2019/02/06	08:13:30	41.1
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761	2019/02/06	08:13:32	42.2
762	2019/02/06	08:13:33	41.8
763	2019/02/06	08:13:34	41.7
764	2019/02/06	08:13:35	42.9
765	2019/02/06	08:13:36	42.4
766	2019/02/06	08:13:37	42.6
767	2019/02/06	08:13:38	43.5
768	2019/02/06	08:13:39	43.0
769	2019/02/06	08:13:40	43.0
770	2019/02/06	08:13:41	43.3
771	2019/02/06	08:13:42	42.8
772	2019/02/06	08:13:43	43.7
773	2019/02/06	08:13:44	43.6
774	2019/02/06	08:13:45	43.2
775	2019/02/06	08:13:46	42.9
776	2019/02/06	08:13:47	43.7
777	2019/02/06	08:13:48	44.1
778	2019/02/06	08:13:49	41.9

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781	2019/02/06	08:13:52	43.4
782	2019/02/06	08:13:53	45.1
783	2019/02/06	08:13:54	45.5
784	2019/02/06	08:13:55	44.7
785	2019/02/06	08:13:56	42.3
786	2019/02/06	08:13:57	45.3
787	2019/02/06	08:13:58	46.9
788	2019/02/06	08:13:59	42.9
789	2019/02/06	08:14:00	44.8
790	2019/02/06	08:14:01	47.2
791	2019/02/06	08:14:02	43.8
792	2019/02/06	08:14:03	45.2
793	2019/02/06	08:14:04	44.1
794	2019/02/06	08:14:05	43.0
795	2019/02/06	08:14:06	44.1
796	2019/02/06	08:14:07	45.2
797	2019/02/06	08:14:08	47.2
798	2019/02/06	08:14:09	43.9
799	2019/02/06	08:14:10	43.9
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803	2019/02/06	08:14:14	44.5
804	2019/02/06	08:14:15	43.3
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807	2019/02/06	08:14:18	44.4
808	2019/02/06	08:14:19	43.3
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811	2019/02/06	08:14:22	46.0
812	2019/02/06	08:14:23	45.0
813	2019/02/06	08:14:24	42.8
814	2019/02/06	08:14:25	43.7
815	2019/02/06	08:14:26	44.4
816	2019/02/06	08:14:27	44.3
817	2019/02/06	08:14:28	43.7
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822	2019/02/06	08:14:33	43.7
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825	2019/02/06	08:14:36	44.3
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827	2019/02/06	08:14:38	43.9
828	2019/02/06	08:14:39	43.6
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832	2019/02/06	08:14:43	43.1
833	2019/02/06	08:14:44	43.0
834	2019/02/06	08:14:45	43.3
835	2019/02/06	08:14:46	43.5
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837	2019/02/06	08:14:48	43.7
838	2019/02/06	08:14:49	43.9
839	2019/02/06	08:14:50	43.2
840	2019/02/06	08:14:51	43.6
841	2019/02/06	08:14:52	43.7
842	2019/02/06	08:14:53	43.3
843	2019/02/06	08:14:54	43.3
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845	2019/02/06	08:14:56	44.4
846	2019/02/06	08:14:57	44.7
847	2019/02/06	08:14:58	43.7
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849	2019/02/06	08:15:00	43.2
850	2019/02/06	08:15:01	43.5
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853	2019/02/06	08:15:04	42.9
854	2019/02/06	08:15:05	43.9
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856	2019/02/06	08:15:07	43.1
857	2019/02/06	08:15:08	42.4
858	2019/02/06	08:15:09	42.0
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860	2019/02/06	08:15:11	43.2
861	2019/02/06	08:15:12	43.8
862	2019/02/06	08:15:13	43.0
863	2019/02/06	08:15:14	46.1
864	2019/02/06	08:15:15	43.1
865	2019/02/06	08:15:16	42.5
866	2019/02/06	08:15:17	42.9
867	2019/02/06	08:15:18	43.1
868	2019/02/06	08:15:19	42.9
869	2019/02/06	08:15:20	42.6
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871	2019/02/06	08:15:22	42.4
872	2019/02/06	08:15:23	43.2
873	2019/02/06	08:15:24	43.0
874	2019/02/06	08:15:25	43.1
875	2019/02/06	08:15:26	42.8
876	2019/02/06	08:15:27	42.1
877	2019/02/06	08:15:28	43.5

878	2019/02/06	08:15:29	42.2
879	2019/02/06	08:15:30	43.5
880	2019/02/06	08:15:31	42.5
881	2019/02/06	08:15:32	42.3
882	2019/02/06	08:15:33	42.6
883	2019/02/06	08:15:34	42.6
884	2019/02/06	08:15:35	43.6
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886	2019/02/06	08:15:37	43.3
887	2019/02/06	08:15:38	43.6
888	2019/02/06	08:15:39	43.2
889	2019/02/06	08:15:40	44.1
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891	2019/02/06	08:15:42	43.5
892	2019/02/06	08:15:43	43.1
893	2019/02/06	08:15:44	43.8
894	2019/02/06	08:15:45	43.7
895	2019/02/06	08:15:46	43.3
896	2019/02/06	08:15:47	43.4
897	2019/02/06	08:15:48	43.1
898	2019/02/06	08:15:49	43.2
899	2019/02/06	08:15:50	43.6
900	2019/02/06	08:15:51	44.3

Noise Measurement 3

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 78.2 - 2019/02/06 17:06:49
- Level Range : 40-100
- SEL : 99.5
- Leq : 70.0
-

No.s	Date Time	(dB)
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2	2019/02/06 16:52:09	66.1
3	2019/02/06 16:52:10	66.5
4	2019/02/06 16:52:11	68.3
5	2019/02/06 16:52:12	70.7
6	2019/02/06 16:52:13	68.9
7	2019/02/06 16:52:14	68.8
8	2019/02/06 16:52:15	70.0
9	2019/02/06 16:52:16	69.3
10	2019/02/06 16:52:17	69.5
11	2019/02/06 16:52:18	69.8
12	2019/02/06 16:52:19	69.5
13	2019/02/06 16:52:20	72.4
14	2019/02/06 16:52:21	72.7
15	2019/02/06 16:52:22	70.6
16	2019/02/06 16:52:23	70.6
17	2019/02/06 16:52:24	69.0
18	2019/02/06 16:52:25	67.8
19	2019/02/06 16:52:26	68.5
20	2019/02/06 16:52:27	69.3
21	2019/02/06 16:52:28	69.1
22	2019/02/06 16:52:29	69.5
23	2019/02/06 16:52:30	69.7
24	2019/02/06 16:52:31	69.9
25	2019/02/06 16:52:32	68.9
26	2019/02/06 16:52:33	69.5
27	2019/02/06 16:52:34	68.8
28	2019/02/06 16:52:35	69.7
29	2019/02/06 16:52:36	71.0
30	2019/02/06 16:52:37	71.2
31	2019/02/06 16:52:38	71.5
32	2019/02/06 16:52:39	71.5
33	2019/02/06 16:52:40	70.7
34	2019/02/06 16:52:41	69.4
35	2019/02/06 16:52:42	68.4
36	2019/02/06 16:52:43	68.2
37	2019/02/06 16:52:44	66.6
38	2019/02/06 16:52:45	66.4
39	2019/02/06 16:52:46	67.4
40	2019/02/06 16:52:47	67.0
41	2019/02/06 16:52:48	67.5
42	2019/02/06 16:52:49	68.1
43	2019/02/06 16:52:50	68.2
44	2019/02/06 16:52:51	69.2
45	2019/02/06 16:52:52	71.2
46	2019/02/06 16:52:53	71.3
47	2019/02/06 16:52:54	69.9
48	2019/02/06 16:52:55	68.1
49	2019/02/06 16:52:56	68.2
50	2019/02/06 16:52:57	69.5
51	2019/02/06 16:52:58	71.0
52	2019/02/06 16:52:59	70.7
53	2019/02/06 16:53:00	71.3
54	2019/02/06 16:53:01	69.8
55	2019/02/06 16:53:02	68.3
56	2019/02/06 16:53:03	67.4
57	2019/02/06 16:53:04	67.7
58	2019/02/06 16:53:05	69.6
59	2019/02/06 16:53:06	68.7
60	2019/02/06 16:53:07	69.0
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65	2019/02/06 16:53:12	70.6
66	2019/02/06 16:53:13	73.0
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69	2019/02/06 16:53:16	66.7
70	2019/02/06 16:53:17	66.9
71	2019/02/06 16:53:18	66.2
72	2019/02/06 16:53:19	66.8
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76	2019/02/06 16:53:23	67.6
77	2019/02/06 16:53:24	70.2
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80	2019/02/06 16:53:27	67.4
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82	2019/02/06 16:53:29	67.6
83	2019/02/06 16:53:30	67.7
84	2019/02/06 16:53:31	67.5
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92	2019/02/06	16:53:39	68.0
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115	2019/02/06	16:54:02	69.2
116	2019/02/06	16:54:03	69.1
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697	2019/02/06	17:03:44	66.2
698	2019/02/06	17:03:45	66.6
699	2019/02/06	17:03:46	66.5
700	2019/02/06	17:03:47	65.2
701	2019/02/06	17:03:48	65.0
702	2019/02/06	17:03:49	65.9
703	2019/02/06	17:03:50	67.9
704	2019/02/06	17:03:51	69.1
705	2019/02/06	17:03:52	68.3
706	2019/02/06	17:03:53	66.3
707	2019/02/06	17:03:54	66.0
708	2019/02/06	17:03:55	66.4
709	2019/02/06	17:03:56	66.7
710	2019/02/06	17:03:57	68.4
711	2019/02/06	17:03:58	69.9
712	2019/02/06	17:03:59	69.4
713	2019/02/06	17:04:00	71.0
714	2019/02/06	17:04:01	72.3
715	2019/02/06	17:04:02	72.1
716	2019/02/06	17:04:03	69.8
717	2019/02/06	17:04:04	69.0
718	2019/02/06	17:04:05	70.6
719	2019/02/06	17:04:06	70.0
720	2019/02/06	17:04:07	68.9
721	2019/02/06	17:04:08	67.6
722	2019/02/06	17:04:09	66.9
723	2019/02/06	17:04:10	66.7
724	2019/02/06	17:04:11	65.7
725	2019/02/06	17:04:12	66.3
726	2019/02/06	17:04:13	65.0
727	2019/02/06	17:04:14	64.1
728	2019/02/06	17:04:15	66.3
729	2019/02/06	17:04:16	68.4
730	2019/02/06	17:04:17	70.1
731	2019/02/06	17:04:18	70.0
732	2019/02/06	17:04:19	70.7
733	2019/02/06	17:04:20	72.4
734	2019/02/06	17:04:21	71.5
735	2019/02/06	17:04:22	70.7
736	2019/02/06	17:04:23	70.8
737	2019/02/06	17:04:24	68.2
738	2019/02/06	17:04:25	69.1
739	2019/02/06	17:04:26	70.3
740	2019/02/06	17:04:27	68.9
741	2019/02/06	17:04:28	70.2
742	2019/02/06	17:04:29	69.7
743	2019/02/06	17:04:30	70.1
744	2019/02/06	17:04:31	70.2
745	2019/02/06	17:04:32	69.1
746	2019/02/06	17:04:33	70.3
747	2019/02/06	17:04:34	70.1
748	2019/02/06	17:04:35	71.7
749	2019/02/06	17:04:36	69.7
750	2019/02/06	17:04:37	69.1
751	2019/02/06	17:04:38	71.3
752	2019/02/06	17:04:39	73.6
753	2019/02/06	17:04:40	73.6
754	2019/02/06	17:04:41	76.1
755	2019/02/06	17:04:42	74.2
756	2019/02/06	17:04:43	73.0
757	2019/02/06	17:04:44	72.1
758	2019/02/06	17:04:45	72.0
759	2019/02/06	17:04:46	71.2
760	2019/02/06	17:04:47	69.0
761	2019/02/06	17:04:48	69.4
762	2019/02/06	17:04:49	71.6
763	2019/02/06	17:04:50	71.6
764	2019/02/06	17:04:51	70.7
765	2019/02/06	17:04:52	70.9
766	2019/02/06	17:04:53	72.2
767	2019/02/06	17:04:54	72.1
768	2019/02/06	17:04:55	72.3
769	2019/02/06	17:04:56	73.4
770	2019/02/06	17:04:57	74.8
771	2019/02/06	17:04:58	74.1
772	2019/02/06	17:04:59	73.7
773	2019/02/06	17:05:00	73.8
774	2019/02/06	17:05:01	72.2
775	2019/02/06	17:05:02	72.2
776	2019/02/06	17:05:03	72.2
777	2019/02/06	17:05:04	72.8
778	2019/02/06	17:05:05	72.1

779	2019/02/06	17:05:06	70.4
780	2019/02/06	17:05:07	69.8
781	2019/02/06	17:05:08	71.9
782	2019/02/06	17:05:09	70.1
783	2019/02/06	17:05:10	68.7
784	2019/02/06	17:05:11	70.2
785	2019/02/06	17:05:12	72.2
786	2019/02/06	17:05:13	72.3
787	2019/02/06	17:05:14	71.2
788	2019/02/06	17:05:15	71.2
789	2019/02/06	17:05:16	73.4
790	2019/02/06	17:05:17	73.1
791	2019/02/06	17:05:18	71.1
792	2019/02/06	17:05:19	70.9
793	2019/02/06	17:05:20	72.2
794	2019/02/06	17:05:21	71.9
795	2019/02/06	17:05:22	71.4
796	2019/02/06	17:05:23	74.5
797	2019/02/06	17:05:24	74.3
798	2019/02/06	17:05:25	70.5
799	2019/02/06	17:05:26	70.3
800	2019/02/06	17:05:27	71.6
801	2019/02/06	17:05:28	70.6
802	2019/02/06	17:05:29	68.4
803	2019/02/06	17:05:30	66.9
804	2019/02/06	17:05:31	65.5
805	2019/02/06	17:05:32	64.5
806	2019/02/06	17:05:33	66.4
807	2019/02/06	17:05:34	66.8
808	2019/02/06	17:05:35	66.1
809	2019/02/06	17:05:36	66.3
810	2019/02/06	17:05:37	67.2
811	2019/02/06	17:05:38	69.9
812	2019/02/06	17:05:39	71.0
813	2019/02/06	17:05:40	69.7
814	2019/02/06	17:05:41	69.1
815	2019/02/06	17:05:42	68.7
816	2019/02/06	17:05:43	66.8
817	2019/02/06	17:05:44	65.2
818	2019/02/06	17:05:45	65.3
819	2019/02/06	17:05:46	67.2
820	2019/02/06	17:05:47	69.8
821	2019/02/06	17:05:48	70.1
822	2019/02/06	17:05:49	68.4
823	2019/02/06	17:05:50	68.2
824	2019/02/06	17:05:51	69.0
825	2019/02/06	17:05:52	70.0
826	2019/02/06	17:05:53	68.9
827	2019/02/06	17:05:54	68.9
828	2019/02/06	17:05:55	68.8
829	2019/02/06	17:05:56	69.3
830	2019/02/06	17:05:57	68.0
831	2019/02/06	17:05:58	67.9
832	2019/02/06	17:05:59	65.1
833	2019/02/06	17:06:00	64.6
834	2019/02/06	17:06:01	66.2
835	2019/02/06	17:06:02	67.0
836	2019/02/06	17:06:03	67.5
837	2019/02/06	17:06:04	66.8
838	2019/02/06	17:06:05	66.1
839	2019/02/06	17:06:06	67.1
840	2019/02/06	17:06:07	68.7
841	2019/02/06	17:06:08	67.0
842	2019/02/06	17:06:09	68.6
843	2019/02/06	17:06:10	69.3
844	2019/02/06	17:06:11	67.5
845	2019/02/06	17:06:12	66.3
846	2019/02/06	17:06:13	66.5
847	2019/02/06	17:06:14	66.4
848	2019/02/06	17:06:15	66.9
849	2019/02/06	17:06:16	65.5
850	2019/02/06	17:06:17	64.5
851	2019/02/06	17:06:18	63.7
852	2019/02/06	17:06:19	63.9
853	2019/02/06	17:06:20	67.3
854	2019/02/06	17:06:21	69.3
855	2019/02/06	17:06:22	69.2
856	2019/02/06	17:06:23	70.3
857	2019/02/06	17:06:24	70.6
858	2019/02/06	17:06:25	71.7
859	2019/02/06	17:06:26	71.2
860	2019/02/06	17:06:27	71.1
861	2019/02/06	17:06:28	70.6
862	2019/02/06	17:06:29	71.3
863	2019/02/06	17:06:30	71.6
864	2019/02/06	17:06:31	70.3
865	2019/02/06	17:06:32	70.3
866	2019/02/06	17:06:33	70.1
867	2019/02/06	17:06:34	68.6
868	2019/02/06	17:06:35	69.6
869	2019/02/06	17:06:36	68.3
870	2019/02/06	17:06:37	67.9
871	2019/02/06	17:06:38	67.6
872	2019/02/06	17:06:39	68.4
873	2019/02/06	17:06:40	68.2
874	2019/02/06	17:06:41	68.2
875	2019/02/06	17:06:42	69.4
876	2019/02/06	17:06:43	69.6
877	2019/02/06	17:06:44	70.6

878	2019/02/06	17:06:45	69.8
879	2019/02/06	17:06:46	70.1
880	2019/02/06	17:06:47	71.8
881	2019/02/06	17:06:48	75.8
882	2019/02/06	17:06:49	75.9
883	2019/02/06	17:06:50	74.3
884	2019/02/06	17:06:51	76.3
885	2019/02/06	17:06:52	74.7
886	2019/02/06	17:06:53	73.0
887	2019/02/06	17:06:54	70.4
888	2019/02/06	17:06:55	70.3
889	2019/02/06	17:06:56	68.7
890	2019/02/06	17:06:57	67.4
891	2019/02/06	17:06:58	68.8
892	2019/02/06	17:06:59	69.3
893	2019/02/06	17:07:00	68.5
894	2019/02/06	17:07:01	67.8
895	2019/02/06	17:07:02	68.5
896	2019/02/06	17:07:03	72.2
897	2019/02/06	17:07:04	71.4
898	2019/02/06	17:07:05	72.4
899	2019/02/06	17:07:06	72.6
900	2019/02/06	17:07:07	73.6

Appendix B

Roadway Construction Noise Model Results

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/8/2019
Case Descr Yucaipa Point Project Reference Noise Level

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65	55	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Excavator	No	40		80.7	50	0
Front End Loader	No	40		79.1	50	0
Generator	No	50		80.6	50	0
Backhoe	No	40		77.6	50	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A
Total	81.7	83.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65	55	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Excavator	No	40		80.7	50	0
Front End Loader	No	40		79.1	50	0
Generator	No	50		80.6	50	0
Backhoe	No	40		77.6	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A
Total	81.7	83.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Church sou	Residential	65	55	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Excavator	No	40		80.7	50	0
Front End Loader	No	40		79.1	50	0
Generator	No	50		80.6	50	0
Backhoe	No	40		77.6	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A
Total	81.7	83.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/8/2019
Case Descr Yucaipa Point Project

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65	55	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	100	0
Excavator	No	40		80.7	100	0
Front End Loader	No	40		79.1	100	0
Generator	No	50		80.6	100	0
Backhoe	No	40		77.6	100	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dozer	75.6	71.7	N/A	N/A	N/A	N/A	N/A
Excavator	74.7	70.7	N/A	N/A	N/A	N/A	N/A
Front End Loader	73.1	69.1	N/A	N/A	N/A	N/A	N/A
Generator	74.6	71.6	N/A	N/A	N/A	N/A	N/A
Backhoe	71.5	67.6	N/A	N/A	N/A	N/A	N/A
Total	75.6	77.4	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65	55	45

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	800	0
Excavator	No	40		80.7	800	0
Front End Loader	No	40		79.1	800	0
Generator	No	50		80.6	800	0
Backhoe	No	40		77.6	800	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dozer	57.6	53.6	N/A	N/A	N/A	N/A	N/A
Excavator	56.6	52.6	N/A	N/A	N/A	N/A	N/A
Front End Loader	55	51	N/A	N/A	N/A	N/A	N/A
Generator	56.5	53.5	N/A	N/A	N/A	N/A	N/A
Backhoe	53.5	49.5	N/A	N/A	N/A	N/A	N/A
Total	57.6	59.3	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Church sou	Residential	65	55	45

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	700	0
Excavator	No	40		80.7	700	0
Front End Loader	No	40		79.1	700	0
Generator	No	50		80.6	700	0
Backhoe	No	40		77.6	700	0

Results

	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dozer	58.7	54.8	N/A	N/A	N/A	N/A	N/A
Excavator	57.8	53.8	N/A	N/A	N/A	N/A	N/A
Front End Loader	56.2	52.2	N/A	N/A	N/A	N/A	N/A
Generator	57.7	54.7	N/A	N/A	N/A	N/A	N/A
Backhoe	54.6	50.7	N/A	N/A	N/A	N/A	N/A
Total	58.7	60.5	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Appendix C

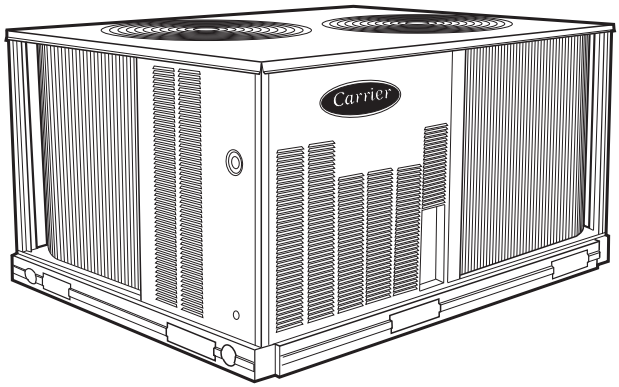
Car Wash and HVAC Noise Specifications

38AUZ/D 50 Hz
Commercial Split Systems
Air Conditioning Condensing Units
18.3 kW to 59.2 kW

Carrier
turn to the experts

Product Data

Gemini



C09227

38AUZ07-08 shown

Certified to ISO 9001

Carrier's air-cooled air conditioning split systems:

- provide a logical solution for commercial needs
- have a rugged, dependable construction
- are available in single and circuit scroll compressor capacity control
- have cooling capability up to 52°C (125°F) ambient and down to 2°C (35°F) ambient standard

FEATURES/BENEFITS

These dependable outdoor air cooled condensing units match Carrier's indoor-air handlers to meet a wide selection of cooling solutions.

Constructed for long life

The 38AUZ single circuit and 38AUD dual circuit, scroll compressor models are designed and built to last. The high efficient designed outdoor coil construction allows for a more efficient design in a smaller cabinet size that utilizes an overall reduction in refrigerant charge. Where conditions require, special coil coating coil protection option is available. Cabinets are constructed of prepainted galvanized steel, delivering unparalleled protection from the environment. Inside and outside surfaces are protected to ensure long life, good looks, and reliable operation. Safety controls are used for enhanced system protection and reliability.

Each unit utilizes the Comfort Alert diagnostic and troubleshoot control system. This protects the units operation and provides valuable diagnostic information when required.

Factory-installed options (FIOPs)

Certified and pre-engineered factory-installed options (FIOPs) allow units to be installed in less time, thereby reducing installed cost. FIOPs include:

- low ambient controls which provide cooling operation down to -29°C (-20°F) ambient temperatures
- non-fused disconnect
- special coil coating coil protection
- louvered hail guard

FEATURES AND BENEFITS (cont.)

Efficient operation

These air cooled condensing units will provide EER's up to 12.6 (tested in accordance with ASHRAE 90.1 standards).

This high efficiency will help reduce overall operating cost and energy consumption.

Controls for performance dependability

The 38AU condensing units offer operating controls and components designed for performance dependability. The high efficiency hermetic scroll compressor is engineered for long life and durability. The compressors include vibration isolation for quiet operation. The high-pressure switch protects the entire refrigeration system from abnormally high operating pressures. A low-pressure switch protects the system from loss of charge. These units also include anti-short-cycling protection, which helps to protect the units against compressor failure.

All units include a crankcase heater to eliminate liquid slugging at start-up. Each unit comes standard with the Comfort Alert™ control system. This provides:

- System Go LED indicator
- Fault LED indicator
- Compressor fault LED indicator
- Phase loss protection
- Phase reversal protection
- Safety pressure indicator
- Anti-short cycle protection

Innovative Carrier 40RU packaged air handlers are custom matched to 38AUZ/D condensing units

Information on matching 40RU DX packaged air handler follows for convenience. See separate product data for more details. The 40RU Series has excellent fan performance, efficient direct-expansion (DX) coils, a unique combination of indoor-air quality features, and is easy to install. Its versatility and state-of-the-art features help to ensure economical performance of the split system both now and in the future.

Indoor-air quality (IAQ) features

The unique combination of IAQ features in the 40RU Series air handlers help to ensure that only clean, fresh, conditioned air is delivered to the occupied space.

Direct-expansion (DX) 4 row cooling coils prevent the build-up of humidity in the room, even during part-load conditions.

Standard 2-in. (51mm) disposable filters remove dust and airborne particles from the occupied space for cleaner air.

The pitched, non-corroding drain pan can be adjusted for a right-hand or left-hand connection to suit many applications and provide positive drainage and prevent standing condensate.

The accessory economizer can provide ventilation air to improve indoor-air quality by using demand control ventilation. When used in conjunction with Carrier Comfort System and CO_2 sensors, the economizer admits fresh outdoor air to replace stale, recirculated indoor air.

Economy

The 40RU Series packaged air handlers provide reduced installation expense and energy-efficient performance.

Quick installation is ensured by the multipoise design. Units can be installed in either the horizontal or vertical configuration without modifications. Fan motors and contactors are pre-wired and thermostatic expansion valves (TXVs) are factory-installed on all 40RU models.

High efficiency, precision-balanced fans minimize air turbulence, surging, and unbalanced operation, cutting operation expenses.

The economizer accessory precisely controls the blend of outdoor air and room air to achieve comfort levels. When the outside air enthalpy is suitable, outside air dampers can fully open to provide "free" cooling without energizing mechanical cooling.

Rugged dependability

The 40RU series units are made to last. The die-formed galvanized steel panels ensure structural integrity under all operating conditions. Galvanized steel fan housings are securely mounted to a die-formed galvanized steel fan deck.

Rugged pillow-block bearings (40RU14) are securely fastened to the solid steel fan shaft with split collets and clamp locking devices. Smaller unit sizes have spider-type bearings.

Coil flexibility

Model 40RU direct- expansion coils have galvanized steel casings; inlet and outlet connections are on the same end. The coils are designed for use with Puron (R-410A) refrigerant and have $^3/_8$-in. diameter copper tubes mechanically bonded to aluminum sine-wave fins. The coils include matched, factory-installed thermostatic expansion valves (TXVs) with matching distributor nozzles and offers a removable power element and extended connections.

Easier installation and service

The multipoise design and component layout ensures quick unit installation and operation. Units can be converted from horizontal to vertical operation by simply repositioning the unit. Drain pan connections are duplicated on both sides of the unit. The filters, motor, drive, TXVs, and coil connections are all easily accessed by removing a single side panel.

MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3	8	A	U	Z	A	0	7	A	0	A	9	–	0	A	0	A	0

Model Type
Commercial Air Cooled Cond. Unit
Puron® R–410A Refrigerant

Type of Coil
D = Dual Circuit
Z = Single Circuit

Refrigerant Options
A = Standard
B = Low Ambient Controls

Nominal Tonnage
07 = 18.3 kW (5.2 Tons)
08 = 23.2 kW (6.6 Tons)
12 = 29.1 kW (8.3 Tons)
14 = 35.2 kW (10.0 Tons)
16 = 45.8 kW (13.0 Tons)
25 = 59.2 kW (16.8 Tons)

Factory Assigned
A = Default

Factory Assigned
0 = Default

Coil Options (Condenser)
With Round Tube/Plate Fin Design
All models except 14 size (12.5 Ton)
A = Al/Cu Standard
B = Pre Coat Al/Cu
C = E–Coat Al/Cu
E = Cu/Cu
M = Al/Cu Standard with louvered hail guard
N = Pre Coat Al/Cu with louvered hail guard
P = E–Coat Al/Cu with louvered hail guard
R = Cu/Cu – Louvered hail guard
Coil Options (Condenser)
With All Aluminum – NOVATION Design (07–16 sizes)
G = Al/Al Standard
K = E–Coat Al/Al
T = Al/Al with louvered hail guard
W = E–Coat Al/Al with louvered hail guard

Voltage
9 = 400–3–50

Design Rev
– = Factory Assigned

Base Unit Controls
0 = Standard Electro–Mechanical Controls

Factory Assigned
A = Default

Service Options
0 = None

Electrical Options
A = None
C = Non–Fused Disconnect

Brand / Packaging
0 = Standard
1 = LTL

AHRI CAPACITY RATINGS

UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER
38AUZ07/40RU07	1	5	62.7	5.1	12.2
38AUZ08/40RU08	1	6.3	79.3	6.9	11.5
38AUD12/40RU12	2	8.3	103.0	8.2	12.6
38AUD14/40RU14	2	10.4	125.0	10.9	11.5
38AUD16/40RU16	2	12.5	162.0	13.5	12.0
38AUD25/40RU25	2	16.7	202.2	16.6	12.2

LEGEND

AHRI – Air Conditioning, Heating and Refrigeration Institute
ASHRAE – American Society of Heating, Refrigerating and Air Conditioning, Inc.
EER – Energy Efficiency Ratio
IEER – Integrated Energy Efficiency Ratio

NOTES

1. Rated in accordance with AHRI Standard 340/360, as appropriate.
2. Ratings are based on:
   Cooling Standard: 27°C (80°F) db, 19°C (67°F) wb indoor air temp and 35°C (95°F) db outdoor air temp.
3. All units comply with ASHRAE 90.1 Energy Standard for minimum EER and IEER requirements.

SOUND POWER LEVELS, dB

UNIT	COOLING STAGES	OUTDOOR SOUND (dB)								
		A–WEIGHTED	63	125	250	500	1000	2000	4000	8000
NOVATION – All Aluminum Coil Design										
38AUZ07	1	82	78.7	91.2	84.4	79.7	76.9	73.5	71.9	67.5
38AUZ08	1	81	81.7	89.7	82.6	77.6	74.4	70.3	68.0	64.2
38AUD12	2	78	79.2	81.1	78.4	75.0	72.9	68.2	66.4	68.2
38AUD14	2	79	76.2	78.6	78.1	75.1	75.2	71.4	67.9	65.1
38AUD16	2	80	90.3	81.8	78.0	76.7	75.2	70.5	66.4	61.9
RTPF – Round Tube/Plate Fin Coil Design										
38AUZ07	1	83	81.7	88.2	84.0	79.7	78.1	74.0	71.4	68.0
38AUZ08	1	83	81.7	88.2	84.0	79.7	78.1	74.0	71.4	68.0
38AUD12	2	80	76.0	79.9	79.8	77.4	75.6	69.8	67.8	66.4
38AUD16	2	83	86.7	81.2	78.9	80.4	78.0	74.2	70.2	65.0
38AUD25	2	85	91.0	85.0	80.0	86.0	79.0	73.0	68.0	63.0

NOTE: Outdoor sound data is measure in accordance with AHRI standard 270–2008.
LEGEND:
dB = Decibel

PHYSICAL DATA

SINGLE CIRCUIT MODELS with RTPF – Round Tube/Plate Fin Coil Design		
	38AUZ07	**38AUZ08**
Refrigeration System		
# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / Scroll
R–410a shipping charge A/B (lbs, 50 Hz)	11	13
System charge w/ fan coil* (50 Hz)	14	17
Metering device	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117
Cond. Coil		
Material	Al/Cu	Al/Cu
Coil type	RTPF	RTPF
Rows / FPI	2 / 17	2 / 17
Total face area (ft2)	17.5	17.5
Cond. fan / motor		
Qty / Motor drive type	2 / direct	2 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22
Nominal Airflow (cfm)	6000	6000
Watts (total)	610	610
Piping Connections		
Qty / Suction (in. ODS)	1 / 1 1/8	1 / 1 1/8
Qty / Liquid (in. ODS)	1 / 3/8	1 / 1/2

SINGLE CIRCUIT MODELS with NOVATION – All Aluminum coil Design		
	38AUZ07	**38AUZ08**
Refrigeration System		
# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / Scroll
R–410a shipping charge A/B (lbs)	4.4	4.9
System charge w/ fan coil	8.4	10.2
System charge w/ fan coil (50hz)	9.0	12.3
Metering device	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117
Cond. Coil		
Material	Al	Al
Coil type	microchannel	microchannel
Rows / FPI	1 / 17	1 / 17
total face area (ft2)	17.5	20.5
Cond. fan / motor		
Qty / Motor drive type	2 / direct	2 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22
Nominal Airflow (cfm)	6,000	6,000
Watts (total)	610	610

RTPF – Round tube /plate fin design

* Approximate system charge with about 25 ft piping of sizes indicated with matched 40RU.

PHYSICAL DATA (CONT)

DUAL CIRCUIT MODELS with RTPF – Round Tube/Plate Fin Coil Design			
	38AUD12	**38AUD16**	**38AUD25**
Refrigeration System			
# Circuits / # Comp. / Type	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
R–410a shipping charge A/B (lbs, 50 Hz)	8.0 / 8.0	16.0 / 16.0	14.0 / 14.0
System charge w/ fan coil* (50 Hz)	11.0 / 10.0	22.0 / 22.0	19.0 / 19.0
Metering device	TXV	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117	54 / 117
Compressor			
Model	ZP51 (2)	ZP83 (2)	ZP103 (2)
Oil Charge A/B (oz)	42 / 42	60 / 60	110 / 110
Speed rpm 50 Hz	2900	2900	2900
Cond. Coil			
Material	Al/Cu	Al/Cu	Al/Cu
Coil type	RTPF	RTPF	RTPF
Rows / FPI	2 / 17	2 / 17	2 / 17
Total face area (ft2)	25.1	23.5 x 2	25.0 x 2
Cond. fan / motor			
Qty / Motor drive type	2 / direct	3 / direct	4 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22	22
Nominal Airflow (cfm)	6000	9000	12000
Watts (total)	610	970	1150
Piping Connections			
Qty / Suction (in. ODS)	2 / 1 1/8	2 / 1 3/8	2 / 1 3/8
Qty / Liquid (in. ODS)	2 / 3/8	2 / 1/2	2 / 1/2

DUAL CIRCUIT MODELS with NOVATION – All Aluminum coil Design			
	38AUD12	**38AUD14**	**38AUD16**
Refrigeration System			
# Circuits / # Comp. / Type	2/2/Scroll	2/2/Scroll	2/2/Scroll
R–410a shipping charge A/B (lbs)	3.0 /3.1	3.7/3.9	6.1/6.1
System charge w/ fan coil	7.4 / 7.4	10.8 / 10.8	12.0/12.0
System charge w/ fan coil (50hz)	7.5 / 7.5	11.2 / 11.2	14.0 /14.0
Metering device	TXV	TXV	TXV
High–press. Trip / Reset (psig)	630 / 505	630 / 505	630 / 505
Low–press. Trip / Reset (psig)	54 / 117	54 / 117	54 / 117
Cond. Coil			
Material	Al	Al	Al
Coil type	microchannel	microchannel	microchannel
Rows / FPI	1 / 17	1 / 17	1 / 17
total face area (ft2)	25.0	31.8	25.0 x 2
Cond. fan / motor			
Qty / Motor drive type	2 / direct	2 / direct	3 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22	22
Nominal Airflow (cfm)	6,000	6,000	10,000
Watts (total)	610	610	970

RTPF – Round tube /plate fin design

* Approximate system charge with about 25 ft piping of sizes indicated with matched 40RU.

DIMENSIONS

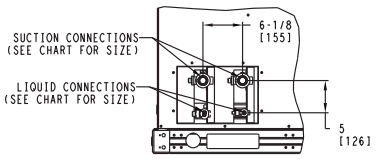
UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUZ-07 (MCHX)	149	328	58	128	31	68	28	62	32	70	21 [533.4]	19 [482.6]	13 [330.2]	42-3/8 [1076.0]
38AUZ-08 (MCHX)	160	353	63	138	33	72	29	65	35	78	19 [482.6]	23 [584.2]	13 [330.2]	42-3/8 [1076.0]
38AUD-12 (MCHX)	226	499	88	193	50	111	38	72	56	123	20 [508.0]	23 [584.2]	15 [381.0]	50-3/8 [1279.2]
38AUD-14 (MCHX)	229	505	86	190	40	88	34	76	68	151	20 [508.0]	24 [609.6]	15 [381.0]	50-3/8 [1279.2]
38AUZ-07 (RTPF)	176	389	64	141	44	96	28	62	41	91	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
38AUZ-08 (RTPF)	177	391	64	142	44	96	28	62	41	91	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
38AUD-12 (RTPF)	234	516	84	185	53	117	38	83	59	131	19 [482.6]	23 [584.2]	24 [609.6]	50-3/8 [1279.2]

CG CENTER OF GRAVITY

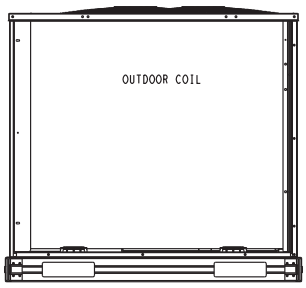
DIRECTION OF AIR FLOW

DIMENSIONS IN [ ] ARE IN MM

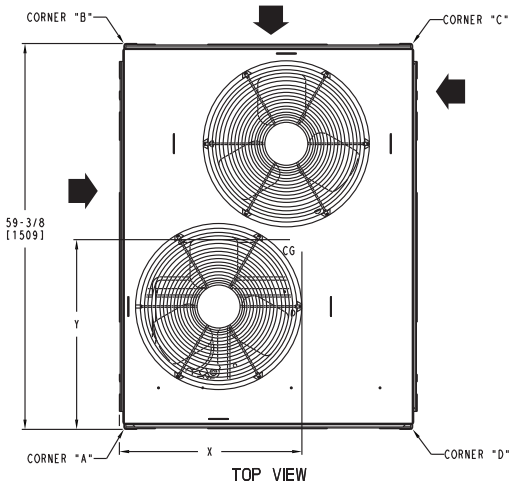
SERVICE VALVE CONNECTIONS		
UNIT	SUCTION	LIQUID
38AUZ07	1-1/8 [28.6]	3/8 [9.5]
38AUZ08	1-1/8 [28.6]	1/2 [12.7]
38AUD12	1-1/8 [28.6]	3/8 [9.5]
38AUD14	1-3/8 [34.9]	1/2 [12.7]



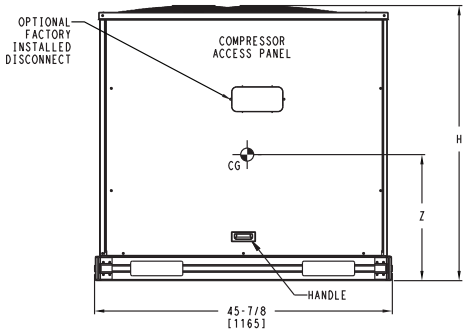
RIGHT SIDE VIEW
(FOR 38AUD SYSTEMS)



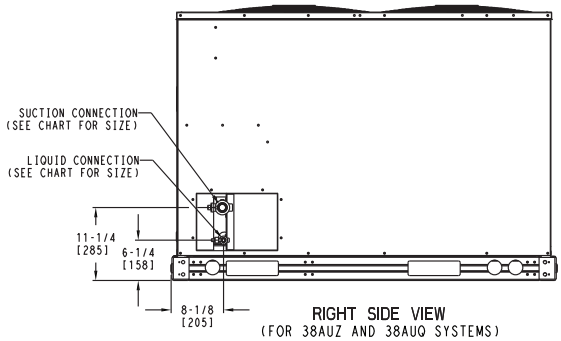
PLAN VIEW



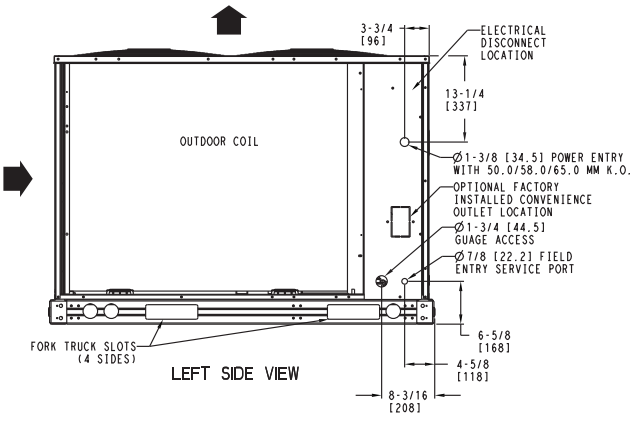
TOP VIEW



FRONT VIEW



RIGHT SIDE VIEW
(FOR 38AUZ AND 38AUQ SYSTEMS)



LEFT SIDE VIEW

NOTES:

1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

C10590

DIMENSIONS (cont.)

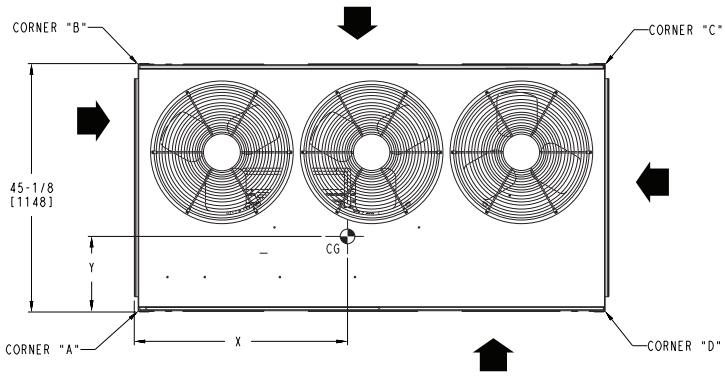
UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUD16 (MCHX)	288	633	100	220	61	134	61.5	135	65.5	144	38 [965.2]	19 [482.6]	15 [381]	50-3/8 [1279.2]
38AUD16 (RTPF)	332	731	107	237	78	172	61	135	84	186	38 [965.2]	19 [482.6]	17 [431.8]	50-3/8 [1279.2]

CG CENTER OF GRAVITY

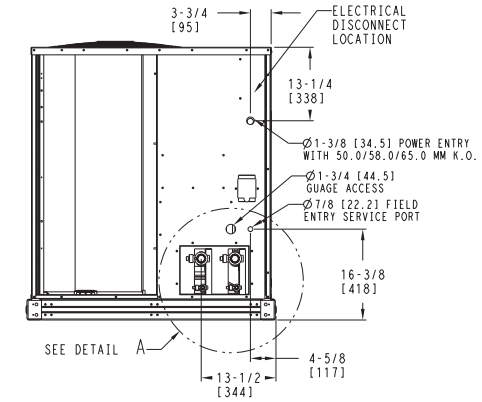
DIRECTION OF AIR FLOW

DIMENSIONS IN [ ] ARE IN MM

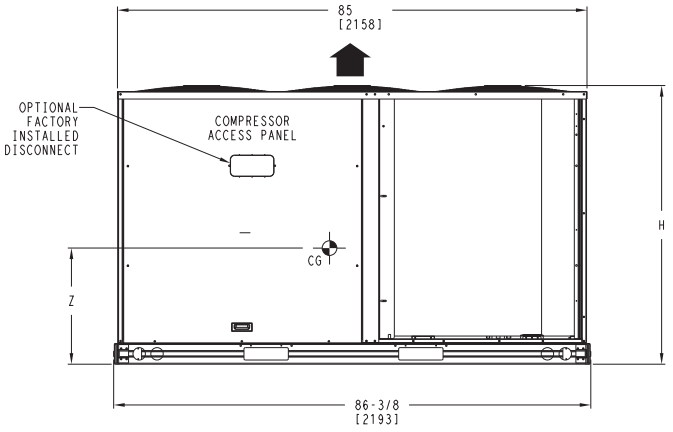
SERVICE VALVE CONNECTIONS			QTY
UNIT	SUCTION	LIQUID	
38AUD16	1-3/8 [34.9]	1/2 [12.7]	2 EA



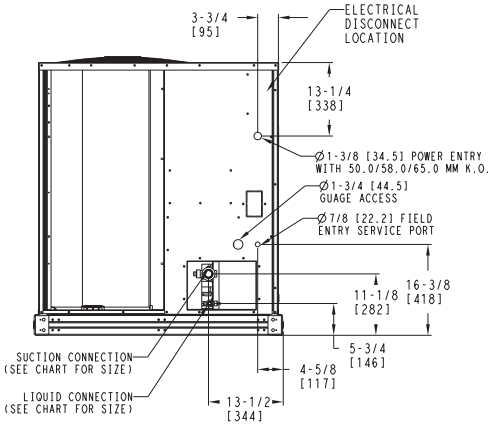
TOP VIEW



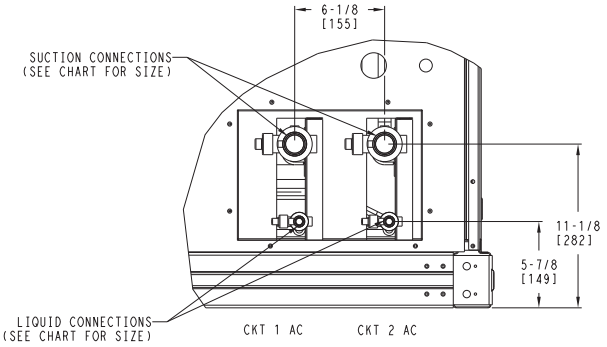
LEFT SIDE VIEW FOR 38AUD SYSTEMS



FRONT VIEW



LEFT SIDE VIEW



DETAIL A
(NOTE POSITION OF CKT 1)

NOTES:
1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

C10591

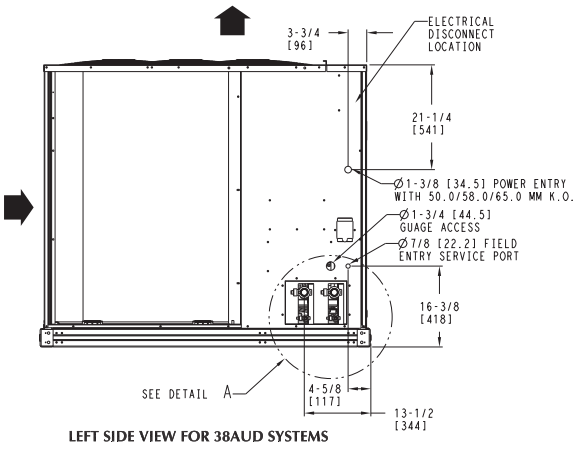
DIMENSIONS (cont.)

UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	X	Y	Z	H
38AUD25 (RTPF)	444	978	163	360	85	188	67	147	128	283	38 [965.2]	23 [584.2]	17 [431.8]	50-3/8 [1279.2]

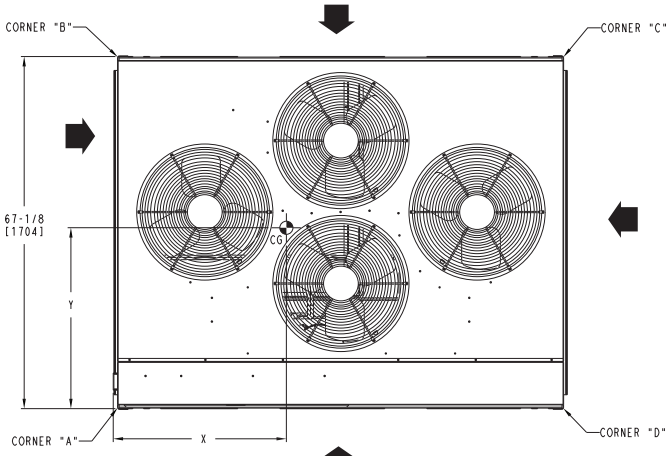
CG CENTER OF GRAVITY

DIRECTION OF AIR FLOW

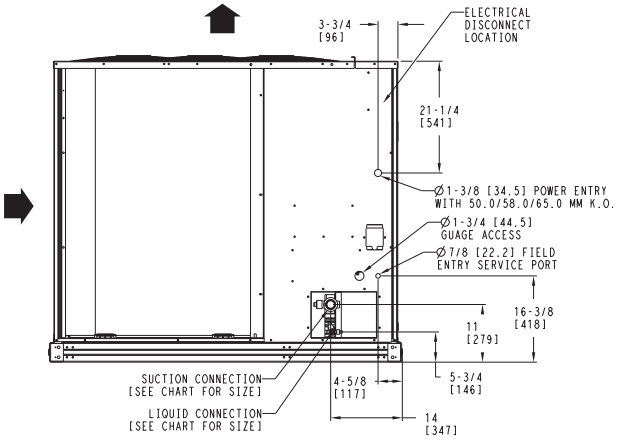
DIMENSIONS IN [ ] ARE IN MM



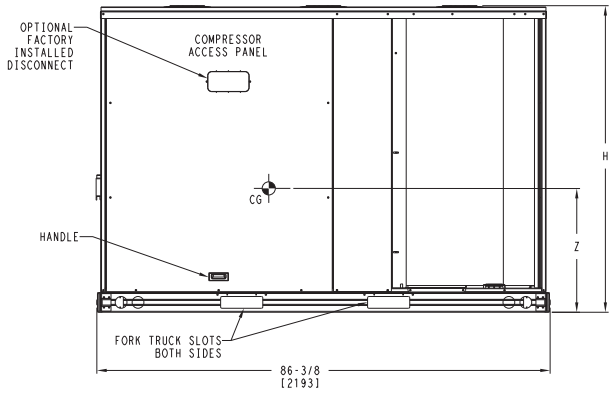
LEFT SIDE VIEW FOR 38AUD SYSTEMS



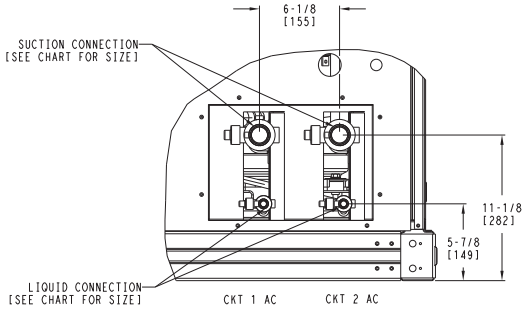
TOP VIEW



LEFT SIDE VIEW



FRONT VIEW



DETAIL A
(NOTE POSITION OF CKT 1)

NOTES:
1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
   B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
   D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
   E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
   F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

SERVICE VALVE CONNECTIONS			QTY
UNIT	SUCTION	LIQUID	
38AUD25	1-3/8 [34.9]	1/2 [12.7]	2 EA

C10592

OPTIONS AND ACCESSORIES

38AUZ/D OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY†
Disconnect Switch (non-fused)	X	
Special–coated Coil Protection	X	
Low Ambient Temperature MotorMaster I® Control	X	X
Wired Condenser Coil Grille (Novation 07–14 models only)		X
Louvered Hail Guard	X	X
Programmable Thermostats		X

* Factory-installed option.

† Field-installed accessory.

38AUZ/38AUD factory-installed options

E-coated aluminum-fin coils have a flexible and durable epoxy coating uniformly applied to all coil surfaces. Unlike brittle phenolic dip and bake coatings, E-coating provides superior protection with unmatched flexibility, edge coverage, metal adhesion, thermal performance, and most importantly, corrosion resistance.

E-coated coils provide this protection since all coil surfaces are completely encapsulated from environmental contamination. This coating is especially suitable in industrial environments.

Pre-coated coils (RTPF coils only) provide protection in mild coastal environments.

–29°C (–20°F) low-ambient temperature kit option (MotorMaster I®) controls outdoor-fan motor operation to maintain the correct head pressure at low outdoor ambient temperatures.

Louvered hail guard package protects coils against damage from flying debris and hail.

Non-fused disconnect switch is used to remove power locally at the condensing unit. This switch also includes a power lockout capability to protect the service person. This lockout switch saves the service person time and effort because there is no need to access a distant disconnect switch while servicing the unit.

NOTE: Non-fused disconnect switch cannot be used when unit MOCP electrical rating exceeds 80 amps.

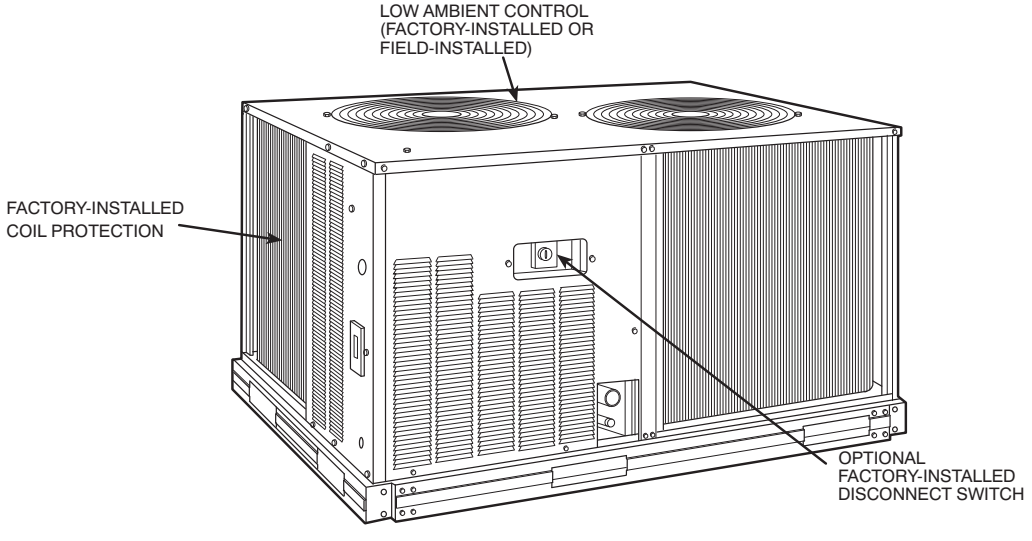
38AUZ/D field-installed accessories

–29°C (–20°F) low-ambient temperature kit accessory (MotorMaster I®) controls outdoor-fan motor operation to maintain the correct head pressure at low outdoor ambient temperatures.

Louvered hail guard package protects coils against damage from flying debris and hail.

Condenser coil grille package protects condensing unit coil from impact by large objects and vandalism.

Carrier's line of thermostats provide both programmable and non-programmable capability with the new **Debonair®** line of commercial programmable thermostats. The **Commercial Electronic** thermostats provide 7-day programmable capability for economical applications.



C10609

OPTIONS AND ACCESSORIES (cont.)

40RU OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY†
Alternate Fan Motors	X	
Alternate Drives	X	
CO_2 Sensors		X
Condensate Drain Trap		X
Discharge Plenum		X
Economizer		X
Electric Heat		X
Hot Water Heating Coils		X
Overhead Suspension Package		X
Prepainted Units	X	
Return Air Grille		X
Steam Heating Coil		X
Subbase		X

* Factory-installed option.

† Field-installed accessory.

40RU factory-installed options

Alternate fan motors and drives are available to provide the widest possible range of performance.

Units constructed of prepainted steel are available from the factory for applications that require painted units. Unit color is American Sterling Gray.

40RU field-installed accessories

Two-row hot water coils have $^5/_8$-in. diameter copper tubes mechanically bonded to aluminum plate fins. Coils have non-ferrous headers.

One-row steam coil has 1-in. OD copper tube and aluminum fins. The Inner Distributing Tube (IDT) design provides uniform temperatures across the coil face. The IDT steam coils are especially suited to applications where sub-freezing air enters the unit.

Electric resistance heat coils have an open-wire design and are mounted in a rigid frame. Safety cutouts for high temperature conditions are standard.

Economizer (enthalpy controlled) provides ventilation air and provides "free" cooling if the outside ambient temperature and humidity are suitable. The economizer can also be used in conjunction with Carrier Comfort System thermostats and CO_2 sensors to help meet indoor air quality requirements. The economizer can be used in both vertical and horizontal positions.

Discharge plenum directs the air discharge into the occupied space; integral horizontal and vertical louvers enable redirection of airflow. This accessory is available unpainted or painted.

Return-air grille provides a protective barrier over the return-air opening and gives a finished appearance to units installed in the occupied space. This accessory is available unpainted or painted.

Subbase provides a stable, raised platform and room for condensate drain connection for floor-mounted units. This accessory is available unpainted or painted.

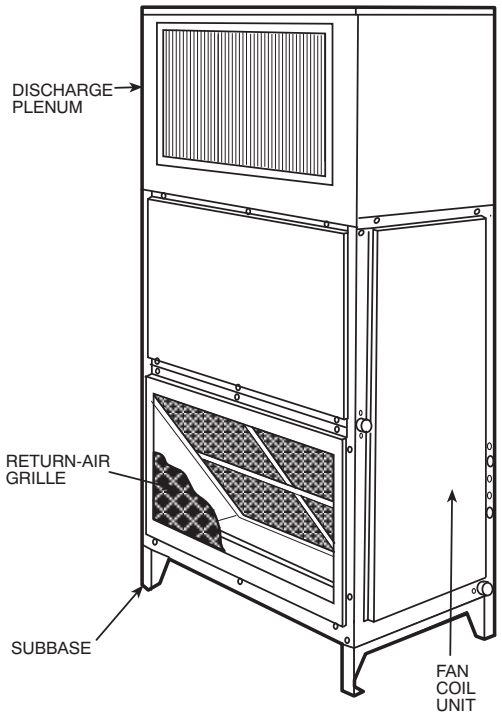
Overhead suspension package includes necessary brackets to support units in horizontal installations.

CO_2 sensors can be used in conjunction with the economizer accessory to help meet indoor air quality requirements. The sensor signals the economizer to open when the CO_2 level in the space exceeds the setpoint. A Carrier Comfort System programmable thermostat can also be used to override the sensor if the outside-air temperature is too high or too low.

Condensate drain trap includes an overflow shutoff switch that can be wired to turn off the unit if the trap becomes plugged. The kit also includes a wire harness that can be connected to an alarm if desired. The transparent trap is designed for easy service and maintenance.

OPTIONS AND ACCESSORIES (cont.)

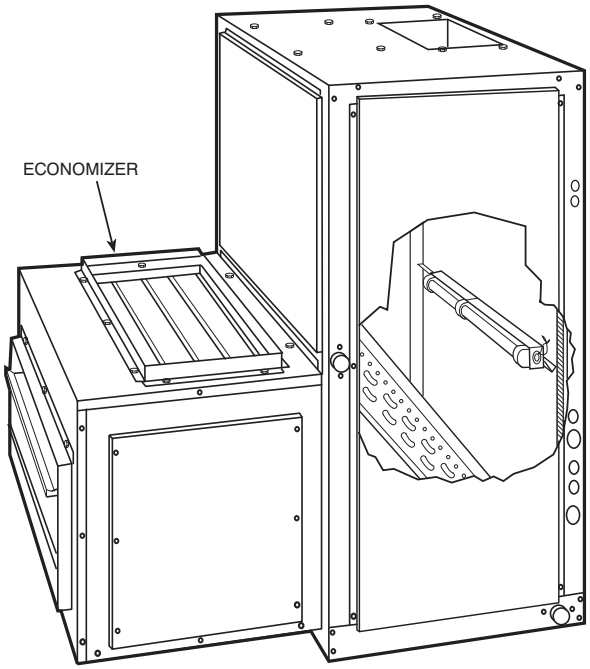
40RU WITH DISCHARGE PLENUM RETURN-AIR GRILLE AND SUBBASE



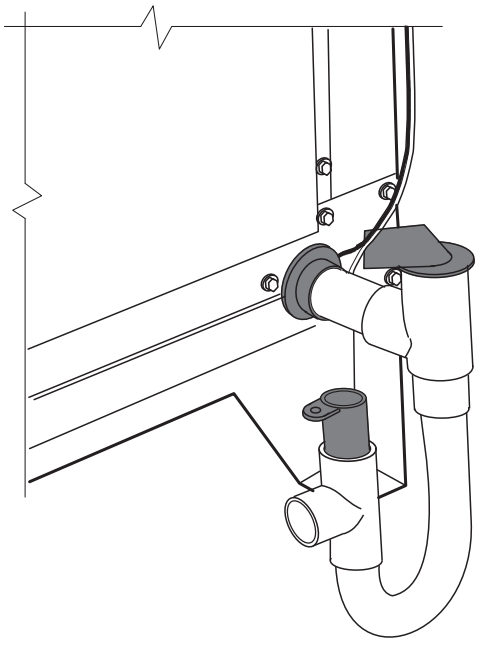
40RU WITH HOT WATER OR STEAM COIL



40RU WITH ECONOMIZER

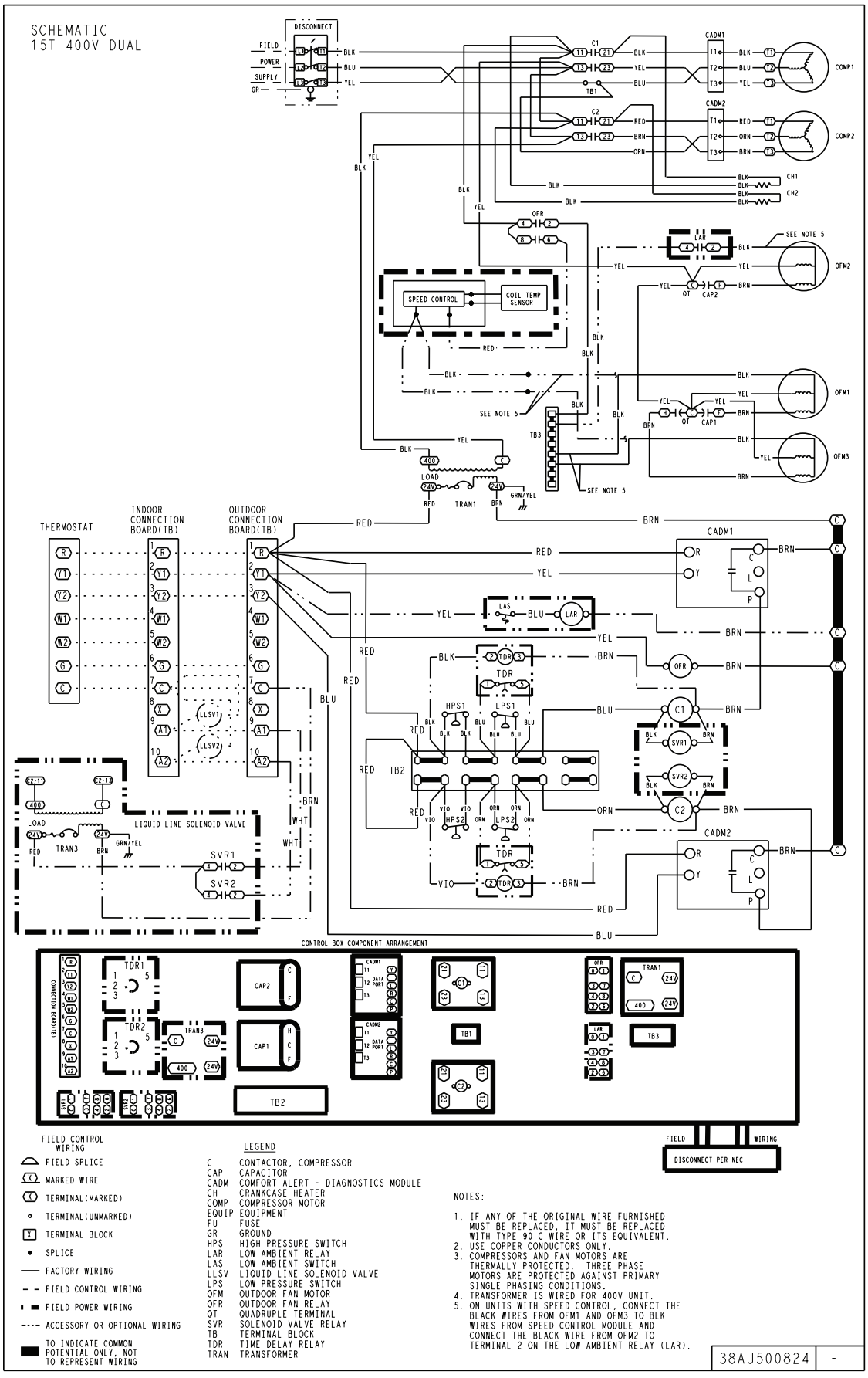


40RU WITH CONDENSATE TRAP



C10610

TYPICAL WIRING SCHEMATIC



C10593

Typical 38AUD16 Dual Circuit

PERFORMANCE DATA

38AUZ07 50 Hz **CONDENSER ONLY RATINGS** **SI**

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	11.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.4	38.1	44.2	49.5	54.5	59.6
-4	TC	13.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.9	38.7	44.2	49.5	54.3	60.0
-1	TC	14.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.5	39.3	44.8	50.0	54.9	61.9
2	TC	16.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.1	39.8	45.4	50.9	56.1	61.6
4	TC	17.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.7	40.4	45.9	51.5	56.9	62.2
7	TC	18.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.2	41.0	46.5	52.0	57.4	62.5
10	TC	20.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.6	47.1	52.5	57.9	63.3

38AUZ07 50 Hz **CONDENSER ONLY RATINGS** **ENGLISH**

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	40.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	95.7	100.6	111.5	121.1	130.1	139.3
25	TC	45.2	43.8	41.0	38.0	34.5	31.3
	kW	3.6	3.8	4.4	5.0	5.7	6.4
	SDT	96.7	101.6	111.6	121.1	129.8	140.1
30	TC	49.8	48.4	45.5	42.2	38.6	36.0
	kW	3.5	3.8	4.4	5.0	5.7	6.6
	SDT	97.8	102.7	112.6	122.1	130.8	143.5
35	TC	54.6	53.2	50.2	47.0	43.2	40.0
	kW	3.5	3.7	4.3	5.0	5.8	6.6
	SDT	98.8	103.7	113.7	123.6	132.9	142.9
40	TC	59.5	58.0	54.9	51.6	48.1	44.3
	kW	3.4	3.7	4.3	5.0	5.7	6.6
	SDT	99.8	104.7	114.7	124.6	134.5	143.9
45	TC	64.4	62.9	59.7	56.4	52.8	48.6
	kW	3.3	3.6	4.2	4.9	5.7	6.5
	SDT	100.8	105.8	115.7	125.6	135.4	144.4
50	TC	69.3	67.8	64.6	61.2	57.6	53.6
	kW	3.2	3.5	4.2	4.9	5.6	6.5
	SDT	101.9	106.8	116.7	126.5	136.3	145.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

38AUZ08 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	15.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.5	37.2	42.7	48.2	53.5	59.1
-4	TC	16.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.0	37.7	43.2	48.7	53.5	58.9
-1	TC	18.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.6	38.3	43.7	49.2	54.6	59.5
2	TC	20.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.1	38.8	44.3	49.7	55.1	60.5
4	TC	22.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.7	39.4	44.8	50.2	55.6	60.9
7	TC	23.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.3	40.0	45.4	50.7	56.1	61.4
10	TC	25.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.0	40.6	46.0	51.3	56.6	61.8

38AUZ08 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	52.2	50.6	47.2	43.7	39.9	36.3
	kW	4.1	4.4	5.2	6.0	6.8	7.8
	SDT	94.1	99.0	108.9	118.8	128.2	138.4
25	TC	57.7	55.9	52.3	48.6	44.0	40.1
	kW	4.1	4.5	5.2	6.0	6.9	7.9
	SDT	95.0	99.9	109.8	119.7	128.3	138.1
30	TC	63.4	61.5	57.7	53.8	49.6	44.7
	kW	4.2	4.5	5.3	6.1	7.0	8.0
	SDT	96.0	100.9	110.7	120.6	130.3	139.1
35	TC	69.3	67.3	63.3	59.2	54.9	50.4
	kW	4.2	4.6	5.3	6.2	7.1	8.0
	SDT	97.0	101.9	111.7	121.5	131.3	140.9
40	TC	75.2	73.3	69.2	64.9	60.4	55.6
	kW	4.3	4.6	5.4	6.2	7.1	8.1
	SDT	98.1	102.9	112.7	122.4	132.1	141.7
45	TC	81.3	79.3	75.2	70.7	66.0	61.0
	kW	4.3	4.6	5.4	6.2	7.2	8.2
	SDT	99.2	104.0	113.7	123.3	132.9	142.5
50	TC	87.4	85.4	81.1	76.6	71.7	66.5
	kW	4.3	4.7	5.5	6.3	7.2	8.2
	SDT	100.3	105.1	114.7	124.3	133.8	143.3

LEGEND:

kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD12 Total Unit 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	19.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.5	38.0	43.1	48.2	53.2	58.2
-4	TC	21.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.2	38.7	43.8	48.8	53.8	58.7
-1	TC	23.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.9	39.5	44.5	49.5	54.4	59.2
2	TC	26.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.7	40.2	45.2	50.1	55.0	59.8
4	TC	28.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.5	40.9	45.9	50.8	55.6	60.3
7	TC	30.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.2	41.7	46.6	51.5	56.2	60.9
10	TC	33.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.1	42.5	47.3	52.2	56.9	61.4

38AUD12 Total Unit 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	66.5	64.3	59.8	55.1	50.0	44.7
	kW	5.2	5.6	6.4	7.3	8.2	9.1
	SDT	95.9	100.5	109.6	118.8	127.8	136.7
25	TC	73.4	71.0	66.1	61.0	55.7	50.0
	kW	5.2	5.6	6.5	7.4	8.3	9.2
	SDT	97.2	101.7	110.8	119.9	128.9	137.7
30	TC	80.8	78.2	72.9	67.3	61.6	55.5
	kW	5.3	5.7	6.6	7.5	8.4	9.3
	SDT	98.5	103.0	112.1	121.1	129.9	138.6
35	TC	88.6	85.8	80.0	74.0	67.9	61.4
	kW	5.4	5.8	6.6	7.5	8.5	9.4
	SDT	99.8	104.3	113.3	122.3	131.1	139.6
40	TC	96.8	93.8	87.5	81.2	74.5	67.4
	kW	5.5	5.9	6.7	7.6	8.6	9.5
	SDT	101.2	105.7	114.6	123.4	132.2	140.6
45	TC	105.6	102.2	95.4	88.5	81.2	73.6
	kW	5.6	5.9	6.8	7.7	8.7	9.6
	SDT	102.6	107.0	115.9	124.6	133.2	141.6
50	TC	114.7	111.0	103.6	96.0	88.0	79.6
	kW	5.6	6.0	6.9	7.8	8.7	9.7
	SDT	104.1	108.4	117.2	125.9	134.3	142.6

LEGEND:

kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD12 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (° C)					
		27	29	35	41	46	52
-7	TC	9.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.4	37.9	43.0	48.1	53.1	58.0
-4	TC	10.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.1	38.6	43.7	48.7	53.7	58.6
-1	TC	11.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.8	39.3	44.3	49.3	54.3	59.1
2	TC	12.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.5	40.0	45.0	50.0	54.9	59.6
4	TC	14.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.3	40.8	45.7	50.6	55.5	60.1
7	TC	15.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.1	41.5	46.4	51.3	56.0	60.7
10	TC	16.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.9	42.3	47.1	52.0	56.6	61.2

38AUD12 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	32.9	31.8	29.6	27.2	24.7	22.1
	kW	2.6	2.8	3.2	3.6	4.1	4.5
	SDT	95.7	100.3	109.4	118.6	127.6	136.4
25	TC	36.3	35.1	32.6	30.1	27.4	24.6
	kW	2.6	2.8	3.2	3.7	4.1	4.6
	SDT	96.9	101.5	110.6	119.7	128.6	137.4
30	TC	39.9	38.6	35.9	33.2	30.3	27.3
	kW	2.6	2.8	3.3	3.7	4.2	4.7
	SDT	98.3	102.8	111.8	120.8	129.7	138.3
35	TC	43.7	42.2	39.4	36.4	33.3	30.1
	kW	2.7	2.9	3.3	3.8	4.2	4.7
	SDT	99.6	104.1	113.0	122.0	130.7	139.3
40	TC	47.6	46.1	43.0	39.8	36.5	32.9
	kW	2.7	2.9	3.3	3.8	4.3	4.8
	SDT	101.0	105.4	114.3	123.1	131.8	140.3
45	TC	51.8	50.1	46.8	43.3	39.6	35.9
	kW	2.8	3.0	3.4	3.8	4.3	4.8
	SDT	102.3	106.7	115.5	124.3	132.9	141.3
50	TC	56.2	54.3	50.6	46.8	42.8	38.6
	kW	2.8	3.0	3.4	3.9	4.3	4.8
	SDT	103.8	108.1	116.8	125.5	133.9	142.1

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD12 Circuit B 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	9.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.6	38.2	43.3	48.3	53.3	58.3
-4	TC	10.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.3	38.9	43.9	49.0	53.9	58.8
-1	TC	12.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.1	39.6	44.6	49.6	54.6	59.4
2	TC	13.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.8	40.3	45.3	50.3	55.2	60.0
4	TC	14.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.6	41.1	46.0	51.0	55.8	60.5
7	TC	15.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.4	41.8	46.8	51.6	56.4	61.1
10	TC	17.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.2	42.7	47.5	52.3	57.1	61.7

38AUD12 Circuit B 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	33.6	32.5	30.2	27.8	25.3	22.7
	kW	2.6	2.8	3.2	3.7	4.1	4.5
	SDT	96.1	100.7	109.9	119.0	128.0	136.9
25	TC	37.1	35.9	33.5	30.9	28.2	25.4
	kW	2.6	2.8	3.2	3.7	4.2	4.6
	SDT	97.4	101.9	111.1	120.2	129.1	137.9
30	TC	40.9	39.6	37.0	34.2	31.3	28.2
	kW	2.7	2.9	3.3	3.7	4.2	4.7
	SDT	98.7	103.3	112.3	121.3	130.2	138.9
35	TC	44.9	43.5	40.6	37.6	34.6	31.3
	kW	2.7	2.9	3.3	3.8	4.3	4.7
	SDT	100.1	104.6	113.6	122.6	131.4	139.9
40	TC	49.2	47.7	44.5	41.4	38.0	34.5
	kW	2.7	2.9	3.4	3.8	4.3	4.8
	SDT	101.5	106.0	114.9	123.7	132.5	141.0
45	TC	53.7	52.1	48.7	45.2	41.6	37.8
	kW	2.8	3.0	3.4	3.9	4.3	4.8
	SDT	102.9	107.3	116.2	125.0	133.6	142.0
50	TC	58.5	56.7	53.0	49.2	45.2	41.1
	kW	2.8	3.0	3.5	3.9	4.4	4.9
	SDT	104.4	108.8	117.6	126.2	134.7	143.0

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD14 Total Unit 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	24.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.5	39.0	44.0	48.9	53.7	58.4
-4	TC	27.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.4	39.8	44.8	49.6	54.4	59.1
-1	TC	29.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.2	40.7	45.6	50.4	55.1	59.7
2	TC	32.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.1	41.5	46.4	51.2	55.9	60.4
4	TC	35.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.0	42.4	47.2	52.0	56.6	61.1
7	TC	38.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.9	43.3	48.1	52.8	57.4	61.7
10	TC	40.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	41.9	44.3	48.9	53.6	58.1	62.4

38AUD14 Total Unit 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	83.7	80.8	74.6	68.0	61.0	53.9
	kW	7.0	7.5	8.4	9.3	10.2	11.0
	SDT	97.8	102.2	111.2	120.0	128.7	137.2
25	TC	92.1	89.0	82.3	75.4	67.9	60.3
	kW	7.1	7.6	8.5	9.5	10.4	11.3
	SDT	99.3	103.7	112.6	121.4	129.9	138.3
30	TC	101.0	97.5	90.5	83.0	75.3	66.8
	kW	7.3	7.7	8.7	9.7	10.6	11.6
	SDT	100.8	105.2	114.0	122.7	131.3	139.5
35	TC	110.2	106.5	98.9	91.0	82.4	73.5
	kW	7.4	7.9	8.8	9.8	10.8	11.8
	SDT	102.4	106.8	115.5	124.2	132.6	140.8
40	TC	119.8	115.7	107.6	98.9	89.8	80.1
	kW	7.6	8.0	9.0	10.0	11.0	12.1
	SDT	104.0	108.3	117.0	125.6	133.9	141.9
45	TC	129.6	125.1	116.1	106.8	97.1	86.6
	kW	7.7	8.2	9.2	10.2	11.2	12.3
	SDT	105.7	110.0	118.5	127.0	135.2	143.1
50	TC	139.3	134.6	124.7	114.8	104.1	93.1
	kW	7.9	8.4	9.3	10.4	11.4	12.5
	SDT	107.4	111.7	120.1	128.5	136.5	144.4

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD14 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	12.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.3	38.8	43.7	48.7	53.5	58.2
-4	TC	13.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.1	39.6	44.5	49.4	54.2	58.9
-1	TC	14.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.9	40.4	45.3	50.1	54.9	59.5
2	TC	16.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.2	46.1	50.9	55.6	60.2
4	TC	17.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.7	42.1	46.9	51.7	56.4	60.9
7	TC	19.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.6	43.0	47.8	52.5	57.1	61.5
10	TC	20.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	41.6	43.9	48.6	53.3	57.8	62.2

38AUD14 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	42.0	40.5	37.4	34.2	30.7	27.1
	kW	3.5	3.8	4.2	4.7	5.1	5.5
	SDT	97.3	101.8	110.7	119.6	128.3	136.8
25	TC	46.2	44.7	41.4	37.9	34.2	30.3
	kW	3.6	3.8	4.3	4.8	5.2	5.7
	SDT	98.8	103.2	112.1	120.9	129.5	138.0
30	TC	50.7	49.0	45.5	41.7	37.9	33.7
	kW	3.7	3.9	4.4	4.9	5.3	5.8
	SDT	100.3	104.7	113.6	122.3	130.8	139.1
35	TC	55.4	53.5	49.7	45.8	41.5	37.0
	kW	3.7	4.0	4.4	4.9	5.4	5.9
	SDT	101.8	106.2	115.0	123.7	132.1	140.4
40	TC	60.2	58.2	54.1	49.8	45.2	40.4
	kW	3.8	4.0	4.5	5.0	5.6	6.1
	SDT	103.5	107.8	116.5	125.1	133.4	141.5
45	TC	65.2	62.9	58.4	53.8	48.9	43.7
	kW	3.9	4.1	4.6	5.1	5.6	6.2
	SDT	105.1	109.4	118.0	126.5	134.8	142.7
50	TC	70.2	67.8	62.8	57.9	52.5	47.0
	kW	4.0	4.2	4.7	5.2	5.7	6.3
	SDT	106.8	111.1	119.5	127.9	136.0	143.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD14 Circuit B 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	12.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.8	39.3	44.2	49.1	53.9	58.6
-4	TC	13.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.6	40.1	45.0	49.9	54.6	59.3
-1	TC	14.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.5	41.0	45.9	50.7	55.4	60.0
2	TC	16.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.4	41.8	46.7	51.5	56.1	60.7
4	TC	17.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.3	42.7	47.5	52.3	56.9	61.3
7	TC	18.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	41.3	43.6	48.4	53.1	57.6	62.0
10	TC	20.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	42.2	44.6	49.2	53.9	58.4	62.7

38AUD14 Circuit B 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	41.7	40.2	37.1	33.8	30.3	26.8
	kW	3.5	3.7	4.2	4.6	5.1	5.5
	SDT	98.2	102.7	111.6	120.4	129.1	137.6
25	TC	45.9	44.3	41.0	37.5	33.8	29.9
	kW	3.5	3.8	4.2	4.7	5.2	5.6
	SDT	99.7	104.2	113.1	121.8	130.3	138.7
30	TC	50.2	48.5	45.0	41.3	37.4	33.2
	kW	3.6	3.8	4.3	4.8	5.3	5.8
	SDT	101.3	105.7	114.5	123.2	131.7	139.9
35	TC	54.8	53.0	49.2	45.2	40.9	36.5
	kW	3.7	3.9	4.4	4.9	5.4	5.9
	SDT	102.9	107.3	116.0	124.6	133.0	141.2
40	TC	59.6	57.5	53.5	49.1	44.6	39.7
	kW	3.8	4.0	4.5	5.0	5.5	6.0
	SDT	104.6	108.9	117.6	126.1	134.4	142.4
45	TC	64.4	62.1	57.6	53.0	48.1	42.9
	kW	3.8	4.1	4.5	5.1	5.6	6.1
	SDT	106.3	110.5	119.1	127.5	135.7	143.6
50	TC	69.2	66.8	61.9	56.9	51.6	46.2
	kW	3.9	4.1	4.6	5.1	5.7	6.2
	SDT	108.0	112.3	120.6	129.0	137.0	144.8

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD16 Total Unit 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	31.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.4	38.0	43.2	48.3	53.4	58.4
-4	TC	34.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.2	38.7	43.8	48.9	53.9	58.9
-1	TC	38.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.9	39.5	44.5	49.5	54.5	59.4
2	TC	41.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.7	40.2	45.2	50.2	55.1	59.9
4	TC	45.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.5	41.0	45.9	50.9	55.7	60.5
7	TC	49.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.3	41.8	46.7	51.6	56.4	61.0
10	TC	53.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.2	42.6	47.5	52.3	57.0	61.6

38AUD16 Total Unit 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	107.8	104.6	97.9	90.9	83.7	76.1
	kW	8.4	8.9	10.0	11.2	12.5	13.9
	SDT	95.8	100.4	109.7	118.9	128.1	137.1
25	TC	118.8	115.3	107.9	100.4	92.4	84.1
	kW	8.6	9.1	10.2	11.4	12.7	14.1
	SDT	97.1	101.7	110.9	120.0	129.1	138.0
30	TC	130.5	126.6	118.6	110.3	101.6	92.7
	kW	8.7	9.2	10.3	11.6	12.9	14.3
	SDT	98.4	103.0	112.1	121.2	130.1	138.9
35	TC	142.8	138.5	129.7	120.8	111.5	101.6
	kW	8.9	9.4	10.5	11.7	13.0	14.4
	SDT	99.8	104.3	113.4	122.4	131.2	139.9
40	TC	155.8	151.0	141.6	132.0	121.7	110.7
	kW	9.1	9.6	10.7	11.9	13.2	14.6
	SDT	101.3	105.7	114.7	123.6	132.3	140.8
45	TC	169.5	164.3	154.0	143.4	132.0	120.1
	kW	9.3	9.8	10.9	12.1	13.4	14.8
	SDT	102.7	107.2	116.0	124.8	133.5	141.9
50	TC	183.9	178.2	166.8	154.9	142.6	129.5
	kW	9.5	10.0	11.1	12.3	13.6	15.0
	SDT	104.3	108.7	117.4	126.1	134.6	142.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD16 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	15.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.9	38.5	43.6	48.7	53.8	58.8
-4	TC	17.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.6	39.2	44.3	49.4	54.3	59.3
-1	TC	19.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.4	39.9	45.0	50.0	54.9	59.8
2	TC	20.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.2	40.7	45.7	50.7	55.6	60.3
4	TC	22.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.0	41.5	46.4	51.4	56.2	60.9
7	TC	24.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.9	42.3	47.2	52.1	56.8	61.5
10	TC	26.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	40.7	43.1	48.0	52.8	57.5	62.1

38AUD16 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	53.8	52.2	48.8	45.3	41.7	37.9
	kW	4.2	4.5	5.1	5.7	6.3	7.0
	SDT	96.6	101.2	110.5	119.7	128.8	137.8
25	TC	59.3	57.5	53.8	50.0	46.0	41.9
	kW	4.3	4.6	5.1	5.7	6.4	7.1
	SDT	97.9	102.5	111.7	120.8	129.8	138.7
30	TC	65.1	63.1	59.0	54.9	50.6	46.1
	kW	4.4	4.7	5.2	5.8	6.5	7.2
	SDT	99.3	103.9	112.9	122.0	130.9	139.6
35	TC	71.1	68.9	64.5	60.1	55.4	50.5
	kW	4.5	4.8	5.3	5.9	6.6	7.3
	SDT	100.7	105.2	114.2	123.2	132.0	140.6
40	TC	77.5	75.1	70.4	65.6	60.5	55.0
	kW	4.6	4.9	5.4	6.0	6.7	7.4
	SDT	102.2	106.7	115.6	124.5	133.2	141.6
45	TC	84.3	81.7	76.6	71.3	65.6	59.6
	kW	4.7	5.0	5.5	6.1	6.8	7.5
	SDT	103.7	108.1	117.0	125.7	134.3	142.7
50	TC	91.4	88.6	82.9	76.9	70.8	64.3
	kW	4.8	5.1	5.6	6.2	6.9	7.6
	SDT	105.3	109.7	118.4	127.0	135.5	143.7

LEGEND:

kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD16 Circuit B 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	15.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.0	37.6	42.7	47.9	53.0	58.0
-4	TC	17.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.7	38.3	43.4	48.5	53.5	58.5
-1	TC	19.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.4	39.0	44.0	49.1	54.1	59.0
2	TC	21.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.2	39.7	44.7	49.7	54.7	59.5
4	TC	22.9	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.0	40.4	45.4	50.4	55.3	60.0
7	TC	25.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.2	46.2	51.1	55.9	60.6
10	TC	27.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.6	42.0	46.9	51.8	56.5	61.2

38AUD16 Circuit B 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	54.0	52.4	49.1	45.6	42.0	38.2
	kW	4.2	4.4	5.0	5.6	6.2	6.9
	SDT	95.0	99.7	108.9	118.2	127.3	136.3
25	TC	59.6	57.8	54.2	50.4	46.4	42.3
	kW	4.2	4.5	5.0	5.6	6.3	7.0
	SDT	96.2	100.9	110.1	119.2	128.3	137.2
30	TC	65.5	63.5	59.5	55.4	51.1	46.6
	kW	4.3	4.6	5.1	5.7	6.4	7.1
	SDT	97.6	102.1	111.3	120.4	129.3	138.1
35	TC	71.7	69.5	65.2	60.7	56.0	51.1
	kW	4.4	4.7	5.2	5.8	6.5	7.2
	SDT	98.9	103.4	112.5	121.5	130.4	139.1
40	TC	78.2	75.9	71.2	66.3	61.2	55.7
	kW	4.5	4.8	5.3	5.9	6.5	7.2
	SDT	100.3	104.8	113.8	122.7	131.5	140.0
45	TC	85.2	82.6	77.4	72.1	66.4	60.4
	kW	4.6	4.9	5.4	6.0	6.6	7.3
	SDT	101.8	106.2	115.1	123.9	132.6	141.1
50	TC	92.4	89.6	83.9	77.9	71.8	65.2
	kW	4.7	5.0	5.5	6.1	6.7	7.4
	SDT	103.3	107.6	116.5	125.2	133.8	142.1

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD25 Total Unit **CONDENSER ONLY RATINGS** **SI**

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	38.7	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	33.8	36.4	41.6	46.7	51.9	57.0
-4	TC	42.8	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.5	37.1	42.2	47.4	52.5	57.5
-1	TC	47.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.2	37.8	42.9	48.0	53.1	58.1
2	TC	52.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.0	38.6	43.6	48.7	53.7	58.6
4	TC	57.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.9	39.4	44.4	49.4	54.4	59.2
7	TC	62.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.8	40.3	45.2	50.2	55.1	59.8
10	TC	68.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.8	41.2	46.1	51.0	55.8	60.5

38AUD25 Total Unit **CONDENSER ONLY RATINGS** **ENGLISH**

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	131.9	128.0	119.8	111.1	101.6	91.4
	kW	10.0	10.6	12.0	13.5	15.2	17.2
	SDT	92.8	97.5	106.9	116.1	125.4	134.6
25	TC	145.9	141.7	132.9	123.5	113.3	102.3
	kW	10.2	10.8	12.1	13.6	15.4	17.3
	SDT	94.1	98.7	108.0	117.3	126.4	135.5
30	TC	161.1	156.5	146.9	136.7	125.6	113.7
	kW	10.4	11.0	12.3	13.8	15.5	17.5
	SDT	95.4	100.0	109.2	118.4	127.5	136.5
35	TC	177.3	172.3	161.9	150.7	138.7	125.7
	kW	10.6	11.2	12.5	14.0	15.7	17.6
	SDT	96.9	101.4	110.5	119.6	128.7	137.6
40	TC	194.8	189.3	177.9	165.7	152.5	138.4
	kW	10.8	11.4	12.7	14.2	15.9	17.8
	SDT	98.4	102.9	111.9	120.9	129.8	138.6
45	TC	213.5	207.4	194.9	181.5	167.1	151.7
	kW	11.1	11.7	13.0	14.5	16.1	18.0
	SDT	100.0	104.5	113.4	122.3	131.1	139.7
50	TC	233.4	226.7	213.0	198.2	182.5	165.6
	kW	11.4	12.0	13.3	14.7	16.4	18.2
	SDT	101.8	106.2	115.0	123.7	132.4	140.9

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD25 Circuit A 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	19.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	33.6	36.2	41.4	46.6	51.7	56.8
-4	TC	21.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.3	36.8	42.0	47.2	52.3	57.3
-1	TC	23.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.0	37.5	42.7	47.8	52.9	57.9
2	TC	26.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.8	38.3	43.4	48.5	53.5	58.4
4	TC	28.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.6	39.1	44.1	49.2	54.1	59.0
7	TC	31.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.5	40.0	44.9	49.9	54.8	59.6
10	TC	34.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.4	40.9	45.8	50.7	55.5	60.3

38AUD25 Circuit A 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	66.0	64.0	60.0	55.6	50.9	45.8
	kW	5.0	5.3	5.9	6.7	7.6	8.5
	SDT	92.4	97.1	106.5	115.8	125.1	134.3
25	TC	73.0	70.9	66.5	61.8	56.7	51.2
	kW	5.1	5.4	6.0	6.8	7.6	8.6
	SDT	93.7	98.3	107.6	116.9	126.1	135.2
30	TC	80.6	78.3	73.5	68.4	62.9	57.0
	kW	5.2	5.5	6.1	6.9	7.7	8.7
	SDT	95.0	99.6	108.8	118.0	127.1	136.2
35	TC	88.8	86.2	81.1	75.5	69.5	63.0
	kW	5.3	5.6	6.2	7.0	7.8	8.8
	SDT	96.4	100.9	110.1	119.2	128.3	137.2
40	TC	97.5	94.8	89.1	83.0	76.4	69.4
	kW	5.4	5.7	6.3	7.1	7.9	8.9
	SDT	97.9	102.4	111.4	120.5	129.4	138.2
45	TC	106.9	103.9	97.6	91.0	83.8	76.0
	kW	5.5	5.8	6.5	7.2	8.0	9.0
	SDT	99.5	104.0	112.9	121.8	130.6	139.3
50	TC	116.9	113.6	106.7	99.4	91.5	83.0
	kW	5.7	6.0	6.6	7.3	8.1	9.1
	SDT	101.2	105.6	114.4	123.2	131.9	140.5

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUD25 Circuit B 50 Hz CONDENSER ONLY RATINGS SI

SST (°C)		Air Temperature entering Condenser (°C)					
		27	29	35	41	46	52
-7	TC	19.3	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.0	36.6	41.8	46.9	52.1	57.2
-4	TC	21.4	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	34.7	37.3	42.4	47.6	52.7	57.7
-1	TC	23.6	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	35.5	38.0	43.1	48.2	53.3	58.3
2	TC	26.0	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	36.3	38.8	43.9	48.9	53.9	58.8
4	TC	28.5	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	37.2	39.7	44.7	49.7	54.6	59.4
7	TC	31.2	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	38.1	40.6	45.5	50.4	55.3	60.1
10	TC	34.1	39.4	37.0	34.2	30.9	27.2
	kW	3.6	3.9	4.4	5.0	5.7	6.3
	SDT	39.1	41.5	46.4	51.2	56.0	60.7

38AUD25 Circuit B 50 Hz CONDENSER ONLY RATINGS ENGLISH

SST (°F)		Air Temperature entering Condenser (°F)					
		80	85	95	105	115	125
20	TC	65.9	63.9	59.9	55.5	50.7	45.6
	kW	5.0	5.3	6.0	6.8	7.6	8.6
	SDT	93.3	97.9	107.2	116.5	125.8	134.9
25	TC	72.9	70.8	66.4	61.7	56.6	51.0
	kW	5.1	5.4	6.1	6.8	7.7	8.7
	SDT	94.5	99.2	108.4	117.6	126.8	135.9
30	TC	80.5	78.2	73.4	68.2	62.7	56.7
	kW	5.2	5.5	6.2	6.9	7.8	8.8
	SDT	95.9	100.5	109.6	118.8	127.9	136.9
35	TC	88.6	86.0	80.8	75.2	69.2	62.7
	kW	5.3	5.6	6.3	7.0	7.9	8.9
	SDT	97.4	101.9	111.0	120.1	129.0	137.9
40	TC	97.3	94.5	88.8	82.7	76.1	69.0
	kW	5.4	5.7	6.4	7.1	8.0	8.9
	SDT	98.9	103.4	112.4	121.4	130.3	139.0
45	TC	106.6	103.5	97.2	90.5	83.3	75.6
	kW	5.6	5.9	6.5	7.3	8.1	9.0
	SDT	100.6	105.0	113.9	122.8	131.5	140.1
50	TC	116.5	113.1	106.2	98.8	91.0	82.5
	kW	5.7	6.0	6.7	7.4	8.2	9.2
	SDT	102.4	106.8	115.5	124.2	132.9	141.3

LEGEND:
kW – Compressor Power
SDT – Saturated Discharge Temperature at Compressor
SST – Saturated Suction Temperature
TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

38AUZ07 - 40RUA07 **COMBINATION RATINGS** **SI**

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
850 L/S	EAT (wb)	14.4	THC	17.2	17.2	19.3	16.6	16.6	18.8	16.0	16.0	18.1	15.4	15.4	17.4	14.5	14.5	16.4
			SHC	15.0	17.2	19.3	14.5	16.6	18.8	14.0	16.0	18.1	13.5	15.4	17.4	12.7	14.5	16.4
			kW		3.6			4.3			4.9			5.7			6.5	
		16.7	THC	17.5	17.5	19.2	16.9	16.9	18.8	16.2	16.2	18.4	15.5	15.5	17.9	14.6	14.6	17.1
			SHC	13.8	16.5	19.2	13.5	16.2	18.8	13.2	15.8	18.4	12.8	15.4	17.9	12.2	14.6	17.1
			kW		3.6			4.2			4.9			5.7			6.5	
		19.4	THC	18.9	18.9	18.9	18.3	18.3	18.3	17.5	17.5	17.5	16.7	16.7	16.7	15.8	15.8	15.8
			SHC	11.2	13.9	16.6	10.9	13.6	16.3	10.6	13.3	16.0	10.3	13.0	15.7	9.9	12.6	15.3
			kW		3.6			4.2			4.9		5.7				6.5	
		22.2	THC	20.6	20.6	20.6	19.9	19.9	19.9	19.1	19.1	19.1	18.3	18.3	18.3	17.3	17.3	17.3
			SHC	8.4	11.2	13.9	8.2	10.9	13.6	7.9	10.6	13.3	7.6	10.3	13.0	7.2	9.9	12.7
			kW		3.5			4.1			4.8			5.6			6.5	
		24.4	THC	–	22.0	22.0	–	21.3	21.3	–	20.5	20.5	–	19.6	19.6	–	–	–
			SHC	–	9.0	11.8	–	8.7	11.5	–	8.4	11.2	–	8.1	10.9	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
991 L/S	EAT (wb)	14.4	THC	17.9	17.9	20.2	17.4	17.4	19.5	16.7	16.7	18.8	16.1	16.1	18.1	15.3	15.3	17.3
			SHC	15.6	17.9	20.2	15.2	17.4	19.5	14.6	16.7	18.8	14.0	16.1	18.1	13.4	15.3	17.3
			kW		3.6			4.2			4.9			5.7			6.5	
		16.7	THC	18.0	18.0	20.6	17.4	17.4	20.3	16.7	16.7	19.6	16.1	16.1	18.8	15.3	15.3	17.9
			SHC	14.7	17.7	20.6	14.4	17.4	20.3	13.9	16.7	19.6	13.4	16.1	18.8	12.7	15.3	17.9
			kW		3.6			4.2			4.9			5.7			6.5	
		19.4	THC	19.3	19.3	19.3	18.6	18.6	18.6	17.8	17.8	17.8	17.0	17.0	17.1	16.1	16.1	16.7
			SHC	11.8	14.9	18.0	11.5	14.6	17.7	11.3	14.3	17.4	10.9	14.0	17.1	10.6	13.6	16.7
			kW		3.6			4.2			4.9			5.6			6.5	
		22.2	THC	21.0	21.0	21.0	20.3	20.3	20.3	19.5	19.5	19.5	18.6	18.6	18.6	17.6	17.6	17.6
			SHC	8.7	11.8	14.9	8.4	11.5	14.6	8.2	11.3	14.3	7.9	10.9	14.0	7.5	10.6	13.7
			kW		3.5			4.1			4.8			5.6			6.4	
		24.4	THC	–	22.4	22.4	–	21.7	21.7	–	20.8	20.8	–	–	–	–	–	–
			SHC	–	9.3	12.5	–	9.1	12.3	–	8.8	12.0	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
1133 L/S	EAT (wb)	14.4	THC	18.5	18.5	20.8	17.9	17.9	20.2	17.3	17.3	19.5	16.6	16.6	18.7	15.8	15.8	17.8
			SHC	16.1	18.5	20.8	15.7	17.9	20.2	15.1	17.3	19.5	14.5	16.6	18.7	13.8	15.8	17.8
			kW		3.6			4.2			4.9			5.7			6.5	
		16.7	THC	18.5	18.5	21.7	17.9	17.9	21.0	17.3	17.3	20.2	16.6	16.6	19.4	15.8	15.8	18.5
			SHC	15.4	18.5	21.7	14.9	17.9	21.0	14.4	17.3	20.2	13.8	16.6	19.4	13.2	15.8	18.5
			kW		3.6			4.2			4.9			5.7			6.5	
		19.4	THC	19.6	19.6	19.6	18.9	18.9	19.0	18.1	18.1	18.7	17.3	17.3	18.3	16.3	16.3	17.9
			SHC	12.4	15.9	19.3	12.1	15.6	19.0	11.8	15.3	18.7	11.5	14.9	18.3	11.1	14.5	17.9
			kW		3.5			4.2			4.9			5.6			6.5	
		22.2	THC	21.2	21.2	21.2	20.5	20.5	20.5	19.7	19.7	19.7	18.8	18.8	18.8	17.8	17.8	17.8
			SHC	8.9	12.4	15.9	8.7	12.1	15.6	8.4	11.8	15.3	8.1	11.5	14.9	7.7	11.2	14.6
			kW		3.5			4.1			4.8			5.6			6.4	
		24.4	THC	–	22.7	22.7	–	21.9	21.9	–	21.1	21.1	–	–	–	–	–	–
			SHC	–	9.6	13.2	–	9.4	12.9	–	9.1	12.6	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
1274 L/S	EAT (wb)	14.4	THC	19.0	19.0	21.4	18.4	18.4	20.7	17.7	17.7	20.0	17.0	17.0	19.2	16.2	16.2	18.3
			SHC	16.6	19.0	21.4	16.0	18.4	20.7	15.5	17.7	20.0	14.9	17.0	19.2	14.2	16.2	18.3
			kW	3.6			4.2			4.9			5.6			6.5		
		16.7	THC	19.0	19.0	22.2	18.4	18.4	21.5	17.7	17.7	20.8	17.0	17.0	19.9	16.2	16.2	19.0
			SHC	15.8	19.0	22.2	15.3	18.4	21.5	14.7	17.7	20.8	14.1	17.0	19.9	13.5	16.2	19.0
			kW	3.6			4.2			4.9			5.6			6.5		
		19.4	THC	19.8	19.8	20.5	19.1	19.1	20.2	18.3	18.3	19.9	17.5	17.5	19.5	16.5	16.5	19.1
			SHC	13.0	16.8	20.5	12.7	16.5	20.2	12.4	16.1	19.9	12.0	15.8	19.5	11.6	15.4	19.1
			kW	3.5			4.2			4.8			5.6			6.5		
		22.2	THC	21.5	21.5	21.5	20.8	20.8	20.8	19.9	19.9	19.9	19.0	19.0	19.0	–	–	–
			SHC	9.2	13.0	16.8	8.9	12.7	16.5	8.6	12.4	16.2	8.3	12.1	15.9	–	–	–
			kW	3.5			4.1			4.8			5.6			–		
		24.4	THC	–	22.9	22.9	–	22.2	22.2	–	21.3	21.3	–	–	–	–	–	–
			SHC	–	9.9	13.8	–	9.7	13.5	–	9.4	13.2	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
1416 L/S	EAT (wb)	14.4	THC	19.4	19.4	21.9	18.8	18.8	21.2	18.1	18.1	20.4	17.4	17.4	19.6	16.6	16.6	18.6
			SHC	16.9	19.4	21.9	16.4	18.8	21.2	15.8	18.1	20.4	15.2	17.4	19.6	14.4	16.6	18.6
			kW		3.5			4.2			4.9			5.6			6.5	
		16.7	THC	19.4	19.4	22.7	18.8	18.8	22.0	18.1	18.1	21.2	17.4	17.4	20.3	16.6	16.6	19.4
			SHC	16.1	19.4	22.7	15.6	18.8	22.0	15.1	18.1	21.2	14.4	17.4	20.3	13.7	16.6	19.4
			kW		3.5			4.2		4.8			5.6			6.5		
		19.4	THC	20.0	20.0	21.7	19.3	19.3	21.4	18.5	18.5	21.0	17.6	17.6	20.6	16.7	16.7	20.1
			SHC	13.5	17.6	21.7	13.2	17.3	21.4	12.9	17.0	21.0	12.5	16.6	20.6	12.1	16.1	20.1
			kW		3.5			4.1		4.8			5.6				6.5	
		22.2	THC	21.7	21.7	21.7	20.9	20.9	20.9	20.1	20.1	20.1	19.1	19.1	19.1	–	–	–
			SHC	9.4	13.5	17.6	9.1	13.2	17.4	8.8	12.9	17.1	8.5	12.6	16.7	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
		24.4	THC	–	23.1	23.1	–	22.3	22.3	–	21.4	21.4	–	–	–	–	–	–
			SHC	–	10.2	14.4	–	9.9	14.1	–	9.6	13.8	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

				Ambient Temperature														
				85.0			95.0			105.0			115.0			125.0		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0
1800 cfm	EAT (wb)	58.0	THC	58.6	58.6	66.0	56.8	56.8	64.0	54.7	54.7	61.7	52.6	52.6	59.3	49.6	49.6	55.9
			SHC	51.1	58.6	66.0	49.6	56.8	64.0	47.8	54.7	61.7	45.9	52.6	59.3	43.3	49.6	55.9
			kW		3.6			4.3			4.9			5.7			6.5	
		62.0	THC	59.7	59.7	65.4	57.5	57.5	64.2	55.2	55.2	62.8	52.8	52.8	61.2	49.9	49.9	58.4
			SHC	47.2	56.3	65.4	46.2	55.2	64.2	44.9	53.9	62.8	43.6	52.4	61.2	41.5	49.9	58.4
			kW		3.6			4.2			4.9			5.7			6.5	
		67.0	THC	64.6	64.6	64.6	62.3	62.3	62.3	59.7	59.7	59.7	57.0	57.0	57.0	54.0	54.0	54.0
			SHC	38.2	47.4	56.6	37.2	46.4	55.6	36.2	45.4	54.6	35.1	44.3	53.4	33.8	43.0	52.2
			kW		3.6			4.2			4.9			5.7			6.5	
		72.0	THC	70.3	70.3	70.3	67.9	67.9	67.9	65.3	65.3	65.3	62.3	62.3	62.3	59.1	59.1	59.1
			SHC	28.8	38.1	47.4	27.9	37.2	46.5	27.0	36.2	45.5	25.9	35.1	44.4	24.7	33.9	43.2
			kW		3.5			4.1			4.8			5.6			6.5	
		76.0	THC	–	75.1	75.1	–	72.7	72.7	–	69.9	69.9	–	66.8	66.8	–	–	–
			SHC	–	30.6	40.2	–	29.8	39.3	–	28.8	38.3	–	27.7	37.2	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
2100 cfm	EAT (wb)	58.0	THC	61.1	61.1	68.8	59.2	59.2	66.7	57.1	57.1	64.3	54.8	54.8	61.8	52.3	52.3	58.9
			SHC	53.3	61.1	68.8	51.7	59.2	66.7	49.8	57.1	64.3	47.9	54.8	61.8	45.6	52.3	58.9
			kW		3.6			4.2			4.9			5.7			6.5	
		62.0	THC	61.5	61.5	70.4	59.2	59.2	69.2	57.1	57.1	66.8	54.9	54.9	64.2	52.3	52.3	61.2
			SHC	50.3	60.3	70.4	49.2	59.2	69.2	47.4	57.1	66.8	45.6	54.9	64.2	43.5	52.3	61.2
			kW		3.6			4.2			4.9			5.7			6.5	
		67.0	THC	65.8	65.8	65.8	63.4	63.4	63.4	60.9	60.9	60.9	58.0	58.0	58.2	54.9	54.9	56.9
			SHC	40.4	50.9	61.4	39.4	49.9	60.4	38.4	48.9	59.3	37.2	47.7	58.2	36.0	46.4	56.9
			kW		3.6			4.2			4.9			5.6			6.5	
		72.0	THC	71.6	71.6	71.6	69.1	69.1	69.1	66.4	66.4	66.4	63.4	63.4	63.4	60.1	60.1	60.1
			SHC	29.7	40.3	50.9	28.8	39.4	49.9	27.9	38.4	48.9	26.8	37.3	47.8	25.6	36.1	46.6
			kW		3.5			4.1			4.8			5.6			6.4	
		76.0	THC	–	76.4	76.4	–	73.9	73.9	–	71.0	71.0	–	–	–	–	–	–
			SHC	–	31.8	42.6	–	30.9	41.8	–	29.9	40.8	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
2400 cfm	EAT (wb)	58.0	THC	63.1	63.1	71.1	61.1	61.1	68.9	58.9	58.9	66.4	56.6	56.6	63.8	54.0	54.0	60.9
			SHC	55.1	63.1	71.1	53.4	61.1	68.9	51.5	58.9	66.4	49.4	56.6	63.8	47.1	54.0	60.9
			kW		3.6			4.2			4.9			5.7			6.5	
		62.0	THC	63.2	63.2	73.9	61.2	61.2	71.5	59.0	59.0	68.9	56.6	56.6	66.2	54.0	54.0	63.2
			SHC	52.5	63.2	73.9	50.8	61.2	71.5	49.0	59.0	68.9	47.0	56.6	66.2	44.9	54.0	63.2
			kW		3.6			4.2			4.9			5.7			6.5	
		67.0	THC	66.8	66.8	66.8	64.4	64.4	64.9	61.8	61.8	63.8	58.9	58.9	62.5	55.7	55.7	61.1
			SHC	42.4	54.2	65.9	41.4	53.2	64.9	40.4	52.1	63.8	39.2	50.9	62.5	37.9	49.5	61.1
			kW		3.5			4.2			4.9			5.6			6.5	
		72.0	THC	72.5	72.5	72.5	70.1	70.1	70.1	67.3	67.3	67.3	64.2	64.2	64.2	60.7	60.7	60.7
			SHC	30.5	42.3	54.1	29.7	41.4	53.2	28.7	40.4	52.2	27.6	39.3	51.0	26.4	38.1	49.7
			kW		3.5		4.1			4.8				5.6			6.4	
		76.0	THC	–	77.4	77.4	–	74.8	74.8	–	71.9	71.9	–	–	–	–	–	–
			SHC	–	32.8	44.9	–	32.0	44.0	–	31.0	43.0	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
2700 cfm	EAT (wb)	58.0	THC	64.8	64.8	73.0	62.7	62.7	70.7	60.5	60.5	68.2	58.0	58.0	65.4	55.4	55.4	62.4
			SHC	56.6	64.8	73.0	54.7	62.7	70.7	52.8	60.5	68.2	50.7	58.0	65.4	48.3	55.4	62.4
			kW		3.6			4.2			4.9			5.6			6.5	
		62.0	THC	64.8	64.8	75.8	62.7	62.7	73.4	60.5	60.5	70.8	58.1	58.1	67.9	55.4	55.4	64.8
			SHC	53.9	64.8	75.8	52.1	62.7	73.4	50.3	60.5	70.8	48.2	58.1	67.9	46.0	55.4	64.8
			kW		3.6			4.2			4.9			5.6			6.5	
		67.0	THC	67.6	67.6	70.1	65.1	65.1	69.0	62.5	62.5	67.9	59.6	59.6	66.6	56.4	56.4	65.1
			SHC	44.3	57.2	70.1	43.3	56.2	69.0	42.3	55.1	67.9	41.1	53.8	66.6	39.7	52.4	65.1
			kW		3.5			4.2			4.8			5.6			6.5	
		72.0	THC	73.3	73.3	73.3	70.8	70.8	70.8	67.9	67.9	67.9	64.8	64.8	64.8	–	–	–
			SHC	31.3	44.3	57.2	30.4	43.3	56.3	29.4	42.3	55.2	28.3	41.2	54.1	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
		76.0	THC	–	78.2	78.2	–	75.6	75.6	–	72.6	72.6	–	–	–	–	–	–
			SHC	–	33.9	47.1	–	33.0	46.2	–	32.0	45.2	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	
3000 cfm	EAT (wb)	58.0	THC	66.2	66.2	74.6	64.1	64.1	72.2	61.8	61.8	69.6	59.3	59.3	66.8	56.5	56.5	63.6
			SHC	57.8	66.2	74.6	55.9	64.1	72.2	53.9	61.8	69.6	51.8	59.3	66.8	49.3	56.5	63.6
			kW		3.5			4.2			4.9			5.6			6.5	
		62.0	THC	66.2	66.2	77.4	64.1	64.1	75.0	61.8	61.8	72.3	59.3	59.3	69.4	56.5	56.5	66.1
			SHC	55.0	66.2	77.4	53.3	64.1	75.0	51.4	61.8	72.3	49.3	59.3	69.4	46.9	56.5	66.1
			kW		3.5			4.2			4.8			5.6			6.5	
		67.0	THC	68.2	68.2	74.0	65.8	65.8	72.9	63.1	63.1	71.7	60.2	60.2	70.3	57.0	57.0	68.5
			SHC	46.1	60.1	74.0	45.1	59.0	72.9	44.0	57.9	71.7	42.7	56.5	70.3	41.3	54.9	68.5
			kW		3.5			4.1			4.8			5.6			6.5	
		72.0	THC	73.9	73.9	73.9	71.3	71.3	71.3	68.5	68.5	68.5	65.3	65.3	65.3	–	–	–
			SHC	32.0	46.1	60.2	31.1	45.2	59.2	30.1	44.1	58.2	29.0	43.0	57.0	–	–	–
			kW		3.5			4.1			4.8			5.6			–	
		76.0	THC	–	78.9	78.9	–	76.2	76.2	–	73.1	73.1	–	–	–	–	–	–
			SHC	–	34.8	49.2	–	33.9	48.2	–	32.9	47.2	–	–	–	–	–	–
			kW		3.4			4.1			4.8			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUZ08 - 40RUA08 **COMBINATION RATINGS** **SI**

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
1062 L/S	EAT (wb)	14.4	THC	21.9	21.9	24.6	21.2	21.2	23.9	20.4	20.4	23.0	19.5	19.5	22.0	18.6	18.6	21.0
			SHC	19.1	21.9	24.6	18.5	21.2	23.9	17.8	20.4	23.0	17.1	19.5	22.0	16.2	18.6	21.0
			Kw		4.6			5.4			6.2			7.2			8.2	
		16.7	THC	22.5	22.5	24.3	21.6	21.6	23.9	20.7	20.7	23.3	19.6	19.6	22.7	18.6	18.6	21.7
			SHC	17.6	21.0	24.3	17.2	20.5	23.9	16.7	20.0	23.3	16.1	19.4	22.7	15.4	18.6	21.7
			kW		4.6			5.4			6.3			7.2			8.2	
		19.4	THC	24.4	24.4	24.4	23.5	23.5	23.5	22.4	22.4	22.4	21.3	21.3	21.3	20.0	20.0	20.0
			SHC	14.3	17.7	21.1	13.9	17.3	20.7	13.5	16.9	20.3	13.0	16.4	19.8	12.5	15.9	19.3
			kW		4.7			5.5			6.3			7.2			8.2	
		22.2	THC	26.5	26.5	26.5	25.5	25.5	25.5	24.4	24.4	24.4	23.2	23.2	23.2	–	–	–
			SHC	10.8	14.3	17.7	10.5	13.9	17.3	10.1	13.5	16.9	9.6	13.0	16.4	–	–	–
			kW		4.8			5.5			6.4			7.3			–	
		24.4	THC	–	28.3	28.3	–	27.3	27.3	–	26.1	26.1	–	24.8	24.8	–	–	–
			SHC	–	11.5	15.0	–	11.1	14.6	–	10.7	14.2	–	10.3	13.8	–	–	–
			kW		4.8			5.6			6.4			7.4			–	
1239 L/S	EAT (wb)	14.4	THC	22.9	22.9	25.8	22.1	22.1	24.9	21.3	21.3	24.0	20.4	20.4	22.9	19.4	19.4	21.8
			SHC	20.0	22.9	25.8	19.3	22.1	24.9	18.6	21.3	24.0	17.8	20.4	22.9	16.9	19.4	21.8
			kW		4.6			5.4			6.3			7.2			8.2	
		16.7	THC	23.1	23.1	26.4	22.2	22.2	25.9	21.3	21.3	24.9	20.4	20.4	23.9	19.4	19.4	22.7
			SHC	18.9	22.7	26.4	18.4	22.2	25.9	17.7	21.3	24.9	16.9	20.4	23.9	16.1	19.4	22.7
			kW		4.7			5.4			6.3			7.2			8.2	
		19.4	THC	24.9	24.9	24.9	23.9	23.9	23.9	22.9	22.9	22.9	21.7	21.7	21.7	20.4	20.4	21.1
			SHC	15.2	19.1	23.0	14.8	18.7	22.6	14.3	18.2	22.1	13.9	17.8	21.6	13.4	17.2	21.1
			kW		4.7			5.5			6.3			7.2			8.2	
		22.2	THC	27.1	27.1	27.1	26.0	26.0	26.0	24.9	24.9	24.9	23.6	23.6	23.6	22.2	22.2	22.2
			SHC	11.2	15.1	19.1	10.8	14.7	18.6	10.4	14.3	18.2	10.0	13.9	17.8	9.5	13.4	17.3
			kW		4.8			5.5			6.4			7.3			8.3	
		24.4	THC	–	28.9	28.9	–	27.8	27.8	–	26.6	26.6	–	–	–	–	–	–
			SHC	–	11.9	16.0	–	11.6	15.6	–	11.2	15.2						
			kW		4.8			5.6			6.5			–			–	
1416 L/S	EAT (wb)	14.4	THC	23.7	23.7	26.7	22.9	22.9	25.8	22.0	22.0	24.8	21.1	21.1	23.7	20.0	20.0	22.5
			SHC	20.7	23.7	26.7	20.0	22.9	25.8	19.2	22.0	24.8	18.4	21.1	23.7	17.5	20.0	22.5
			kW		4.7			5.4			6.3			7.2			8.2	
		16.7	THC	23.7	23.7	27.8	22.9	22.9	26.8	22.0	22.0	25.8	21.1	21.1	24.6	20.0	20.0	23.4
			SHC	19.7	23.7	27.8	19.1	22.9	26.8	18.3	22.0	25.8	17.5	21.1	24.6	16.6	20.0	23.4
			kW		4.7			5.4			6.3			7.2			8.2	
		19.4	THC	25.3	25.3	25.3	24.3	24.3	24.4	23.2	23.2	23.9	22.0	22.0	23.4	20.7	20.7	22.8
			SHC	16.0	20.4	24.8	15.6	20.0	24.4	15.2	19.5	23.9	14.7	19.0	23.4	14.1	18.5	22.8
			kW		4.7			5.5			6.3			7.3			8.3	
		22.2	THC	27.4	27.4	27.4	26.4	26.4	26.4	25.2	25.2	25.2	23.9	23.9	23.9	22.5	22.5	22.5
			SHC	11.5	15.9	20.3	11.1	15.6	20.0	10.7	15.1	19.5	10.3	14.7	19.1	9.8	14.2	18.6
			kW		4.8			5.6			6.4			7.3			8.3	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
1593 L/S	EAT (wb)	14.4	THC	24.4	24.4	27.5	23.5	23.5	26.5	22.6	22.6	25.5	21.6	21.6	24.4	20.5	20.5	23.1
			SHC	21.3	24.4	27.5	20.5	23.5	26.5	19.8	22.6	25.5	18.9	21.6	24.4	17.9	20.5	23.1
			kW		4.7			5.5			6.3			7.2			8.2	
		16.7	THC	24.4	24.4	28.5	23.6	23.6	27.5	22.6	22.6	26.5	21.6	21.6	25.3	20.5	20.5	24.0
			SHC	20.3	24.4	28.5	19.6	23.6	27.5	18.8	22.6	26.5	18.0	21.6	25.3	17.1	20.5	24.0
			kW		4.7			5.5			6.3			7.2			8.2	
		19.4	THC	25.6	25.6	26.5	24.6	24.6	26.0	23.5	23.5	25.5	22.2	22.2	25.0	21.0	21.0	24.4
			SHC	16.8	21.6	26.5	16.3	21.2	26.0	15.9	20.7	25.5	15.4	20.2	25.0	14.8	19.6	24.4
			kW		4.7			5.5			6.3			7.3			8.3	
		22.2	THC	27.7	27.7	27.7	26.7	26.7	26.7	25.5	25.5	25.5	24.2	24.2	24.2	–	–	–
			SHC	11.8	16.7	21.6	11.5	16.4	21.2	11.0	15.9	20.8	10.6	15.5	20.3	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
1770 L/S	EAT (wb)	14.4	THC	24.9	24.9	28.1	24.1	24.1	27.1	23.1	23.1	26.1	22.1	22.1	24.9	21.0	21.0	23.6
			SHC	21.8	24.9	28.1	21.0	24.1	27.1	20.2	23.1	26.1	19.3	22.1	24.9	18.3	21.0	23.6
			kW		4.7			5.5			6.3			7.3			8.3	
		16.7	THC	24.9	24.9	29.2	24.1	24.1	28.2	23.2	23.2	27.1	22.1	22.1	25.8	21.0	21.0	24.5
			SHC	20.7	24.9	29.2	20.0	24.1	28.2	19.2	23.2	27.1	18.3	22.1	25.8	17.4	21.0	24.5
			kW		4.7			5.5			6.3			7.3			8.3	
		19.4	THC	25.8	25.8	28.1	24.8	24.8	27.6	23.7	23.7	27.1	22.5	22.5	26.5	21.2	21.2	25.7
			SHC	17.5	22.8	28.1	17.1	22.3	27.6	16.6	21.8	27.1	16.1	21.2	26.5	15.4	20.6	25.7
			kW		4.7			5.5			6.3			7.3			8.3	
		22.2	THC	28.0	28.0	28.0	26.9	26.9	26.9	25.7	25.7	25.7	24.4	24.4	24.4	–	–	–
			SHC	12.1	17.5	22.9	11.8	17.1	22.5	11.3	16.7	22.0	10.9	16.2	21.6	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUZ08 - 40RUA08 **COMBINATION RATINGS** **ENGLISH**

				Ambient Temperature														
				85.0			95.0			105.0			115.0			125.0		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0
2250 cfm	EAT (wb)	58.0	THC	74.7	74.7	84.1	72.2	72.2	81.4	69.6	69.6	78.4	66.6	66.6	75.1	63.4	63.4	71.5
			SHC	65.2	74.7	84.1	63.1	72.2	81.4	60.7	69.6	78.4	58.2	66.6	75.1	55.4	63.4	71.5
			kW		4.6			5.4			6.2			7.2			8.2	
		62.0	THC	76.7	76.7	83.0	73.7	73.7	81.4	70.5	70.5	79.6	67.0	67.0	77.3	63.5	63.5	74.2
			SHC	60.2	71.6	83.0	58.7	70.0	81.4	57.1	68.3	79.6	55.1	66.2	77.3	52.7	63.5	74.2
			kW		4.6			5.4			6.3			7.2			8.2	
		67.0	THC	83.3	83.3	83.3	80.1	80.1	80.1	76.5	76.5	76.5	72.6	72.6	72.6	68.4	68.4	68.4
			SHC	48.8	60.4	72.0	47.5	59.0	70.6	46.0	57.6	69.1	44.5	56.0	67.5	42.8	54.3	65.8
			kW		4.7			5.5			6.3			7.2			8.2	
		72.0	THC	90.5	90.5	90.5	87.1	87.1	87.1	83.3	83.3	83.3	79.2	79.2	79.2	–	–	–
			SHC	37.0	48.7	60.3	35.8	47.4	59.0	34.4	46.0	57.6	32.8	44.4	56.0	–	–	–
			kW		4.8		5.5			6.4				7.3			–	
		76.0	THC	–	96.5	96.5	–	93.0	93.0	–	89.1	89.1	–	84.7	84.7	–	–	–
			SHC	–	39.2	51.2	–	37.9	49.9	–	36.6	48.5	–	35.1	47.0	–	–	–
			kW		4.8		5.6			6.4				7.4			–	
2625 cfm	EAT (wb)	58.0	THC	78.1	78.1	88.0	75.5	75.5	85.1	72.7	72.7	81.9	69.5	69.5	78.3	66.1	66.1	74.5
			SHC	68.2	78.1	88.0	65.9	75.5	85.1	63.4	72.7	81.9	60.7	69.5	78.3	57.7	66.1	74.5
			kW		4.6		5.4			6.3				7.2			8.2	
		62.0	THC	78.8	78.8	90.1	75.7	75.7	88.5	72.7	72.7	85.0	69.6	69.6	81.4	66.2	66.2	77.4
			SHC	64.4	77.3	90.1	62.9	75.7	88.5	60.4	72.7	85.0	57.8	69.6	81.4	54.9	66.2	77.4
			kW		4.7		5.4			6.3				7.2			8.2	
		67.0	THC	85.1	85.1	85.1	81.7	81.7	81.7	78.0	78.0	78.0	74.0	74.0	74.0	69.7	69.7	72.0
			SHC	51.8	65.1	78.4	50.4	63.7	77.0	48.9	62.2	75.5	47.3	60.6	73.8	45.6	58.8	72.0
			kW		4.7			5.5			6.3			7.2			8.2	
		72.0	THC	92.3	92.3	92.3	88.7	88.7	88.7	84.9	84.9	84.9	80.6	80.6	80.6	75.9	75.9	75.9
			SHC	38.2	51.6	65.0	36.9	50.3	63.6	35.5	48.9	62.2	34.0	47.3	60.6	32.4	45.6	58.9
			kW		4.8			5.5			6.4			7.3			8.3	
		76.0	THC	–	98.5	98.5	–	94.7	94.7	–	90.7	90.7	–	–	–	–	–	–
			SHC	–	40.7	54.5	–	39.5	53.1	–	38.1	51.7	–	–	–	–	–	–
			kW		4.8			5.6			6.5			–			–	
3000 cfm	EAT (wb)	58.0	THC	80.9	80.9	91.2	78.2	78.2	88.1	75.2	75.2	84.7	71.9	71.9	81.0	68.3	68.3	76.9
			SHC	70.6	80.9	91.2	68.2	78.2	88.1	65.6	75.2	84.7	62.8	71.9	81.0	59.6	68.3	76.9
			kW		4.7			5.4			6.3			7.2			8.2	
		62.0	THC	81.0	81.0	94.7	78.3	78.3	91.6	75.2	75.2	88.0	71.9	71.9	84.1	68.3	68.3	79.9
			SHC	67.3	81.0	94.7	65.0	78.3	91.6	62.5	75.2	88.0	59.7	71.9	84.1	56.8	68.3	79.9
			kW		4.7			5.4			6.3			7.2			8.2	
		67.0	THC	86.3	86.3	86.3	82.9	82.9	83.1	79.2	79.2	81.5	75.1	75.1	79.7	70.7	70.7	77.8
			SHC	54.5	69.5	84.5	53.2	68.1	83.1	51.7	66.6	81.5	50.0	64.9	79.7	48.2	63.0	77.8
			kW		4.7			5.5			6.3			7.3			8.3	
		72.0	THC	93.6	93.6	93.6	90.0	90.0	90.0	86.0	86.0	86.0	81.6	81.6	81.6	76.9	76.9	76.9
			SHC	39.3	54.4	69.4	38.0	53.1	68.1	36.6	51.6	66.7	35.1	50.1	65.1	33.4	48.4	63.4
			kW		4.8			5.6			6.4			7.3			8.3	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–		–				–			–	
3375 cfm	EAT (wb)	58.0	THC	83.1	83.1	93.7	80.3	80.3	90.5	77.2	77.2	87.0	73.8	73.8	83.1	70.0	70.0	78.9
			SHC	72.6	83.1	93.7	70.1	80.3	90.5	67.4	77.2	87.0	64.4	73.8	83.1	61.1	70.0	78.9
			kW		4.7			5.5			6.3			7.2			8.2	
		62.0	THC	83.2	83.2	97.3	80.4	80.4	94.0	77.2	77.2	90.3	73.8	73.8	86.3	70.1	70.1	81.9
			SHC	69.1	83.2	97.3	66.8	80.4	94.0	64.2	77.2	90.3	61.3	73.8	86.3	58.2	70.1	81.9
			kW		4.7			5.5			6.3			7.2			8.2	
		67.0	THC	87.4	87.4	90.3	83.9	83.9	88.8	80.1	80.1	87.1	75.9	75.9	85.3	71.5	71.5	83.1
			SHC	57.2	73.7	90.3	55.7	72.3	88.8	54.2	70.7	87.1	52.5	68.9	85.3	50.6	66.9	83.1
			kW		4.7			5.5			6.3			7.3			8.3	
		72.0	THC	94.6	94.6	94.6	91.0	91.0	91.0	86.9	86.9	86.9	82.5	82.5	82.5	–	–	–
			SHC	40.4	57.1	73.8	39.1	55.8	72.4	37.7	54.3	71.0	36.1	52.8	69.4	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
3750 cfm	EAT (wb)	58.0	THC	85.1	85.1	95.8	82.1	82.1	92.5	78.9	78.9	88.9	75.4	75.4	84.9	71.5	71.5	80.6
			SHC	74.3	85.1	95.8	71.7	82.1	92.5	68.9	78.9	88.9	65.8	75.4	84.9	62.4	71.5	80.6
			kW		4.7			5.5			6.3			7.3			8.3	
		62.0	THC	85.1	85.1	99.5	82.2	82.2	96.1	79.0	79.0	92.3	75.4	75.4	88.2	71.5	71.5	83.6
			SHC	70.7	85.1	99.5	68.3	82.2	96.1	65.6	79.0	92.3	62.6	75.4	88.2	59.4	71.5	83.6
			kW		4.7			5.5			6.3			7.3			8.3	
		67.0	THC	88.2	88.2	95.8	84.7	84.7	94.2	80.9	80.9	92.4	76.7	76.7	90.3	72.2	72.2	87.8
			SHC	59.6	77.7	95.8	58.2	76.2	94.2	56.6	74.5	92.4	54.8	72.5	90.3	52.7	70.3	87.8
			kW		4.7			5.5			6.3			7.3			8.3	
		72.0	THC	95.5	95.5	95.5	91.7	91.7	91.7	87.6	87.6	87.6	83.1	83.1	83.1	–	–	–
			SHC	41.4	59.7	78.0	40.1	58.4	76.6	38.7	56.9	75.2	37.1	55.3	73.6	–	–	–
			kW		4.8			5.6			6.4			7.3			–	
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD12 - 40RUA12 **COMBINATION RATINGS** **SI**

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
1416 L/S	EAT (wb)	14.4	THC	28.2	28.2	31.8	27.2	27.2	30.7	26.1	26.1	29.4	24.9	24.9	28.1	23.5	23.5	26.5
			SHC	24.6	28.2	31.8	23.8	27.2	30.7	22.8	26.1	29.4	21.7	24.9	28.1	20.5	23.5	26.5
			kW		5.9			6.8			7.9			9.0			10.2	
		16.7	THC	28.7	28.7	31.9	27.5	27.5	31.2	26.2	26.2	30.4	24.9	24.9	29.2	23.6	23.6	27.5
			SHC	22.9	27.4	31.9	22.3	26.8	31.2	21.7	26.1	30.4	20.7	24.9	29.2	19.6	23.6	27.5
			kW		5.9			6.8			7.9			9.0			10.2	
		19.4	THC	31.2	31.2	31.2	29.9	29.9	29.9	28.5	28.5	28.5	26.9	26.9	26.9	25.1	25.1	25.1
			SHC	18.6	23.1	27.6	18.0	22.5	27.1	17.4	22.0	26.5	16.8	21.3	25.8	16.1	20.6	25.1
			kW		6.0			6.9			7.9			9.0			10.2	
		22.2	THC	33.8	33.8	33.8	32.5	32.5	32.5	31.0	31.0	31.0	29.3	29.3	29.3	–	–	–
			SHC	13.9	18.5	23.0	13.4	18.0	22.5	12.9	17.4	22.0	12.3	16.8	21.4	–	–	–
			kW		6.0		7.0				8.0			9.1			10.3	
		24.4	THC	–	36.1	36.1	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	14.7	19.3	–	–	–	–	–	–	–	–	–	–	–	–
			kW		6.1			–			–			–			–	
1652 L/S	EAT (wb)	14.4	THC	29.5	29.5	33.2	28.4	28.4	32.0	27.3	27.3	30.7	26.0	26.0	29.3	24.6	24.6	27.7
			SHC	25.7	29.5	33.2	24.8	28.4	32.0	23.8	27.3	30.7	22.7	26.0	29.3	21.4	24.6	27.7
			kW		5.9			6.9			7.9			9.0			10.2	
		16.7	THC	29.6	29.6	34.3	28.5	28.5	33.3	27.3	27.3	31.9	26.0	26.0	30.4	24.6	24.6	28.7
			SHC	24.4	29.3	34.3	23.6	28.5	33.3	22.7	27.3	31.9	21.6	26.0	30.4	20.4	24.6	28.7
			kW		5.9			6.9			7.9			9.0			10.2	
		19.4	THC	31.8	31.8	31.8	30.5	30.5	30.5	29.0	29.0	29.0	27.4	27.4	28.3	25.6	25.6	27.5
			SHC	19.7	24.9	30.1	19.1	24.4	29.6	18.6	23.8	29.0	17.9	23.1	28.3	17.2	22.4	27.5
			kW		6.0			6.9			7.9			9.1			10.2	
		22.2	THC	34.5	34.5	34.5	33.1	33.1	33.1	31.5	31.5	31.5	29.8	29.8	29.8	28.0	28.0	28.0
			SHC	14.4	19.6	24.9	13.9	19.1	24.4	13.3	18.6	23.8	12.7	17.9	23.2	12.0	17.3	22.5
			kW		6.1			7.0			8.0			9.1			10.3	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
1888 L/S	EAT (wb)	14.4	THC	30.5	30.5	34.3	29.4	29.4	33.1	28.2	28.2	31.7	26.8	26.8	30.2	25.3	25.3	28.5
			SHC	26.6	30.5	34.3	25.7	29.4	33.1	24.6	28.2	31.7	23.4	26.8	30.2	22.1	25.3	28.5
			kW		5.9			6.9			7.9			9.0			10.2	
		16.7	THC	30.5	30.5	35.7	29.4	29.4	34.4	28.2	28.2	33.0	26.8	26.8	31.4	25.4	25.4	29.7
			SHC	25.4	30.5	35.7	24.4	29.4	34.4	23.4	28.2	33.0	22.3	26.8	31.4	21.1	25.4	29.7
			kW		5.9			6.9			7.9			9.0			10.2	
		19.4	THC	32.3	32.3	32.5	30.9	30.9	31.9	29.4	29.4	31.3	27.8	27.8	30.6	26.0	26.0	29.8
			SHC	20.8	26.6	32.5	20.2	26.1	31.9	19.6	25.5	31.3	19.0	24.8	30.6	18.2	24.0	29.8
			kW		6.0			6.9			8.0			9.1			10.2	
		22.2	THC	34.9	34.9	34.9	33.5	33.5	33.5	31.9	31.9	31.9	30.2	30.2	30.2	–	–	–
			SHC	14.8	20.7	26.6	14.3	20.2	26.1	13.7	19.6	25.6	13.2	19.1	24.9	–	–	–
			kW		6.1			7.0			8.0			9.1			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2124 L/S	EAT (wb)	14.4	THC	31.3	31.3	35.3	30.2	30.2	34.0	28.9	28.9	32.6	27.5	27.5	31.0	26.0	26.0	29.3
			SHC	27.3	31.3	35.3	26.3	30.2	34.0	25.3	28.9	32.6	24.0	27.5	31.0	22.7	26.0	29.3
			kW		6.0			6.9			7.9			9.1			10.2	
		16.7	THC	31.4	31.4	36.7	30.2	30.2	35.3	29.0	29.0	33.9	27.5	27.5	32.2	26.0	26.0	30.4
			SHC	26.1	31.4	36.7	25.1	30.2	35.3	24.0	29.0	33.9	22.9	27.5	32.2	21.6	26.0	30.4
			kW		6.0			6.9			7.9			9.1			10.2	
		19.4	THC	32.6	32.6	34.8	31.2	31.2	34.2	29.7	29.7	33.5	28.1	28.1	32.7	26.3	26.3	31.7
			SHC	21.8	28.3	34.8	21.2	27.7	34.2	20.6	27.1	33.5	19.9	26.3	32.7	19.1	25.4	31.7
			kW		6.0			6.9			8.0			9.1			10.2	
		22.2	THC	35.3	35.3	35.3	33.8	33.8	33.8	32.2	32.2	32.2	–	–	–	–	–	–
			SHC	15.2	21.8	28.3	14.7	21.2	27.8	14.2	20.7	27.3	–	–	–	–	–	–
			kW		6.1			7.0			8.0			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2360 L/S	EAT (wb)	14.4	THC	32.0	32.0	36.1	30.9	30.9	34.8	29.5	29.5	33.3	28.1	28.1	31.7	26.5	26.5	29.9
			SHC	28.0	32.0	36.1	26.9	30.9	34.8	25.8	29.5	33.3	24.6	28.1	31.7	23.2	26.5	29.9
			kW		6.0			6.9			8.0			9.1			10.2	
		16.7	THC	32.0	32.0	37.5	30.9	30.9	36.1	29.6	29.6	34.6	28.1	28.1	32.9	26.6	26.6	31.0
			SHC	26.6	32.0	37.5	25.6	30.9	36.1	24.6	29.6	34.6	23.4	28.1	32.9	22.0	26.6	31.0
			kW		6.0			6.9			8.0			9.1			10.2	
		19.4	THC	32.9	32.9	36.9	31.6	31.6	36.2	30.0	30.0	35.5	28.4	28.4	34.5	26.6	26.6	33.3
			SHC	22.7	29.8	36.9	22.2	29.2	36.2	21.5	28.5	35.5	20.8	27.6	34.5	19.8	26.6	33.3
			kW		6.0			7.0			8.0			9.1			10.2	
		22.2	THC	35.6	35.6	35.6	34.1	34.1	34.1	–	–	–	–	–	–	–	–	–
			SHC	15.6	22.8	30.0	15.1	22.3	29.5	–	–	–	–	–	–	–	–	–
			kW		6.1			7.0			–			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD12 - 40RUA12 **COMBINATION RATINGS** **ENGLISH**

				Ambient Temperature															
				85.0			95.0			105.0			115.0			125.0			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	
3000 cfm	EAT (wb)	58.0	THC	96.3	96.3	108.5	92.9	92.9	104.6	89.1	89.1	100.4	85.0	85.0	95.8	80.3	80.3	90.5	
			SHC	84.1	96.3	108.5	81.1	92.9	104.6	77.8	89.1	100.4	74.2	85.0	95.8	70.1	80.3	90.5	
			kW		5.9			6.8			7.9			9.0			10.2		
		62.0	THC	98.0	98.0	108.7	94.0	94.0	106.4	89.5	89.5	103.8	85.1	85.1	99.5	80.4	80.4	94.0	
			SHC	78.3	93.5	108.7	76.2	91.3	106.4	73.9	88.9	103.8	70.7	85.1	99.5	66.8	80.4	94.0	
			kW		5.9		6.8			7.9			9.0				10.2		
		67.0	THC	106.4	106.4	106.4	102.0	102.0	102.0	97.1	97.1	97.1	91.7	91.7	91.7	85.8	85.8	85.8	
			SHC	63.3	78.7	94.2	61.5	76.9	92.4	59.5	74.9	90.4	57.3	72.8	88.2	54.9	70.3	85.8	
			kW		6.0		6.9			7.9			9.0				10.2		
		72.0	THC	115.4	115.4	115.4	110.8	110.8	110.8	105.8	105.8	105.8	100.1	100.1	100.1	93.8	93.8	93.8	
			SHC	47.4	63.0	78.6	45.7	61.3	76.8	43.9	59.4	75.0	41.8	57.4	72.9	39.6	55.1	70.6	
			kW		6.0			7.0			8.0			9.1			10.3		
		76.0	THC	–	123.2	123.2	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	50.2	66.0	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		6.1			–			–			–			–		
3500 cfm	EAT (wb)	58.0	THC	100.6	100.6	113.4	97.0	97.0	109.3	93.0	93.0	104.8	88.6	88.6	99.9	83.8	83.8	94.4	
			SHC	87.8	100.6	113.4	84.7	97.0	109.3	81.2	93.0	104.8	77.4	88.6	99.9	73.1	83.8	94.4	
			kW		5.9			6.9			7.9			9.0			10.2		
		62.0	THC	100.9	100.9	117.0	97.1	97.1	113.5	93.1	93.1	108.9	88.7	88.7	103.7	83.8	83.8	98.0	
			SHC	83.2	100.1	117.0	80.6	97.1	113.5	77.3	93.1	108.9	73.7	88.7	103.7	69.6	83.8	98.0	
			kW		5.9			6.9			7.9			9.0			10.2		
		67.0	THC	108.5	108.5	108.5	104.0	104.0	104.0	98.9	98.9	98.9	93.4	93.4	96.5	87.3	87.3	94.0	
			SHC	67.2	85.0	102.8	65.3	83.1	100.9	63.3	81.1	98.8	61.1	78.8	96.5	58.7	76.3	94.0	
			kW		6.0			6.9			7.9			9.1			10.2		
		72.0	THC	117.6	117.6	117.6	112.8	112.8	112.8	107.6	107.6	107.6	101.8	101.8	101.8	95.4	95.4	95.4	
			SHC	49.0	66.9	84.8	47.3	65.2	83.1	45.4	63.3	81.2	43.4	61.2	79.1	41.1	59.0	76.8	
			kW		6.1			7.0			8.0			9.1			10.3		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
4000 cfm	EAT (wb)	58.0	THC	104.0	104.0	117.2	100.3	100.3	113.0	96.1	96.1	108.3	91.5	91.5	103.1	86.4	86.4	97.4	
			SHC	90.8	104.0	117.2	87.6	100.3	113.0	83.9	96.1	108.3	79.9	91.5	103.1	75.5	86.4	97.4	
			kW		5.9			6.9			7.9			9.0			10.2		
		62.0	THC	104.1	104.1	121.8	100.4	100.4	117.4	96.2	96.2	112.5	91.6	91.6	107.1	86.5	86.5	101.2	
			SHC	86.5	104.1	121.8	83.4	100.4	117.4	79.9	96.2	112.5	76.1	91.6	107.1	71.9	86.5	101.2	
			kW		5.9			6.9			7.9			9.0			10.2		
		67.0	THC	110.1	110.1	110.9	105.5	105.5	109.0	100.3	100.3	106.8	94.7	94.7	104.4	88.6	88.6	101.6	
			SHC	70.8	90.9	110.9	69.0	89.0	109.0	66.9	86.9	106.8	64.7	84.5	104.4	62.1	81.9	101.6	
			kW		6.0			6.9			8.0			9.1			10.2		
		72.0	THC	119.2	119.2	119.2	114.3	114.3	114.3	109.0	109.0	109.0	103.1	103.1	103.1	–	–	–	
			SHC	50.5	70.7	90.8	48.8	68.9	89.1	46.9	67.0	87.2	44.9	65.0	85.1	–	–	–	
			kW		6.1			7.0			8.0			9.1			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
4500 cfm	EAT (wb)	58.0	THC	106.9	106.9	120.5	103.0	103.0	116.0	98.7	98.7	111.2	93.9	93.9	105.8	88.6	88.6	99.9	
			SHC	93.3	106.9	120.5	89.9	103.0	116.0	86.2	98.7	111.2	82.0	93.9	105.8	77.4	88.6	99.9	
			kW		6.0			6.9			7.9			9.1			10.2		
		62.0	THC	107.0	107.0	125.1	103.1	103.1	120.5	98.8	98.8	115.5	94.0	94.0	109.9	88.7	88.7	103.7	
			SHC	88.9	107.0	125.1	85.6	103.1	120.5	82.0	98.8	115.5	78.1	94.0	109.9	73.7	88.7	103.7	
			kW		6.0			6.9			7.9			9.1			10.2		
		67.0	THC	111.3	111.3	118.6	106.6	106.6	116.6	101.5	101.5	114.3	95.8	95.8	111.6	89.6	89.6	108.3	
			SHC	74.3	96.5	118.6	72.4	94.5	116.6	70.3	92.3	114.3	67.9	89.7	111.6	65.2	86.7	108.3	
			kW		6.0			6.9			8.0			9.1			10.2		
		72.0	THC	120.5	120.5	120.5	115.4	115.4	115.4	110.0	110.0	110.0	–	–	–	–	–	–	
			SHC	51.9	74.3	96.7	50.2	72.5	94.9	48.3	70.7	93.0	–	–	–	–	–	–	
			kW		6.1			7.0			8.0			–			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
5000 cfm	EAT (wb)	58.0	THC	109.3	109.3	123.1	105.3	105.3	118.6	100.8	100.8	113.6	95.9	95.9	108.1	90.5	90.5	102.0	
			SHC	95.4	109.3	123.1	91.9	105.3	118.6	88.0	100.8	113.6	83.8	95.9	108.1	79.0	90.5	102.0	
			kW		6.0			6.9			8.0			9.1			10.2		
		62.0	THC	109.3	109.3	127.8	105.3	105.3	123.2	100.9	100.9	118.0	96.0	96.0	112.2	90.6	90.6	105.9	
			SHC	90.8	109.3	127.8	87.5	105.3	123.2	83.8	100.9	118.0	79.7	96.0	112.2	75.2	90.6	105.9	
			kW		6.0			6.9			8.0			9.1			10.2		
		67.0	THC	112.4	112.4	125.8	107.7	107.7	123.6	102.5	102.5	121.0	96.8	96.8	117.8	90.7	90.7	113.7	
			SHC	77.6	101.7	125.8	75.6	99.6	123.6	73.4	97.2	121.0	70.8	94.3	117.8	67.7	90.7	113.7	
			kW		6.0			7.0			8.0			9.1			10.2		
		72.0	THC	121.5	121.5	121.5	116.4	116.4	116.4	–	–	–	–	–	–	–	–	–	
			SHC	53.3	77.9	102.4	51.5	76.1	100.6	–	–	–	–	–	–	–	–	–	
			kW		6.1			7.0			–			–			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD14 - 40RUA14 **COMBINATION RATINGS** **SI**

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
1699 L/S	EAT (wb)	14.4	THC	34.2	34.2	38.5	33.0	33.0	37.2	31.7	31.7	35.7	30.2	30.2	34.0	28.5	28.5	32.1
			SHC	29.8	34.2	38.5	28.8	33.0	37.2	27.6	31.7	35.7	26.3	30.2	34.0	24.9	28.5	32.1
			kW		8.1			9.2			10.4			11.6			12.9	
		16.7	THC	34.8	34.8	38.3	33.4	33.4	37.5	31.9	31.9	36.6	30.2	30.2	35.3	28.5	28.5	33.3
			SHC	27.6	33.0	38.3	26.9	32.2	37.5	26.1	31.4	36.6	25.1	30.2	35.3	23.7	28.5	33.3
			kW		8.1			9.2			10.4			11.6			12.9	
		19.4	THC	37.5	37.5	37.5	36.0	36.0	36.0	34.3	34.3	34.3	32.4	32.4	32.4	30.3	30.3	30.3
			SHC	22.2	27.7	33.1	21.6	27.0	32.4	20.9	26.3	31.7	20.2	25.6	31.0	19.3	24.7	30.1
			kW		8.3			9.4			10.6			11.8			13.1	
		22.2	THC	40.7	40.7	40.7	38.8	38.8	38.8	37.0	37.0	37.0	35.1	35.1	35.1	32.9	32.9	32.9
			SHC	16.7	22.2	27.6	16.0	21.5	26.9	15.4	20.8	26.2	14.7	20.1	25.5	13.9	19.3	24.7
			kW		8.5			9.6			10.7			12.0			13.3	
		24.4	THC	–	43.6	43.6	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	17.7	23.3	–	–	–	–	–	–	–	–	–	–	–	–
			kW		8.7			–			–			–			–	
1982 L/S	EAT (wb)	14.4	THC	35.6	35.6	40.1	34.3	34.3	38.7	32.9	32.9	37.1	31.4	31.4	35.3	29.6	29.6	33.3
			SHC	31.1	35.6	40.1	30.0	34.3	38.7	28.8	32.9	37.1	27.4	31.4	35.3	25.8	29.6	33.3
			kW		8.2			9.3			10.5			11.7			13.0	
		16.7	THC	35.7	35.7	41.6	34.4	34.4	40.2	33.0	33.0	38.5	31.4	31.4	36.7	29.6	29.6	34.6
			SHC	29.5	35.6	41.6	28.5	34.4	40.2	27.4	33.0	38.5	26.1	31.4	36.7	24.6	29.6	34.6
			kW		8.2			9.3			10.5			11.7			13.0	
		19.4	THC	38.2	38.2	38.2	36.6	36.6	36.6	34.9	34.9	34.9	33.0	33.0	33.9	30.8	30.8	33.0
			SHC	23.6	29.8	36.1	22.9	29.2	35.4	22.3	28.5	34.7	21.5	27.7	33.9	20.6	26.8	33.0
			kW		8.4			9.4			10.6			11.8			13.1	
		22.2	THC	41.5	41.5	41.5	39.5	39.5	39.5	37.6	37.6	37.6	35.6	35.6	35.6	33.3	33.3	33.3
			SHC	17.3	23.5	29.8	16.6	22.8	29.1	15.9	22.2	28.4	15.2	21.4	27.7	14.4	20.6	26.9
			kW		8.6			9.6			10.8			12.0			13.3	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2265 L/S	EAT (wb)	14.4	THC	36.7	36.7	41.4	35.4	35.4	39.9	33.9	33.9	38.2	32.3	32.3	36.4	30.5	30.5	34.3
			SHC	32.1	36.7	41.4	30.9	35.4	39.9	29.6	33.9	38.2	28.2	32.3	36.4	26.6	30.5	34.3
			kW		8.3			9.4			10.5			11.8			13.1	
		16.7	THC	36.8	36.8	43.0	35.4	35.4	41.4	34.0	34.0	39.7	32.3	32.3	37.8	30.5	30.5	35.6
			SHC	30.5	36.8	43.0	29.4	35.4	41.4	28.2	34.0	39.7	26.8	32.3	37.8	25.3	30.5	35.6
			kW		8.3			9.4			10.5			11.8			13.1	
		19.4	THC	38.7	38.7	39.0	37.1	37.1	38.2	35.3	35.3	37.5	33.4	33.4	36.7	31.2	31.2	35.7
			SHC	24.9	31.9	39.0	24.2	31.2	38.2	23.5	30.5	37.5	22.7	29.7	36.7	21.8	28.8	35.7
			kW		8.4			9.5			10.6			11.9			13.1	
		22.2	THC	42.1	42.1	42.1	39.9	39.9	39.9	38.0	38.0	38.0	36.0	36.0	36.0	–	–	–
			SHC	17.8	24.9	32.0	17.1	24.1	31.2	16.4	23.4	30.5	15.7	22.7	29.8	–	–	–
			kW															
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2549 L/S	EAT (wb)	14.4	THC	37.7	37.7	42.4	36.3	36.3	40.9	34.8	34.8	39.2	33.1	33.1	37.3	31.2	31.2	35.1
			SHC	32.9	37.7	42.4	31.7	36.3	40.9	30.4	34.8	39.2	28.9	33.1	37.3	27.2	31.2	35.1
			kW		8.3			9.4			10.6			11.9			13.1	
		16.7	THC	37.7	37.7	44.1	36.3	36.3	42.4	34.8	34.8	40.7	33.1	33.1	38.7	31.2	31.2	36.5
			SHC	31.3	37.7	44.1	30.2	36.3	42.4	28.9	34.8	40.7	27.5	33.1	38.7	25.9	31.2	36.5
			kW		8.3			9.4			10.6			11.9			13.1	
		19.4	THC	39.2	39.2	41.6	37.5	37.5	40.9	35.7	35.7	40.1	33.7	33.7	39.2	31.5	31.5	38.0
			SHC	26.1	33.9	41.6	25.4	33.1	40.9	24.7	32.4	40.1	23.9	31.5	39.2	22.9	30.5	38.0
			kW		8.4			9.5			10.7			11.9			13.2	
		22.2	THC	42.6	42.6	42.6	40.3	40.3	40.3	38.4	38.4	38.4	–	–	–	–	–	–
			SHC	18.3	26.2	34.0	17.5	25.4	33.2	16.9	24.7	32.6	–	–	–	–	–	–
			kW		8.7			9.7		10.8				–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
2832 L/S	EAT (wb)	14.4	THC	38.5	38.5	43.3	37.0	37.0	41.7	35.5	35.5	40.0	33.7	33.7	38.0	31.8	31.8	35.8
			SHC	33.6	38.5	43.3	32.3	37.0	41.7	31.0	35.5	40.0	29.5	33.7	38.0	27.8	31.8	35.8
			kW		8.4			9.5			10.7			11.9			13.2	
		16.7	THC	38.5	38.5	45.0	37.0	37.0	43.3	35.5	35.5	41.5	33.8	33.8	39.5	31.8	31.8	37.2
			SHC	32.0	38.5	45.0	30.8	37.0	43.3	29.5	35.5	41.5	28.0	33.8	39.5	26.4	31.8	37.2
			kW	8.4			9.5			10.7			11.9				13.2	
		19.4	THC	39.6	39.6	44.2	37.8	37.8	43.4	36.0	36.0	42.5	34.0	34.0	41.4	31.8	31.8	39.9
			SHC	27.3	35.7	44.2	26.5	35.0	43.4	25.8	34.1	42.5	24.9	33.1	41.4	23.8	31.8	39.9
			kW		8.5			9.5			10.7			11.9			13.2	
		22.2	THC	43.0	43.0	43.0	40.7	40.7	40.7	–	–	–	–	–	–	–	–	–
			SHC	18.8	27.4	36.0	18.0	26.6	35.3	–	–	–	–	–	–	–	–	–
			kW	8.7				9.7			–			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD14 - 40RUA14 **COMBINATION RATINGS** **ENGLISH**

				Ambient Temperature															
				85.0			95.0			105.0			115.0			125.0			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	
3600 cfm	EAT (wb)	58.0	THC	116.6	116.6	131.3	112.5	112.5	126.8	108.0	108.0	121.7	102.9	102.9	115.9	97.1	97.1	109.4	
			SHC	101.8	116.6	131.3	98.2	112.5	126.8	94.3	108.0	121.7	89.8	102.9	115.9	84.8	97.1	109.4	
			kW		8.1			9.2			10.4			11.6			12.9		
		62.0	THC	118.8	118.8	130.6	114.0	114.0	128.0	108.7	108.7	124.9	103.0	103.0	120.4	97.2	97.2	113.7	
			SHC	94.3	112.5	130.6	91.9	110.0	128.0	89.1	107.0	124.9	85.5	103.0	120.4	80.7	97.2	113.7	
			kW		8.1			9.2			10.4			11.6			12.9		
		67.0	THC	128.0	128.0	128.0	122.8	122.8	122.8	117.1	117.1	117.1	110.6	110.6	110.6	103.4	103.4	103.4	
			SHC	75.9	94.4	112.8	73.8	92.2	110.7	71.4	89.9	108.3	68.9	87.3	105.7	66.0	84.4	102.8	
			kW		8.3			9.4			10.6			11.8			13.1		
		72.0	THC	138.8	138.8	138.8	132.5	132.5	132.5	126.4	126.4	126.4	119.7	119.7	119.7	112.1	112.1	112.1	
			SHC	57.0	75.6	94.1	54.6	73.2	91.8	52.4	71.0	89.5	50.0	68.5	87.1	47.3	65.8	84.3	
			kW		8.5			9.6			10.7			12.0			13.3		
		76.0	THC	–	148.6	148.6	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	60.5	79.4	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		8.7			–			–			–			–		
4200 cfm	EAT (wb)	58.0	THC	121.4	121.4	136.8	117.1	117.1	131.9	112.3	112.3	126.6	107.0	107.0	120.6	100.9	100.9	113.7	
			SHC	106.0	121.4	136.8	102.2	117.1	131.9	98.1	112.3	126.6	93.4	107.0	120.6	88.1	100.9	113.7	
			kW		8.2			9.3			10.5			11.7			13.0		
		62.0	THC	121.8	121.8	141.8	117.3	117.3	137.1	112.5	112.5	131.5	107.1	107.1	125.2	101.0	101.0	118.1	
			SHC	100.8	121.3	141.8	97.4	117.3	137.1	93.4	112.5	131.5	88.9	107.1	125.2	83.9	101.0	118.1	
			kW		8.2			9.3			10.5			11.7			13.0		
		67.0	THC	130.4	130.4	130.4	124.9	124.9	124.9	119.1	119.1	119.1	112.5	112.5	115.8	105.0	105.0	112.6	
			SHC	80.5	101.8	123.1	78.3	99.6	120.8	76.0	97.2	118.5	73.4	94.6	115.8	70.4	91.5	112.6	
			kW		8.4			9.4			10.6			11.8			13.1		
		72.0	THC	141.6	141.6	141.6	134.7	134.7	134.7	128.4	128.4	128.4	121.5	121.5	121.5	113.7	113.7	113.7	
			SHC	59.0	80.3	101.7	56.5	77.8	99.2	54.2	75.6	97.0	51.8	73.1	94.5	49.0	70.4	91.7	
			kW		8.6			9.6			10.8			12.0			13.3		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
4800 cfm	EAT (wb)	58.0	THC	125.3	125.3	141.2	120.8	120.8	136.1	115.8	115.8	130.5	110.2	110.2	124.2	103.9	103.9	117.1	
			SHC	109.4	125.3	141.2	105.4	120.8	136.1	101.1	115.8	130.5	96.3	110.2	124.2	90.7	103.9	117.1	
			kW		8.3			9.4			10.5			11.8			13.1		
		62.0	THC	125.5	125.5	146.7	120.9	120.9	141.3	115.9	115.9	135.6	110.3	110.3	129.0	104.0	104.0	121.6	
			SHC	104.2	125.4	146.7	100.4	120.9	141.3	96.3	115.9	135.6	91.6	110.3	129.0	86.4	104.0	121.6	
			kW		8.3			9.4			10.5			11.8			13.1		
		67.0	THC	132.2	132.2	132.9	126.5	126.5	130.5	120.6	120.6	128.0	113.9	113.9	125.1	106.4	106.4	121.7	
			SHC	84.9	108.9	132.9	82.6	106.6	130.5	80.2	104.1	128.0	77.5	101.3	125.1	74.5	98.1	121.7	
			kW		8.4			9.5			10.6			11.9			13.1		
		72.0	THC	143.8	143.8	143.8	136.3	136.3	136.3	129.8	129.8	129.8	122.8	122.8	122.8	–	–	–	
			SHC	60.8	84.9	109.1	58.2	82.3	106.4	55.9	80.0	104.1	53.5	77.6	101.7	–	–	–	
			kW		8.6			9.7			10.8			12.1			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
5400 cfm	EAT (wb)	58.0	THC	128.5	128.5	144.8	123.8	123.8	139.5	118.7	118.7	133.8	112.9	112.9	127.2	106.4	106.4	119.9	
			SHC	112.2	128.5	144.8	108.1	123.8	139.5	103.6	118.7	133.8	98.6	112.9	127.2	92.9	106.4	119.9	
			kW		8.3			9.4			10.6			11.9			13.1		
		62.0	THC	128.6	128.6	150.4	123.9	123.9	144.8	118.8	118.8	138.9	113.0	113.0	132.1	106.4	106.4	124.5	
			SHC	106.8	128.6	150.4	102.9	123.9	144.8	98.7	118.8	138.9	93.8	113.0	132.1	88.4	106.4	124.5	
			kW		8.3			9.4			10.6			11.9			13.1		
		67.0	THC	133.7	133.7	142.1	127.8	127.8	139.5	121.8	121.8	136.9	115.0	115.0	133.7	107.5	107.5	129.8	
			SHC	89.1	115.6	142.1	86.7	113.1	139.5	84.2	110.6	136.9	81.4	107.6	133.7	78.1	103.9	129.8	
			kW		8.4			9.5			10.7			11.9			13.2		
		72.0	THC	145.3	145.3	145.3	137.6	137.6	137.6	130.9	130.9	130.9	–	–	–	–	–	–	
			SHC	62.5	89.3	116.1	59.8	86.6	113.4	57.5	84.3	111.1	–	–	–	–	–	–	
			kW		8.7			9.7			10.8			–			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
6000 cfm	EAT (wb)	58.0	THC	131.2	131.2	147.9	126.3	126.3	142.3	121.0	121.0	136.4	115.1	115.1	129.7	108.4	108.4	122.2	
			SHC	114.6	131.2	147.9	110.3	126.3	142.3	105.7	121.0	136.4	100.5	115.1	129.7	94.7	108.4	122.2	
			kW		8.4			9.5			10.7			11.9			13.2		
		62.0	THC	131.3	131.3	153.6	126.4	126.4	147.8	121.1	121.1	141.6	115.2	115.2	134.7	108.5	108.5	126.8	
			SHC	109.1	131.3	153.6	105.0	126.4	147.8	100.6	121.1	141.6	95.7	115.2	134.7	90.1	108.5	126.8	
			kW		8.4			9.5			10.7			11.9			13.2		
		67.0	THC	135.0	135.0	150.8	128.9	128.9	148.0	122.8	122.8	145.0	116.1	116.1	141.3	108.6	108.6	136.2	
			SHC	93.0	121.9	150.8	90.5	119.3	148.0	87.9	116.5	145.0	84.8	113.0	141.3	81.1	108.6	136.2	
			kW		8.5			9.5			10.7			11.9			13.2		
		72.0	THC	146.6	146.6	146.6	138.8	138.8	138.8	–	–	–	–	–	–	–	–	–	
			SHC	64.2	93.6	123.0	61.5	90.9	120.3	–	–	–	–	–	–	–	–	–	
			kW		8.7			9.7			–			–			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD16 - 40RUA16 **COMBINATION RATINGS** **SI**

				Ambient Temperature														
				29.4			35.0			40.6			46.1			51.7		
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)		
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
2124 L/S	EAT (wb)	14.4	THC	44.1	44.1	49.7	42.6	42.6	48.0	40.9	40.9	46.1	39.2	39.2	44.2	37.3	37.3	42.0
			SHC	38.5	44.1	49.7	37.2	42.6	48.0	35.8	40.9	46.1	34.2	39.2	44.2	32.5	37.3	42.0
			kW		9.7			10.9			12.3			13.8			15.4	
		16.7	THC	45.3	45.3	49.0	43.4	43.4	48.0	41.4	41.4	46.9	39.4	39.4	45.4	37.3	37.3	43.6
			SHC	35.5	42.3	49.0	34.6	41.3	48.0	33.6	40.3	46.9	32.4	38.9	45.4	31.0	37.3	43.6
			kW		9.7			10.9			12.3			13.8			15.4	
		19.4	THC	49.2	49.2	49.2	47.1	47.1	47.1	44.9	44.9	44.9	42.6	42.6	42.6	40.0	40.0	40.0
			SHC	28.8	35.6	42.5	28.0	34.8	41.6	27.1	33.9	40.7	26.1	32.9	39.7	25.1	31.9	38.7
			kW		9.9			11.1			12.4			13.9			15.5	
		22.2	THC	53.3	53.3	53.3	51.1	51.1	51.1	48.8	48.8	48.8	46.2	46.2	46.2	43.5	43.5	43.5
			SHC	21.8	28.7	35.5	21.0	27.9	34.7	20.1	27.0	33.9	19.2	26.1	32.9	18.2	25.1	31.9
			kW		10.1			11.3			12.6			14.1			15.6	
		24.4	THC	–	56.7	56.7	–	54.5	54.5	–	52.0	52.0	–	–	–	–	–	–
			SHC	–	23.0	30.0	–	22.2	29.2	–	21.4	28.3	–	–	–	–	–	–
			kW		10.3			11.5			12.8			–			–	
2478 L/S	EAT (wb)	14.4	THC	46.1	46.1	52.0	44.5	44.5	50.1	42.8	42.8	48.2	40.9	40.9	46.0	38.8	38.8	43.7
			SHC	40.3	46.1	52.0	38.9	44.5	50.1	37.3	42.8	48.2	35.7	40.9	46.0	33.9	38.8	43.7
			kW		9.8			11.0			12.4			13.8			15.4	
		16.7	THC	46.5	46.5	53.3	44.7	44.7	51.7	42.8	42.8	50.0	40.9	40.9	47.8	38.8	38.8	45.4
			SHC	38.0	45.6	53.3	36.8	44.3	51.7	35.6	42.8	50.0	34.0	40.9	47.8	32.2	38.8	45.4
			kW		9.8			11.0			12.4			13.8			15.4	
		19.4	THC	50.2	50.2	50.2	48.1	48.1	48.1	45.8	45.8	45.8	43.3	43.3	43.5	40.7	40.7	42.4
			SHC	30.6	38.4	46.3	29.7	37.5	45.4	28.8	36.6	44.5	27.8	35.6	43.5	26.8	34.6	42.4
			kW		10.0			11.2			12.5			13.9			15.5	
		22.2	THC	54.3	54.3	54.3	52.1	52.1	52.1	49.6	49.6	49.6	47.0	47.0	47.0	44.2	44.2	44.2
			SHC	22.5	30.4	38.3	21.7	29.6	37.5	20.8	28.7	36.6	19.9	27.8	35.6	18.9	26.8	34.6
			kW		10.2			11.4			12.7			14.1			15.7	
		24.4	THC	–	57.8	57.8	–	55.4	55.4	–	–	–	–	–	–	–	–	–
			SHC	–	23.9	31.9	–	23.1	31.1	–	–	–	–	–	–	–	–	–
			kW		10.4			11.6			–			–			–	
2832 L/S	EAT (wb)	14.4	THC	47.8	47.8	53.8	46.1	46.1	51.9	44.2	44.2	49.8	42.2	42.2	47.6	40.0	40.0	45.1
			SHC	41.7	47.8	53.8	40.2	46.1	51.9	38.6	44.2	49.8	36.8	42.2	47.6	34.9	40.0	45.1
			kW		9.9			11.1			12.4			13.9			15.5	
		16.7	THC	47.8	47.8	55.9	46.1	46.1	53.9	44.3	44.3	51.7	42.2	42.2	49.4	40.0	40.0	46.8
			SHC	39.7	47.8	55.9	38.3	46.1	53.9	36.8	44.3	51.7	35.1	42.2	49.4	33.3	40.0	46.8
			kW		9.9			11.1			12.4			13.9			15.5	
		19.4	THC	50.9	50.9	50.9	48.8	48.8	49.0	46.4	46.4	48.1	43.9	43.9	47.0	41.2	41.2	45.8
			SHC	32.2	41.1	49.9	31.3	40.2	49.0	30.4	39.2	48.1	29.4	38.2	47.0	28.3	37.1	45.8
			kW		10.0			11.2			12.5			14.0			15.5	
		22.2	THC	55.1	55.1	55.1	52.8	52.8	52.8	50.3	50.3	50.3	47.6	47.6	47.6	44.7	44.7	44.7
			SHC	23.2	32.1	41.0	22.3	31.2	40.2	21.5	30.4	39.2	20.5	29.4	38.3	19.5	28.4	37.3
			kW		10.2			11.4			12.7			14.2			15.7	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
3186 L/S	EAT (wb)	14.4	THC	49.1	49.1	55.4	47.3	47.3	53.3	45.4	45.4	51.1	43.3	43.3	48.8	41.0	41.0	46.2
			SHC	42.9	49.1	55.4	41.3	47.3	53.3	39.6	45.4	51.1	37.8	43.3	48.8	35.8	41.0	46.2
			kW		9.9			11.1			12.5			13.9			15.5	
		16.7	THC	49.2	49.2	57.5	47.4	47.4	55.4	45.4	45.4	53.1	43.3	43.3	50.6	41.0	41.0	47.9
			SHC	40.8	49.2	57.5	39.3	47.4	55.4	37.7	45.4	53.1	36.0	43.3	50.6	34.1	41.0	47.9
			kW		9.9			11.1			12.5			13.9			15.5	
		19.4	THC	51.5	51.5	53.4	49.3	49.3	52.5	47.0	47.0	51.4	44.4	44.4	50.3	41.7	41.7	49.0
			SHC	33.8	43.6	53.4	32.9	42.7	52.5	31.9	41.7	51.4	30.9	40.6	50.3	29.7	39.4	49.0
			kW		10.0			11.2			12.6			14.0			15.6	
		22.2	THC	55.7	55.7	55.7	53.3	53.3	53.3	50.8	50.8	50.8	48.0	48.0	48.0	45.0	45.0	45.0
			SHC	23.8	33.7	43.6	23.0	32.9	42.7	22.1	32.0	41.9	21.1	31.0	40.9	20.1	30.0	39.8
			kW		10.3			11.4			12.8			14.2			15.7	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
3540 L/S	EAT (wb)	14.4	THC	50.2	50.2	56.6	48.4	48.4	54.5	46.4	46.4	52.3	44.2	44.2	49.8	41.8	41.8	47.1
			SHC	43.9	50.2	56.6	42.2	48.4	54.5	40.5	46.4	52.3	38.6	44.2	49.8	36.5	41.8	47.1
			kW		10.0			11.2			12.5			14.0			15.6	
		16.7	THC	50.3	50.3	58.8	48.4	48.4	56.6	46.4	46.4	54.2	44.2	44.2	51.7	41.8	41.8	48.9
			SHC	41.8	50.3	58.8	40.2	48.4	56.6	38.5	46.4	54.2	36.7	44.2	51.7	34.8	41.8	48.9
			kW		10.0			11.2			12.5			14.0			15.6	
		19.4	THC	52.0	52.0	56.7	49.8	49.8	55.7	47.4	47.4	54.5	44.8	44.8	53.3	42.1	42.1	51.7
			SHC	35.3	46.0	56.7	34.3	45.0	55.7	33.3	43.9	54.5	32.2	42.7	53.3	30.9	41.3	51.7
			kW		10.1			11.3			12.6			14.0			15.6	
		22.2	THC	56.1	56.1	56.1	53.7	53.7	53.7	51.2	51.2	51.2	–	–	–	–	–	–
			SHC	24.4	35.3	46.1	23.6	34.4	45.3	22.7	33.5	44.4	–	–	–	–	–	–
			kW		10.3			11.5			12.8			14.2			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD16 - 40RUA16 **COMBINATION RATINGS** **ENGLISH**

				Ambient Temperature															
				85.0			95.0			105.0			115.0			125.0			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	
4500 cfm	EAT (wb)	58.0	THC	150.4	150.4	169.5	145.3	145.3	163.7	139.7	139.7	157.4	133.7	133.7	150.7	127.1	127.1	143.2	
			SHC	131.3	150.4	169.5	126.8	145.3	163.7	122.0	139.7	157.4	116.7	133.7	150.7	111.0	127.1	143.2	
			kW		9.7			10.9			12.3			13.8			15.4		
		62.0	THC	154.4	154.4	167.2	148.0	148.0	163.8	141.4	141.4	160.1	134.4	134.4	155.0	127.2	127.2	148.8	
			SHC	121.2	144.2	167.2	118.0	140.9	163.8	114.7	137.4	160.1	110.5	132.8	155.0	105.7	127.2	148.8	
			kW		9.7			10.9			12.3			13.8			15.4		
		67.0	THC	167.7	167.7	167.7	160.7	160.7	160.7	153.3	153.3	153.3	145.2	145.2	145.2	136.6	136.6	136.6	
			SHC	98.3	121.6	144.9	95.4	118.7	142.0	92.4	115.7	138.9	89.1	112.4	135.6	85.6	108.9	132.1	
			kW		9.9			11.1			12.4			13.9			15.5		
		72.0	THC	181.8	181.8	181.8	174.4	174.4	174.4	166.5	166.5	166.5	157.8	157.8	157.8	148.5	148.5	148.5	
			SHC	74.4	97.8	121.2	71.7	95.1	118.5	68.7	92.1	115.5	65.5	88.9	112.3	62.1	85.5	108.8	
			kW		10.1			11.3			12.6			14.1			15.6		
		76.0	THC	–	193.5	193.5	–	185.8	185.8	–	177.4	177.4	–	–	–	–	–	–	
			SHC	–	78.4	102.4	–	75.8	99.7	–	72.9	96.7	–	–	–	–	–	–	
			kW		10.3			11.5			12.8			–			–		
5250 cfm	EAT (wb)	58.0	THC	157.4	157.4	177.4	151.8	151.8	171.1	145.9	145.9	164.4	139.4	139.4	157.1	132.3	132.3	149.1	
			SHC	137.4	157.4	177.4	132.6	151.8	171.1	127.4	145.9	164.4	121.7	139.4	157.1	115.5	132.3	149.1	
			kW		9.8			11.0			12.4			13.8			15.4		
		62.0	THC	158.7	158.7	181.7	152.4	152.4	176.5	146.0	146.0	170.7	139.5	139.5	163.1	132.4	132.4	154.9	
			SHC	129.7	155.7	181.7	125.7	151.1	176.5	121.3	146.0	170.7	115.9	139.5	163.1	110.0	132.4	154.9	
			kW		9.8			11.0			12.4			13.8			15.4		
		67.0	THC	171.2	171.2	171.2	164.0	164.0	164.0	156.2	156.2	156.2	147.9	147.9	148.3	139.0	139.0	144.6	
			SHC	104.3	131.1	157.9	101.3	128.1	154.9	98.2	125.0	151.8	94.9	121.6	148.3	91.3	118.0	144.6	
			kW		10.0			11.2			12.5			13.9			15.5		
		72.0	THC	185.3	185.3	185.3	177.6	177.6	177.6	169.4	169.4	169.4	160.5	160.5	160.5	150.7	150.7	150.7	
			SHC	76.8	103.7	130.7	74.0	100.9	127.9	71.0	98.0	124.9	67.9	94.7	121.6	64.4	91.3	118.1	
			kW		10.2			11.4			12.7			14.1			15.7		
		76.0	THC	–	197.1	197.1	–	189.1	189.1	–	–	–	–	–	–	–	–	–	
			SHC	–	81.5	109.0	–	78.8	106.2	–	–	–	–	–	–	–	–	–	
			kW		10.4			11.6			–			–			–		
6000 cfm	EAT (wb)	58.0	THC	163.0	163.0	183.7	157.2	157.2	177.1	150.8	150.8	170.0	144.0	144.0	162.3	136.5	136.5	153.8	
			SHC	142.4	163.0	183.7	137.2	157.2	177.1	131.7	150.8	170.0	125.7	144.0	162.3	119.2	136.5	153.8	
			kW		9.9			11.1			12.4			13.9			15.5		
		62.0	THC	163.2	163.2	190.8	157.3	157.3	183.9	151.0	151.0	176.5	144.1	144.1	168.5	136.6	136.6	159.7	
			SHC	135.6	163.2	190.8	130.6	157.3	183.9	125.4	151.0	176.5	119.7	144.1	168.5	113.5	136.6	159.7	
			kW		9.9			11.1			12.4			13.9			15.5		
		67.0	THC	173.8	173.8	173.8	166.4	166.4	167.3	158.4	158.4	164.0	149.9	149.9	160.3	140.7	140.7	156.4	
			SHC	109.9	140.1	170.3	106.9	137.1	167.3	103.7	133.8	164.0	100.3	130.3	160.3	96.6	126.5	156.4	
			kW		10.0			11.2			12.5			14.0			15.5		
		72.0	THC	187.9	187.9	187.9	180.0	180.0	180.0	171.6	171.6	171.6	162.4	162.4	162.4	152.5	152.5	152.5	
			SHC	79.0	109.4	139.8	76.2	106.6	137.0	73.2	103.6	133.9	70.0	100.3	130.7	66.6	96.9	127.2	
			kW		10.2			11.4			12.7			14.2			15.7		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
6750 cfm	EAT (wb)	58.0	THC	167.6	167.6	188.9	161.5	161.5	182.0	154.9	154.9	174.5	147.7	147.7	166.4	139.8	139.8	157.6	
			SHC	146.3	167.6	188.9	141.0	161.5	182.0	135.2	154.9	174.5	128.9	147.7	166.4	122.1	139.8	157.6	
			kW		9.9			11.1			12.5			13.9			15.5		
		62.0	THC	167.7	167.7	196.1	161.6	161.6	188.9	155.0	155.0	181.2	147.8	147.8	172.8	139.9	139.9	163.6	
			SHC	139.3	167.7	196.1	134.2	161.6	188.9	128.7	155.0	181.2	122.7	147.8	172.8	116.2	139.9	163.6	
			kW		9.9			11.1			12.5			13.9			15.5		
		67.0	THC	175.8	175.8	182.2	168.3	168.3	179.0	160.2	160.2	175.5	151.5	151.5	171.6	142.3	142.3	167.1	
			SHC	115.2	148.7	182.2	112.2	145.6	179.0	108.9	142.2	175.5	105.4	138.5	171.6	101.5	134.3	167.1	
			kW		10.0			11.2			12.6			14.0			15.6		
		72.0	THC	189.9	189.9	189.9	181.9	181.9	181.9	173.2	173.2	173.2	163.9	163.9	163.9	153.7	153.7	153.7	
			SHC	81.2	114.9	148.7	78.4	112.1	145.8	75.3	109.1	142.8	72.1	105.8	139.5	68.6	102.3	135.9	
			kW		10.3			11.4			12.8			14.2			15.7		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
7500 cfm	EAT (wb)	58.0	THC	171.4	171.4	193.2	165.1	165.1	186.0	158.2	158.2	178.3	150.8	150.8	169.9	142.7	142.7	160.7	
			SHC	149.7	171.4	193.2	144.1	165.1	186.0	138.1	158.2	178.3	131.6	150.8	169.9	124.6	142.7	160.7	
			kW		10.0			11.2			12.5			14.0			15.6		
		62.0	THC	171.5	171.5	200.6	165.2	165.2	193.1	158.3	158.3	185.1	150.9	150.9	176.4	142.7	142.7	166.9	
			SHC	142.5	171.5	200.6	137.2	165.2	193.1	131.5	158.3	185.1	125.3	150.9	176.4	118.6	142.7	166.9	
			kW		10.0			11.2			12.5			14.0			15.6		
		67.0	THC	177.5	177.5	193.4	169.8	169.8	190.0	161.7	161.7	186.1	153.0	153.0	181.7	143.7	143.7	176.3	
			SHC	120.3	156.8	193.4	117.1	153.5	190.0	113.7	149.9	186.1	110.0	145.8	181.7	105.6	140.9	176.3	
			kW		10.1			11.3			12.6			14.0			15.6		
		72.0	THC	191.5	191.5	191.5	183.3	183.3	183.3	174.6	174.6	174.6	165.0	165.0	165.0	–	–	–	
			SHC	83.2	120.3	157.3	80.4	117.4	154.5	77.4	114.4	151.4	74.1	111.1	148.1	–	–	–	
			kW		10.3			11.5			12.8			14.2			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD25 - 40RUA25 **COMBINATION RATINGS** **SI**

				Ambient Temperature													
				29.4			35.0			40.6			46.1			51.7	
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)	
				23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4	23.9	26.7	29.4
2832 L/S	EAT (wb)	14.4	THC	58.3	58.3	65.7	56.2	56.2	63.3	54.0	54.0	60.8	51.5	51.5	58.0	48.7	48.7	54.9
			SHC	50.9	58.3	65.7	49.1	56.2	63.3	47.1	54.0	60.8	44.9	51.5	58.0	42.5	48.7	54.9
			kW	11.6			13.0			14.5			16.3			18.3		
		16.7	THC	59.8	59.8	64.9	57.3	57.3	63.6	54.5	54.5	62.0	51.7	51.7	59.8	48.7	48.7	57.0
			SHC	47.0	56.0	64.9	45.8	54.7	63.6	44.4	53.2	62.0	42.6	51.2	59.8	40.5	48.7	57.0
			kW	11.7			13.0			14.6			16.3			18.3		
		19.4	THC	65.4	65.4	65.4	62.5	62.5	62.5	59.4	59.4	59.4	56.0	56.0	56.0	52.3	52.3	52.3
			SHC	38.3	47.4	56.4	37.1	46.2	55.2	35.8	44.9	53.9	34.5	43.5	52.5	33.0	42.0	51.0
			kW		11.9			13.3			14.6			16.6			18.5	
		22.2	THC	71.6	71.6	71.6	68.4	68.4	68.4	65.0	65.0	65.0	61.3	61.3	61.3	57.2	57.2	57.2
			SHC	29.3	38.4	47.5	28.1	37.2	46.3	26.8	35.9	45.0	25.4	34.5	43.6	24.0	33.0	42.1
			kW		12.3			13.6			15.1			16.9		18.8		
		24.4	THC	–	76.8	76.8	–	73.4	73.4	–	69.7	69.7	–	–	–	–	–	–
			SHC	–	31.1	40.6	–	29.9	39.3	–	28.6	38.0	–	–	–	–	–	–
			kW		12.6			13.9			15.4			–			–	
3304 L/S	EAT (wb)	14.4	THC	61.1	61.1	68.8	58.9	58.9	66.4	56.4	56.4	63.6	53.7	53.7	60.6	50.7	50.7	57.2
			SHC	53.3	61.1	68.8	51.4	58.9	66.4	49.3	56.4	63.6	46.9	53.7	60.6	44.3	50.7	57.2
			kW		11.7			13.1			14.7			16.5		18.4		
		16.7	THC	61.7	61.7	70.5	59.1	59.1	68.5	56.5	56.5	66.0	53.8	53.8	62.9	50.8	50.8	59.4
			SHC	50.4	60.4	70.5	48.8	58.6	68.5	46.9	56.5	66.0	44.7	53.8	62.9	42.2	50.8	59.4
			kW		11.8			13.1			14.7			16.5			18.4	
		19.4	THC	67.0	67.0	67.0	64.0	64.0	64.0	60.7	60.7	60.7	57.2	57.2	57.5	53.3	53.3	55.9
			SHC	40.7	51.1	61.5	39.5	49.9	60.3	38.2	48.5	58.9	36.7	47.1	57.5	35.2	45.5	55.9
			kW		12.0			13.4			14.9			16.6			18.6	
		22.2	THC	73.2	73.2	73.2	69.9	69.9	69.9	66.3	66.3	66.3	62.4	62.4	62.4	58.2	58.2	58.2
			SHC	30.3	40.8	51.3	29.1	39.5	50.0	27.8	38.2	48.7	26.4	36.8	47.2	24.9	35.3	45.7
			kW		12.4			13.7			15.2			16.9			18.8	
		24.4	THC	–	78.5	78.5	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	32.4	43.2	–	–	–	–	–	–	–	–	–	–	–	–
			kW		12.7			–			–			–			–	
3776 L/S	EAT (wb)	14.4	THC	63.4	63.4	71.5	61.0	61.0	68.8	58.4	58.4	65.8	55.5	55.5	62.6	52.4	52.4	59.0
			SHC	55.4	63.4	71.5	53.3	61.0	68.8	51.0	58.4	65.8	48.5	55.5	62.6	45.7	52.4	59.0
			kW		11.9			13.2			14.8			16.6			18.5	
		16.7	THC	63.5	63.5	74.2	61.1	61.1	71.4	58.5	58.5	68.4	55.6	55.6	65.0	52.4	52.4	61.3
			SHC	52.7	63.5	74.2	50.7	61.1	71.4	48.6	58.5	68.4	46.2	55.6	65.0	43.6	52.4	61.3
			kW		11.9			13.2			14.8			16.6			18.5	
		19.4	THC	68.1	68.1	68.1	65.0	65.0	65.1	61.6	61.6	63.7	58.0	58.0	62.1	54.0	54.0	60.4
			SHC	42.9	54.7	66.4	41.7	53.4	65.1	40.3	52.0	63.7	38.8	50.5	62.1	37.3	48.8	60.4
			kW		12.1			13.4			15.0			16.7			18.6	
		22.2	THC	74.5	74.5	74.5	71.0	71.0	71.0	67.3	67.3	67.3	63.3	63.3	63.3	59.0	59.0	59.0
			SHC	31.2	43.1	54.8	30.0	41.8	53.6	28.7	40.4	52.2	27.3	39.0	50.7	25.8	37.5	49.2
			kW		12.4			13.8			15.3			17.0			18.9	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
4248 L/S	EAT (wb)	14.4	THC	65.4	65.4	73.7	62.8	62.8	70.8	60.1	60.1	67.7	57.1	57.1	64.3	53.8	53.8	60.6
			SHC	57.1	65.4	73.7	54.9	62.8	70.8	52.5	60.1	67.7	49.8	57.1	64.3	46.9	53.8	60.6
			kW		12.0			13.3			14.9			16.6			18.6	
		16.7	THC	65.4	65.4	76.5	62.9	62.9	73.5	60.1	60.1	70.3	57.1	57.1	66.8	53.8	53.8	62.9
			SHC	54.3	65.4	76.5	52.2	62.9	73.5	49.9	60.1	70.3	47.5	57.1	66.8	44.7	53.8	62.9
			kW		12.0			13.3			14.9			16.6			18.6	
		19.4	THC	69.1	69.1	71.0	65.9	65.9	69.7	62.4	62.4	68.1	58.7	58.7	66.4	54.7	54.7	64.5
			SHC	45.1	58.1	71.0	43.8	56.7	69.7	42.4	55.2	68.1	40.8	53.6	66.4	39.1	51.8	64.5
			kW		12.2			13.5			15.0			16.7			18.7	
		22.2	THC	75.5	75.5	75.5	72.0	72.0	72.0	68.1	68.1	68.1	64.0	64.0	64.0	–	–	–
			SHC	32.1	45.2	58.3	30.9	43.9	57.0	29.5	42.6	55.6	28.1	41.1	54.1	–	–	–
			kW		12.5			13.8			15.3			17.0			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	
4719 L/S	EAT (wb)	14.4	THC	67.0	67.0	75.5	64.4	64.4	72.6	61.5	61.5	69.3	58.4	58.4	65.8	54.9	54.9	61.8
			SHC	58.5	67.0	75.5	56.2	64.4	72.6	53.7	61.5	69.3	51.0	58.4	65.8	47.9	54.9	61.8
			kW		12.1			13.4			15.0			16.7			18.7	
		16.7	THC	67.1	67.1	78.4	64.4	64.4	75.4	61.5	61.5	72.0	58.4	58.4	68.3	54.9	54.9	64.2
			SHC	55.7	67.1	78.4	53.5	64.4	75.4	51.1	61.5	72.0	48.5	58.4	68.3	45.6	54.9	64.2
			kW		12.1			13.4			15.0			16.7			18.7	
		19.4	THC	69.9	69.9	75.4	66.6	66.6	74.0	63.1	63.1	72.3	59.3	59.3	70.4	55.3	55.3	67.9
			SHC	47.1	61.3	75.4	45.7	59.8	74.0	44.3	58.3	72.3	42.6	56.5	70.4	40.7	54.3	67.9
			kW		12.2			13.5			15.1			16.8			18.7	
		22.2	THC	76.3	76.3	76.3	72.7	72.7	72.7	68.7	68.7	68.7	–	–	–	–	–	–
			SHC	33.0	47.3	61.7	31.7	46.0	60.3	30.3	44.6	58.9	–	–	–	–	–	–
			kW		12.6			13.9			15.4			–			–	
		24.4	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			kW		–			–			–			–			–	

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

PERFORMANCE DATA (cont.)

38AUD25 - 40RUA25 **COMBINATION RATINGS** **ENGLISH**

				Ambient Temperature															
				85.0			95.0			105.0			115.0			125.0			
				EAT (db)			EAT (db)			EAT (db)			EAT (db)			EAT (db)			
				75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	75.0	80.0	85.0	
6000 cfm	EAT (wb)	58.0	THC	198.8	198.8	224.1	191.8	191.8	216.1	184.1	184.1	207.4	175.6	175.6	197.9	166.1	166.1	187.2	
			SHC	173.6	198.8	224.1	167.5	191.8	216.1	160.7	184.1	207.4	153.3	175.6	197.9	145.1	166.1	187.2	
			kW		11.6			13.0			14.5			16.3			18.3		
		62.0	THC	204.2	204.2	221.5	195.5	195.5	216.9	186.1	186.1	211.6	176.5	176.5	204.0	166.3	166.3	194.5	
			SHC	160.5	191.0	221.5	156.2	186.5	216.9	151.4	181.5	211.6	145.3	174.7	204.0	138.1	166.3	194.5	
			kW		11.7			13.0			14.6			16.3			18.3		
		67.0	THC	223.1	223.1	223.1	213.4	213.4	213.4	202.7	202.7	202.7	191.2	191.2	191.2	178.5	178.5	178.5	
			SHC	130.8	161.7	192.6	126.7	157.6	188.4	122.3	153.2	184.0	117.6	148.4	179.2	112.5	143.3	174.1	
			kW		11.9			13.3			14.6			16.6			18.5		
		72.0	THC	244.3	244.3	244.3	233.5	233.5	233.5	221.8	221.8	221.8	209.1	209.1	209.1	195.3	195.3	195.3	
			SHC	99.9	131.0	162.2	95.9	126.9	158.0	91.5	122.5	153.6	86.8	117.8	148.8	81.8	112.7	143.7	
			kW		12.3			13.6			15.1			16.9			18.8		
		76.0	THC	–	262.2	262.2	–	250.5	250.5	–	237.8	237.8	–	–	–	–	–	–	
			SHC	–	106.2	138.4	–	102.1	134.2	–	97.7	129.6	–	–	–	–	–	–	
			kW		12.6			13.9			15.4			–			–		
7000 cfm	EAT (wb)	58.0	THC	208.5	208.5	234.9	200.9	200.9	226.4	192.5	192.5	216.9	183.3	183.3	206.6	173.1	173.1	195.1	
			SHC	182.0	208.5	234.9	175.4	200.9	226.4	168.1	192.5	216.9	160.1	183.3	206.6	151.1	173.1	195.1	
			kW		11.7			13.1			14.7			16.5		18.4			
		62.0	THC	210.4	210.4	240.6	201.7	201.7	233.7	192.7	192.7	225.3	183.5	183.5	214.6	173.3	173.3	202.6	
			SHC	171.9	206.2	240.6	166.4	200.1	233.7	160.0	192.7	225.3	152.4	183.5	214.6	143.9	173.3	202.6	
			kW		11.8			13.1			14.7			16.5			18.4		
		67.0	THC	228.5	228.5	228.5	218.2	218.2	218.2	207.0	207.0	207.0	195.0	195.0	196.1	181.9	181.9	190.6	
			SHC	138.9	174.4	210.0	134.7	170.2	205.7	130.2	165.6	201.1	125.3	160.7	196.1	120.0	155.3	190.6	
			kW		12.0			13.4			14.9			16.6			18.6		
		72.0	THC	249.9	249.9	249.9	238.6	238.6	238.6	226.3	226.3	226.3	213.0	213.0	213.0	198.6	198.6	198.6	
			SHC	103.4	139.1	174.9	99.2	134.9	170.6	94.8	130.4	166.1	90.0	125.6	161.2	84.9	120.4	155.9	
			kW		12.4			13.7			15.2			16.9			18.8		
		76.0	THC	–	268.0	268.0	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	110.5	147.3	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		12.7			–			–			–			–		
8000 cfm	EAT (wb)	58.0	THC	216.4	216.4	243.8	208.2	208.2	234.7	199.3	199.3	224.6	189.5	189.5	213.6	178.7	178.7	201.4	
			SHC	188.9	216.4	243.8	181.8	208.2	234.7	174.0	199.3	224.6	165.5	189.5	213.6	156.0	178.7	201.4	
			kW		11.9			13.2			14.8			16.6			18.5		
		62.0	THC	216.6	216.6	253.3	208.4	208.4	243.7	199.5	199.5	233.3	189.7	189.7	221.8	178.8	178.8	209.1	
			SHC	179.9	216.6	253.3	173.1	208.4	243.7	165.7	199.5	233.3	157.6	189.7	221.8	148.6	178.8	209.1	
			kW		11.9			13.2			14.8			16.6			18.5		
		67.0	THC	232.5	232.5	232.5	221.8	221.8	222.2	210.3	210.3	217.3	197.9	197.9	212.0	184.4	184.4	206.0	
			SHC	146.5	186.6	226.6	142.2	182.2	222.2	137.6	177.4	217.3	132.5	172.2	212.0	127.1	166.5	206.0	
			kW		12.1			13.4			15.0			16.7			18.6		
		72.0	THC	254.2	254.2	254.2	242.4	242.4	242.4	229.7	229.7	229.7	216.0	216.0	216.0	201.2	201.2	201.2	
			SHC	106.6	146.9	187.1	102.4	142.6	182.8	97.9	138.0	178.1	93.0	133.1	173.1	87.9	127.8	167.7	
			kW		12.4			13.8			15.3			17.0			18.9		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
9000 cfm	EAT (wb)	58.0	THC	223.0	223.0	251.3	214.4	214.4	241.6	205.0	205.0	231.0	194.7	194.7	219.4	183.4	183.4	206.6	
			SHC	194.7	223.0	251.3	187.2	214.4	241.6	179.0	205.0	231.0	170.0	194.7	219.4	160.1	183.4	206.6	
			kW		12.0			13.3			14.9			16.6			18.6		
		62.0	THC	223.2	223.2	261.0	214.6	214.6	250.9	205.2	205.2	239.9	194.9	194.9	227.9	183.5	183.5	214.5	
			SHC	185.4	223.2	261.0	178.2	214.6	250.9	170.4	205.2	239.9	161.9	194.9	227.9	152.4	183.5	214.5	
			kW		12.0			13.3			14.9			16.6			18.6		
		67.0	THC	235.8	235.8	242.4	224.8	224.8	237.7	213.0	213.0	232.5	200.3	200.3	226.7	186.6	186.6	220.0	
			SHC	153.8	198.1	242.4	149.3	193.5	237.7	144.5	188.5	232.5	139.3	183.0	226.7	133.4	176.7	220.0	
			kW		12.2			13.5			15.0			16.7			18.7		
		72.0	THC	257.6	257.6	257.6	245.5	245.5	245.5	232.4	232.4	232.4	218.4	218.4	218.4	–	–	–	
			SHC	109.6	154.3	198.9	105.4	149.9	194.5	100.8	145.2	189.7	95.9	140.2	184.6	–	–	–	
			kW		12.5			13.8			15.3			17.0			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		
10,000 cfm	EAT (wb)	58.0	THC	228.7	228.7	257.7	219.7	219.7	247.6	209.8	209.8	236.5	199.1	199.1	224.4	187.3	187.3	211.0	
			SHC	199.7	228.7	257.7	191.8	219.7	247.6	183.2	209.8	236.5	173.9	199.1	224.4	163.5	187.3	211.0	
			kW		12.1			13.4			15.0			16.7			18.7		
		62.0	THC	228.8	228.8	267.6	219.8	219.8	257.1	210.0	210.0	245.5	199.2	199.2	233.0	187.4	187.4	219.1	
			SHC	190.1	228.8	267.6	182.6	219.8	257.1	174.4	210.0	245.5	165.5	199.2	233.0	155.7	187.4	219.1	
			kW		12.1			13.4			15.0			16.7			18.7		
		67.0	THC	238.5	238.5	257.4	227.3	227.3	252.4	215.2	215.2	246.7	202.4	202.4	240.1	188.7	188.7	231.8	
			SHC	160.6	209.0	257.4	156.0	204.2	252.4	151.0	198.8	246.7	145.4	192.7	240.1	138.9	185.3	231.8	
			kW		12.2			13.5			15.1			16.8			18.7		
		72.0	THC	260.3	260.3	260.3	247.9	247.9	247.9	234.5	234.5	234.5	–	–	–	–	–	–	
			SHC	112.5	161.4	210.4	108.2	157.0	205.9	103.5	152.3	201.0	–	–	–	–	–	–	
			kW		12.6			13.9			15.4			–			–		
		76.0	THC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			SHC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
			kW		–			–			–			–			–		

LEGEND:

– = Do not operate
EAT(wb) = Entering air temp (wet bulb)
SHC = Sensible heat capacity (Gross)
EAT(db) = Entering air temp (dry bulb)
L/s = Liters per second
kW = Compressor kilowatts
THC = Total heat capacity (Gross)
Cfm = Cubic feet per minute (supply air)

ELECTRICAL DATA

38AUZ07 COOLING 50 Hz

38AUZ07							WITHOUT PWRD C.O.		WITH PWRD C.O.	
V–Ph–Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		MCA	Fuse	MCA	Fuse
	MIN	MAX	RLA	LRA	WATTS	FLA				
400–3–50	380	420	9.7	64	270	0.7	13.5	20	15.9	25

38AUZ08 COOLING 50 Hz

38AUZ08							WITHOUT PWRD C.O.		WITH PWRD C.O.	
V–Ph–Hz	VOLTAGE RANGE		COMP 1		OFM (ea)					
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse	MCA	Fuse
400–3–50	380	420	12.2	101	270	0.7	16.7	25	19.0	30

38AUD12 COOLING 50 Hz

38AUD12									WITHOUT PWRD C.O.		WITH PWRD C.O.	
V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)					
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse	MCA	Fuse
400–3–50	380	420	7.8	51.5	7.8	51.5	270	0.7	19.0	25	21.3	30

38AUD14 COOLING 50 Hz

38AUD14									WITHOUT PWRD C.O.		WITH PWRD C.O.	
V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)					
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse	MCA	Fuse
400–3–50	380	420	10.6	74	10.6	74	270	0.7	25.3	30	27.6	30

38AUD16 COOLING 50 Hz

38AUD16									POWER SUPPLY		DISCONNECT SIZE	
V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM					
	Min	Max	RLA	LRA	RLA	LRA	Qty	FLA (ea)	MCA	MOCP	FLA	LRA
400–3–50	360	440	12.2	101	12.2	101	3	0.7	29.6	40	30	208

38AUD25 COOLING 50 Hz

38AUD24									POWER SUPPLY		DISCONNECT SIZE	
V–Ph–Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM					
	Min	Max	RLA	LRA	RLA	LRA	Qty	FLA (ea)	MCA	MOCP	FLA	LRA
400–3–50	360	440	16.7	111	16.7	111	4	0.7	40.4	50	42	230

APPLICATION DATA

Operating limits

Maximum outdoor temperature . . . . . 125°F

Minimum return-air temperature (40RUA) . . . . . 55°F

Maximum return-air temperature (40RUA) . . . . . 95°F

Range of acceptable saturation suction temperature . . . . . 20 to 50°F

Maximum discharge temperature . . . . . 275°F

Minimum discharge superheat . . . . . 60°F

NOTES:

1. Select air handler at no less than 300 cfm/ton (nominal condensing unit capacity).
2. Total combined draw of the field-supplied liquid line solenoid valve and air handler fan contactor must not exceed 22 va. If the specified va must be exceeded, use a remote relay to control the load.

MINIMUM OUTDOOR-AIR OPERATING TEMPERATURE

UNIT 38AU	MINIMUM OUTDOOR TEMP (°F)	
	Std	With MotorMaster I® Control†
Z07	35	–20
Z08	35	
D12	35	
D14	35	
D16	35	
D25	35	

† Wind baffles (field-supplied and field-installed) are recommended for all units with MotorMaster I® control. Refer to Low Ambient Temperature Control Installation Instructions for additional information.

Refrigerant piping

IMPORTANT: Do not bury refrigerant piping underground.

It is recommended that the refrigerant piping for all commercial split systems include a liquid line solenoid valve, a liquid line filter drier and a sight glass.

For refrigerant lines longer than 75 lineal ft, a liquid line solenoid valve installed at the **indoor** unit and a suction accumulator are required. Refer to the Refrigerant Specialties Part Numbers table.

REFRIGERANT SPECIALTIES PART NUMBERS

LIQUID LINE SIZE (in.)	LIQUID LINE SOLENOID VALVE (LLSV)	LLSV COIL	SIGHT GLASS
$^3/_8$	EF680033	EF680037	KM680008
$^1/_2$	EF680035	EF680037	KM680004
$^5/_8$	EF680036	EF680037	KM680005

NOTE: 38AUD units require TWO sets of parts.

38AUZ 07-08 PIPING RECOMMENDATIONS (SINGLE-CIRCUIT UNIT)

R–410A	Equivalent Length									
	meter	0–12		12–23		23–34		34–46		46–57	
	feet	0–38		38–75		75–113		113–150		150–188	
Model	Linear Length										
	meter	0–7.5		7.5–15		15–23		23–30		30–38	
	feet	0–25		25–50		50–75		75–100		100–125	
38AUZ*07	Liquid Line	3/8		3/8	1/2	3/8	1/2	3/8	1/2	3/8	1/2
	Max Lift										
	SI (m)										
	Novation	7.5		15		16	23	9	29	10	34
	RTPF	7.5		15		19	23	12	30	11	38
	EN (ft)										
	Novation	25		50		53	75	34	97	33	112
	RTPF	25		50		63	75	42	100	38	125
	Suction Line	7/8	7/8	7/8		7/8		7/8		1–1/8	
	Charge										
	SI (kg)										
	Novation	3.8		4.4		4.9	5.9	5.4	6.8	6.1	7.9
	RTPF	6.4		7.0		7.4	8.5	7.9	9.3	8.7	10.4
	EN (lbs)										
	Novation	8.4		9.8		10.8	13.1	11.8	14.9	13.5	17.4
	RTPF	14.0		15.4		16.4	18.7	17.4	20.5	19.1	23.0
38AUZ*08	Liquid Line	1/2		1/2	5/8	1/2	5/8	1/2	5/8	1/2	5/8
	Max Lift										
	SI (m)										
	Novation	7.5		9	11	7	10	DNU	10	10	16
	RTPF	7.5		15	NR	23	NR	27	30	18	38
	EN (ft)										
	Novation	25		30	38	24	36	DNU	35	33	53
	RTPF	25		50	NR	75	NR	89	100	62	125
	Suction Line	7/8		7/8		1–1/8		1–1/8		1–1/8	
	Charge										
	SI (kg)										
	Novation	5.5		6.3	7.2	7.4	8.6	DNU	9.9	9.1	11.2
	RTPF	8.6		9.4	NR	10.4	NR	11.3	13.0	12.2	14.3
	EN (lbs)										
	Novation	12.2		13.9	15.8	16.2	19.0	DNU	21.9	20.0	24.8
	RTPF	19.0		20.7	NR	23.0	NR	24.9	28.7	26.8	31.6

Legend:

Equivalent Length – Equivalent tubing length, including effects of refrigeration specialties devices

Linear Length – Linear tubing length, feet

Liquid Line – Tubing size, inches OD.

Max Lift – Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
- Linear Length Less than 30 m (100 ft): Minimum 1.1° C (2.0° F) subcooling entering TXV
- Linear Length Greater than 30 m (100 ft): Minimum 0.3° C (0.5° F) subcooling entering TXV

Suction Line – Tube size, inches OD

Charge – Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)

DNU – Do Not Use (pressure drop exceeds available subcooling in this model)

NR – Not Recommended (use smaller liquid tube size)

SI – Metric units of measure

EN – English units of measure (I–P)

NOTE: For applications with equivalent length greater than 57 m (188 ft) and/or linear length greater than 38 m (125 ft), contact your local Carrier representative.

38AUD 12-14 PIPING RECOMMENDATIONS (TWO-CIRCUIT UNIT)

NOTE: 38AUD requires TWO sets of refrigeration piping

R–410A	Equivalent Length									
	meter	**0–12**	**12–23**		**23–34**		**34–46**		**46–57**	
	feet	**0–38**	**38–75**		**75–113**		**113–150**		**150–188**	
Model	Linear Length									
	meter	0–7.5	7.5–15		15–23		23–30		30–38	
	feet	0–25	25–50		50–75		75–100		100–125	
38AUD*12	Liquid Line	3/8	3/8		3/8	1/2	3/8	1/2	3/8	1/2
	Max Lift									
	SI (m)									
	Novation	7.5	15		15	23	10	24	13	29
	RTPF	7.5	15		15	23	10	27	11	32
	EN (ft)									
	Novation	25	50		50	75	36	79	44	96
	RTPF	25	50		50	75	36	89	39	106
	Suction Line	7/8	7/8		7/8		7/8		1–1/8	
	Charge									
	SI (kg)									
	Novation	3.3	3.8		4.2	5.3	4.7	6.1	5.1	6.9
	RTPF	4.9	5.4		5.8	6.9	6.3	7.7	6.8	8.6
	EN (lbs)									
	Novation	7.3	8.3		9.3	11.6	10.3	13.4	11.3	15.2
	RTPF	10.9	11.9		12.9	15.2	13.9	17.0	14.9	18.8
38AUD*14	Liquid Line	3/8	1/2	5/8	1/2	5/8	1/2	5/8	1/2	5/8
	Max Lift									
	SI (m)									
	Novation	7.5	13	15	12	14	11	14	17	20
	EN (ft)									
	Novation	25	45	50	42	49	39	48	56	68
	Suction Line	7/8	7/8		7/8		1–1/8		1–1/8	
	Charge									
	SI (kg)									
	Novation	4.6	5.8	6.6	6.6	7.8	7.6	10.7	9.4	12.0
	EN (lbs)									
	Novation	10.1	12.7	14.6	14.5	17.3	16.8	23.5	20.7	26.4

Legend:

Equivalent Length – Equivalent tubing length, including effects of refrigeration specialties devices

Linear Length – Linear tubing length, feet

Liquid Line – Tubing size, inches OD.

Max Lift – Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
- Linear Length Less than 30 m (100 ft): Minimum 1.1° C (2.0° F) subcooling entering TXV
- Linear Length Greater than 30 m (100 ft): Minimum 0.3° C (0.5° F) subcooling entering TXV

Suction Line – Tube size, inches OD

Charge – Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)

DNU – Do Not Use (pressure drop exceeds available subcooling in this model)

NR – Not Recommended (use smaller liquid tube size)

SI – Metric units of measure

EN – English units of measure (I–P)

NOTE: For applications with equivalent length greater than 57 m (188 ft) and/or linear length greater than 38 m (125 ft), contact your local Carrier representative.

38AUD 16-25 PIPING RECOMMENDATIONS (TWO-CIRCUIT UNIT)

NOTE: 38AUD requires TWO sets of refrigeration piping

R–410A	Equivalent Length									
	meter	**0–12**		**12–23**		**23–34**		**34–46**		**46–57**	
	feet	**0–38**		**38–75**		**75–113**		**113–150**		**150–188**	
Model	Linear Length										
	meter	0–7.5		7.5–15		15–23		23–30		30–38	
	feet	0–25		25–50		50–75		75–100		100–125	
38AUD*16	Liquid Line	3/8	1/2	3/8	1/2	3/8	1/2	3/8	1/2	1/2	
	Max Lift										
	SI (m)										
	Novation	7.5	NR	15	NR	21	23	13	30	38	
	RTPF	DNU	7.5	DNU	15	DNU	23	DNU	30	36	
	EN (ft)										
	Novation	25	NR	50	NR	71	75	43	100	125	
	RTPF	DNU	25	DNU	50	DNU	75	DNU	100	119	
	Suction Line	7/8		1–1/8		1–1/8		1–1/8		1–1/8	
	Charge										
	SI (kg)										
	Novation	5.8	NR	6.3	NR	7.0	8.0	7.5	8.9	9.8	
	RTPF	DNU	9.8	DNU	10.7	DNU	11.6	DNU	12.4	13.3	
	EN (lbs)										
	Novation	12.9	NR	13.9	NR	15.4	17.7	16.5	19.6	21.6	
	RTPF	DNU	21.7	DNU	23.6	DNU	25.5	DNU	27.4	29.3	
38AUD*25	Liquid Line	1/2		1/2		1/2		1/2	5/8	1/2	5/8
	Max Lift										
	SI (m)										
	RTPF	7.5		15		23		20	27	23	32
	EN (ft)										
	RTPF	25		50		75		67	91	76	107
	Suction Line	7/8		1–1/8		1–1/8		1–1/8		1–1/8	
	Charge										
	SI (kg)										
	RTPF	9.4		10.3		11.2		12.1	13.8	13.0	15.1
	EN (lbs)										
	RTPF	20.7		22.8		24.7		26.6	30.4	28.6	33.3

Legend:

Equivalent Length – Equivalent tubing length, including effects of refrigeration specialties devices

Linear Length – Linear tubing length, feet

Liquid Line – Tubing size, inches OD.

Max Lift – Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
- Linear Length Less than 30 m (100 ft): Minimum 1.1° C (2.0° F) subcooling entering TXV
- Linear Length Greater than 30 m (100 ft): Minimum 0.3° C (0.5° F) subcooling entering TXV

Suction Line – Tube size, inches OD

Charge – Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)

DNU – Do Not Use (pressure drop exceeds available subcooling in this model)

NR – Not Recommended (use smaller liquid tube size)

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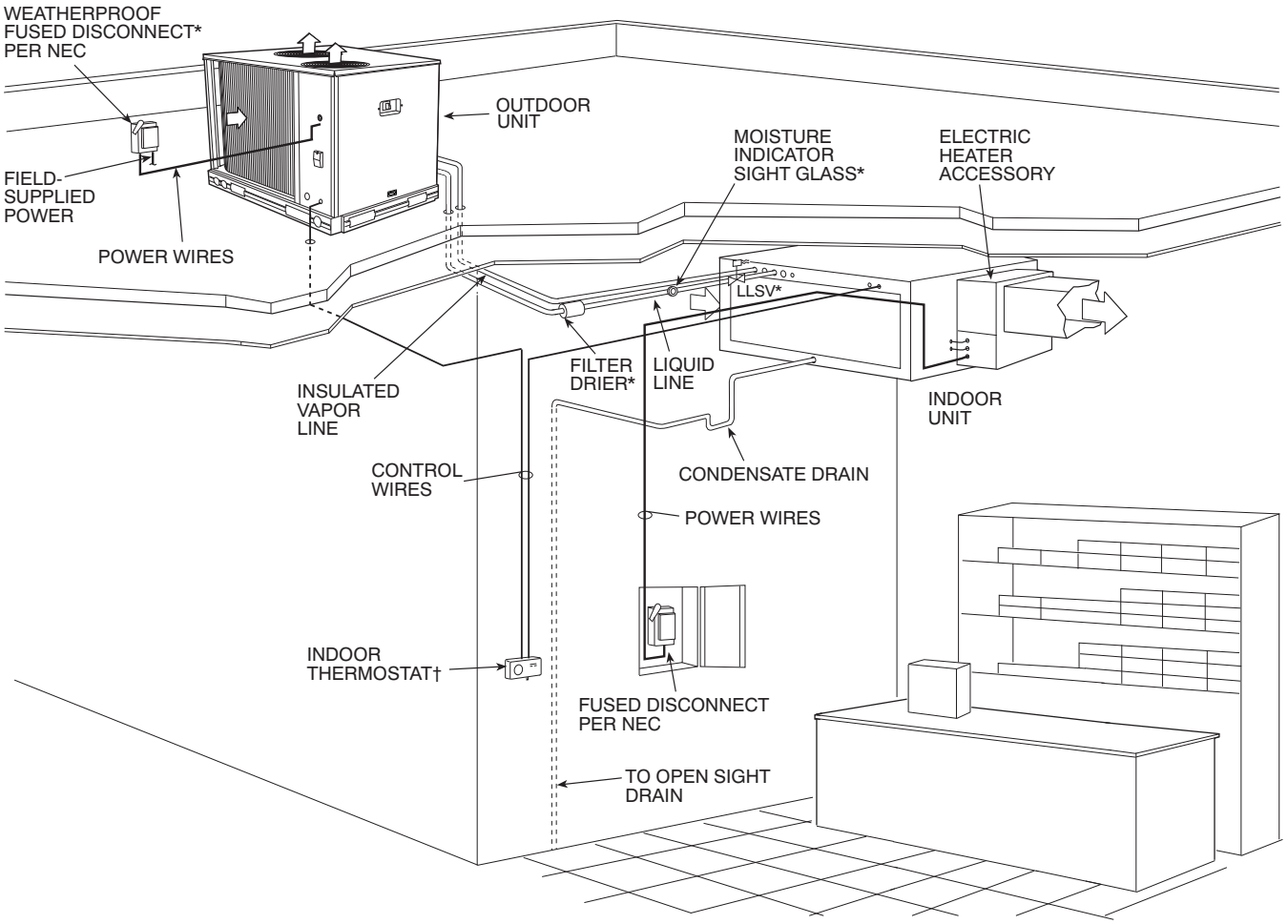
NOTE: For applications with equivalent length greater than 57 m (188 ft) and/or linear length greater than 38 m (125 ft), contact your local Carrier representative.

TYPICAL PIPING AND WIRING



C09054

LEGEND:

NEC – National Electrical Code

TXV – Thermostatic Expansion Valve

* Field–supplied

† Double riser may be required. Consult condensing unit product data catalog for details.

NOTES:

1. All piping must follow standard refrigerant piping techniques. Refer to Carrier System Design Manual for details.
2. All wiring must comply with the applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor.
5. Internal factory-supplied TXVs not shown.

GUIDE SPECIFICATIONS

Commercial Air-Cooled Condensing Units

HVAC Guide Specifications

Size Range: 18.3 kW to 59.2 kW

Carrier Model Numbers: **38AUZ, Single Circuit (07 - 08 Models) 38AUD, Dual Circuit (12, 14, 16, 25 Models)**

Part 1 — General

1.01 SYSTEM DESCRIPTION

Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

1.02 QUALITY ASSURANCE

A. Unit shall be rated in accordance with AHRI Standard 340/360.

B. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.

C. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.

D. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).

E. Air-cooled condenser coils for hermetic scroll compressor units 38AUZ and 38AUD shall be leak tested at 150 psig, and pressure tested at 650 psig.

F. Unit shall be manufactured in a facility registered to ISO 9001:2008 manufacturing quality standard.

1.03 DELIVERY, STORAGE, AND HANDLING

Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

1.04 WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2 — Products

2.01 EQUIPMENT

A. General:

Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.

B. Unit Cabinet:

1. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
2. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

C. Condenser Fans:

1. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
2. Fan blades shall be balanced.
3. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
4. Condenser fan and motor shaft shall be corrosion resistant.

D. Compressor:

1. Compressor shall be of the hermetic scroll type .
2. Compressor shall be mounted on rubber grommets.
3. Compressors shall include overload protection.
4. Compressors shall be equipped with a crankcase heater.
5. Compressor shall be equipped with internal high pressure and high temperature protection.

E. Condenser Coils:

1. Standard Aluminum fin - Copper Tube Coils:

a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.

b. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.

c. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

2. Optional Copper-fin evaporator and condenser coils:

a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.

b. Galvanized steel tube sheets shall not be acceptable.

c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

3. Optional E-coated aluminum-fin evaporator and condenser coils:

a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.

b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.

c. Color shall be high gloss black with gloss per ASTM D523-89.

d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.

e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.

f. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).

g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).

h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

4. Standard All Aluminum Novation Coils:

a. Standard condenser coils shall have all aluminum Novation Heat Exchanger Technology design consisting of aluminum multi port flat tube design and aluminum fin. Coils shall be a furnace brazed design and contain epoxy lined shrink wrap on all aluminum to copper connections.

b. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.

5. Optional E-coated aluminum-fin, aluminum tube condenser coils:

a. Shall have a flexible epoxy polymer coating uniformly applied to all coil external surface areas without material bridging between fins or louvers.

b. Coating process shall ensure complete coil encapsulation, including all exposed fin edges.

c. E-coat thickness of 0.8 to 1.2 mil with top coat having a uniform dry film thickness from 1.0 to 2.0 mil on all external coil surface areas, including fin edges, shall be provided.

d. Shall have superior hardness characteristics of 2H per ASTM D3363-00 and cross-hatch adhesion of 4B-5B per ASTM D3359-02.

e. Shall have superior impact resistance with no cracking, chipping or peeling per NSF/ANSI 51-2002 Method 10.2.

F. Refrigeration Components:

Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

G. Controls and Safeties:

1. Minimum control functions shall include:

f. Control wire terminal blocks.

g. Compressor lockout on auto-reset safety until reset from thermostat.

h. Each unit shall utilize the Comfort Alert™ Diagnostic Board that provides:

(1.) System Pressure Trip fault code indication

(2.) Short Cycling fault code indication

(3.) Locked Rotor fault code indication

(4.) Open Circuit fault code indication

(5.) Reverse Phase 3 fault code indication

(6.) Welded Contactor fault code indication

(7.) Low Voltage fault code indication

(8.) Anti-short cycle protection

(9.) Phase reversal protection

2. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
   a. High discharge pressure cutout.
   b. Low pressure cutout.

H. Operating Characteristics:
1. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____°C/F. The power consumption at full load shall not exceed _____ kW.
2. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____°C/F wet bulb and _____°C/F dry bulb, and air entering the condensing unit at _____°C/F.
3. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
4. Standard unit shall be capable to operate up to 52°C (125°F) and down to 4°C (40°F)

I. Electrical Requirements:
1. Nominal unit electrical characteristics shall be _____ v, 3-ph, 50 Hz. The unit shall be capable of satisfactory operation within voltage limits of ____ v to _____ v.
2. Unit electrical power shall be single-point connection.
3. Unit control circuit shall contain a 24-v transformer for unit control.

J. Special Features:
1. Low-Ambient Temperature Control:
   A low-ambient temperature control shall be available as a factory-installed option or as a field-installed accessory. This low-ambient control shall regulate speed of the condenser-fan motors in response to the saturated condensing temperature of the unit. The control shall maintain correct condensing pressure at outdoor temperatures down to –29°C (-20°F).
2. Unit-Mounted, Non-Fused Disconnect Switch:
   Switch shall be factory-installed and internally mounted. NEC and UL-approved non-fused switch shall provide unit power shutoff. Switch shall be accessible from outside the unit and shall provide power off lockout capability. Non-fused disconnect cannot be used when unit MOCP electrical rating exceeds 80 amps.
3. Thermostat Controls:
   a. Programmable multi-stage thermostat shall have 7-day clock, holiday scheduling, large backlit display, remote sensor capability, and Title 24 compliance.
   b. Commercial Electronic Thermostat shall have 7-day time clock, auto-changeover, multi-stage capability, and large LCD (liquid crystal display) temperature display.
4. Louvered hail Guard Package:
   Louvered hail guard package shall protect coils against damage from hail and other flying debris.
5. Condenser Coil Grille (Novation 07-14 models only):
   Grille shall add decorative appearance to unit and protect condenser coil from large objects and vandalism.

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Noise Emissions
At the Chicago Fuller Car Wash

June 28, 2107

We visited the Fuller Car Wash at 2146 Rockwell in Chicago to conduct sound level testing. This testing was performed to obtain data that could be used to project sound levels at residential locations near similar car washes at other locations.

The blowers used to dry the cars dominate the car wash noise. The sound emissions of the spray nozzles and conveyor mechanisms are secondary and radiate much lower sound levels. In addition, the sprayers and conveyor emit a higher frequency sound that decays more rapidly outside the car wash due to air absorption. Accordingly, our focus was on blower noise.

Figure 1 is an aerial view of the car wash on Rockwell and Cermak. The entrance faces Rockwell to the east while the exit faces a 3-story, brick building to the west. The doorways are roughly 10x10 feet.

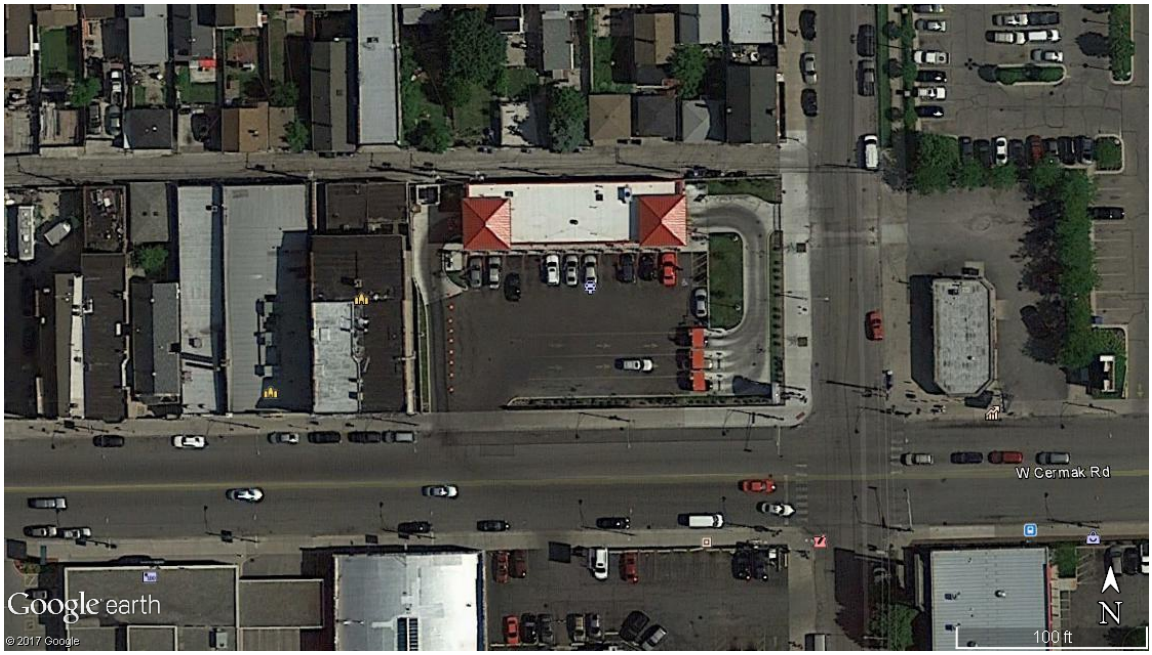

Figure 1 – An aerial view of the car wash. The entrance faces Rockwell to the east.

Figure 2 shows a view of the car wash tunnel from the exit door. There are ten (10) centrifugal blowers attached to steel poles. Two (2) blowers are located on each side and are the closest to the exit door. They are only several feet from the exit doorway. Six (6) blowers are located on overhead poles. The inlets are open inlets with no ductwork. Each blower has its own discharge nozzle so there is no discharge ductwork.

Procedure

Measurements were made at both the exit and the entrance to quantify the difference in noise emissions due to the long tunnel effect. We also made measurements at 0° azimuth (on axis) and 90° azimuth to quantify the difference due to the directivity of the tunnel.

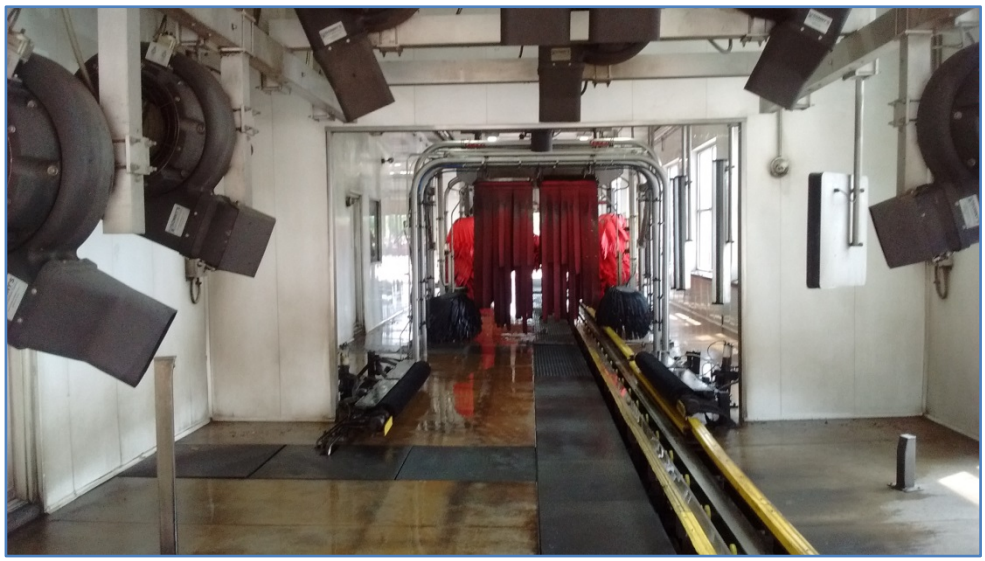

Figure 2 - View of the car wash exit showing the blowers, which are positioned a few feet from the exit door.

While a measurement distance of 25-50 feet is optimum for acoustical reasons, measurement locations at this site were constrained because of building and site configuration elements. Consequently the actual distances ranged from 10 to 33 feet.

We recorded the noise using a precision microphone and a professional grade digital recorder. A calibration tone was placed on the recording to ensure a proper analysis. Professional sound editing software was used to listen to the recording, document the annotations, and evaluate the temporal variations in noise.

We used professional grade software to analyze the recording to generate the overall sound level at 1-second intervals. **Figure 3** gives a plot of these 1-second sound level measurements from the exit and entrance doors and at 0° and 90° azimuth angles to the doors. This graph shows the rise and fall of the blower noise as they turn on and off. The figure also shows the fluctuation of blower noise as the car moves through the blower area.

We used the same sound analysis software to generate sound spectra; specifically, we generated the sound level at each of 11 different frequencies across the audible frequency range. A spectral analysis is important because the noise from the blower varies as a function of frequency. Also, how sound decays over distance varies as a function of frequency. **Figure 4** shows the results of this analysis. In this chart, we normalized all the data to a distance of 50 feet for easy comparison. We also corrected the exit data since it was confounded by reflections from the nearby building. The entrance data at 90 degrees was corrected to extract the influence of background noise. Finally, we smoothed the spectra slightly because there was some jaggedness that was likely a result of building reflections or tunnel resonance.

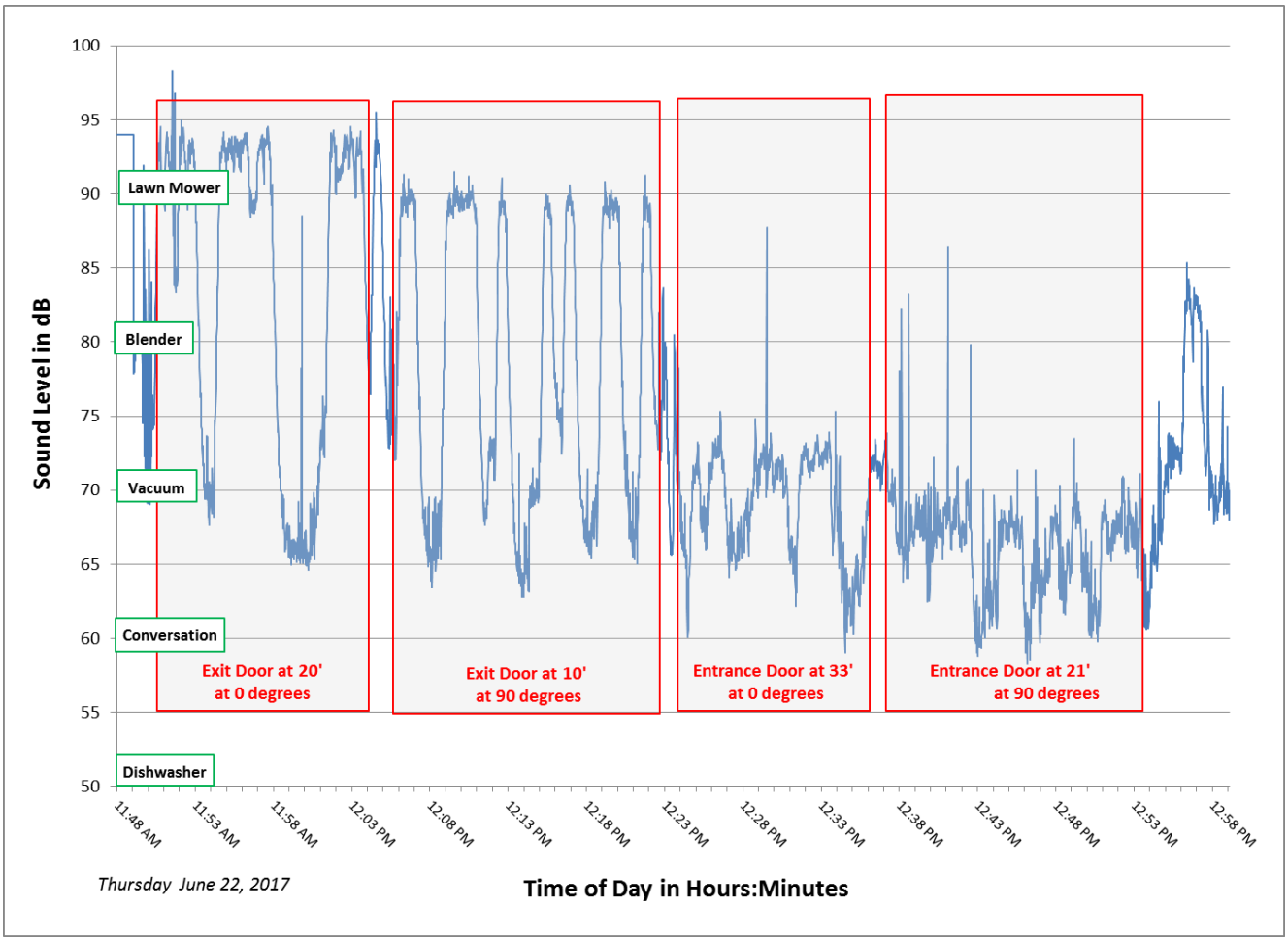

Figure 3 - Time series sound level of the recorded sample taken at the car wash.

Findings

As seen in **Figure 4**, all of the noise spectra show a prominence in the 500-2000 Hz range. For reference, a tea kettle whistle is about 1000 Hz. Because the fans are not large fans, there is not much low frequency energy. And because there is no ductwork, there is not much high frequency noise from aerodynamic flow.

The most important finding is the overall (total) A-weighted level shown on the left-hand side of **Figure 4**. The graph clearly shows that the exit side generates 14 dB greater noises than the entrance. This means the exit is three times louder than the entrance. This fact is important in orientating the exit toward less sensitive receivers.

> The **total A-weighted sound level** is the overall sound level with a filter applied to the noise measurement that diminishes the levels in the low frequencies below 500 Hz. The A-weighting filter is the most commonly used metric in noise assessment because it mimics the low-frequency roll-off of the ear.

Figure 4 also reveals that there is a significant directivity character to the car wash. In other words, the tunnel radiated sound significantly along its axis (at 0° azimuth) and 10 dB less to the side (at 90°). A 10 dB reduction means that the noise is half as loud to the side as it is directly in front. This fact has important implications in siting the car wash tunnel relative to receivers near the facility.

Table 1 below, summarizes our findings.

Table 1 - Sound level emissions from a car wash with ten centrifugal blowers

Measurement Location	Sound Level at 50 feet
Exit at 0 degrees	83 dB
Exit at 90 degrees	73 dB
Entrance at 0 degrees	68 dB
Entrance at 90 degrees	58 dB

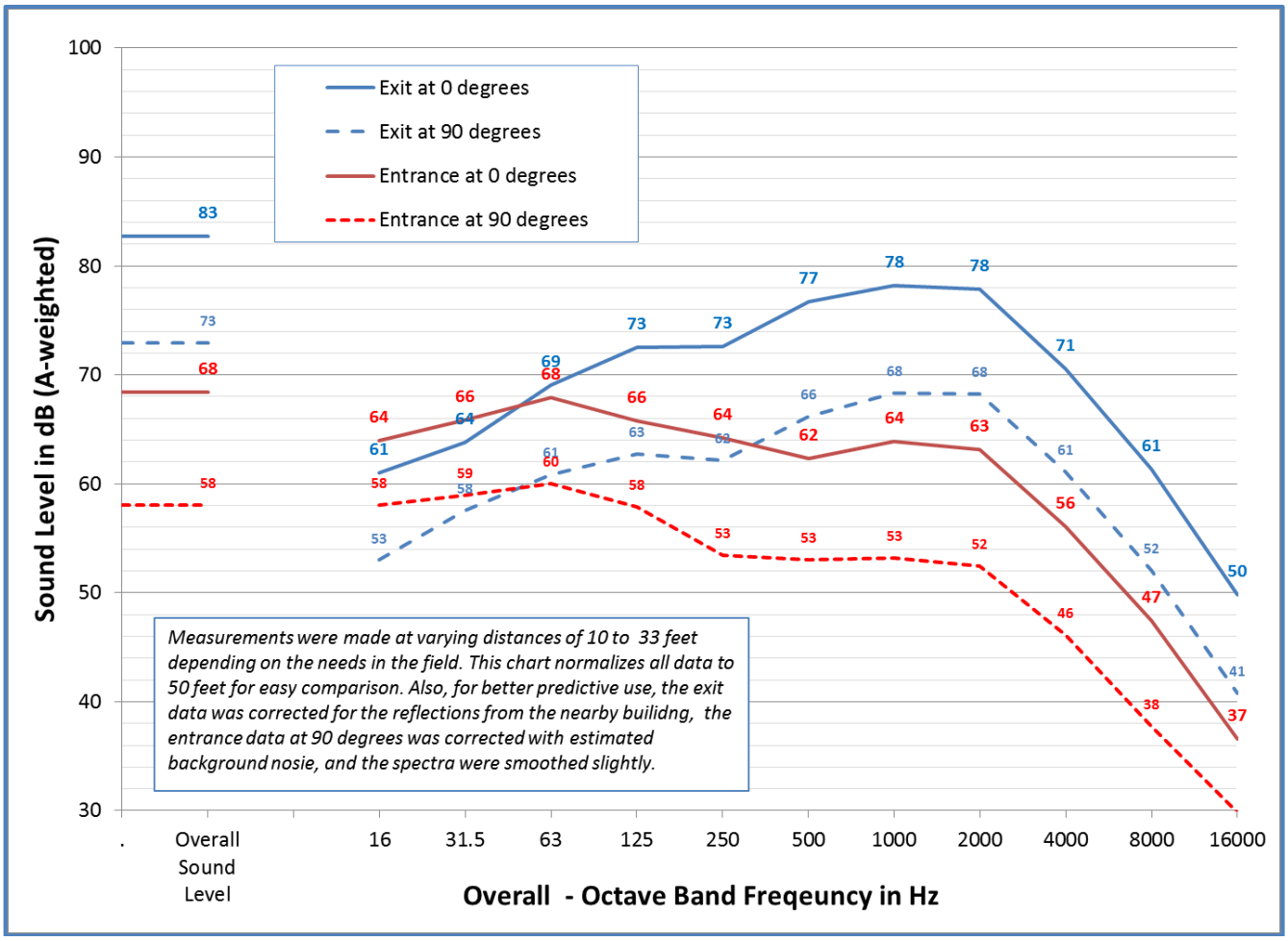

Figure 4- Overall sound level and octave band sound levels measured at the car wash.

Design Considerations

The loudness of the sound heard by residents near a car wash will depend on the following:

1. **Ambient noise** – Hi ambient background noise often prevents a car wash from being heard or annoying. Fortunately, most car washes are located along heavily traveled roads where the ambient noise is high. In most cases, it is helpful to measure the ambient across a full day to help village boards understand the real (not perceived) impact of a car wash.

2. **Distance** – The farther the residents, the lower the sound level. Distance is a major factor in hearing a car wash. Sound drops off at 6 dB per doubling of distance. For example, a car wash at 200 feet is 12 dB lower – or half as loud – than the same was is at 50 feet.

3. **Fences** – A fence can help reduce the intensity of car wash emissions. Unfortunately, the typical board-on-board fence offers minimal attenuation. To be effective, it must be solid. Also, the typical 6-foot fence is ineffective. Heights of 10-15 feet are usually required to achieve a significant noise reduction.

4. **Orientation** – As indicated above, it is best to "point" the exit away from sensitive areas. Based on our data, the exit is triple the loudness for residents facing the entrance at the same distance.

5. **Angle** – The data show that if there are nearby residents, it is best to orientate the wash so that its axis is perpendicular to the line-of-sight to the residents. This takes advantage of the directivity of a car wash where emissions are substantially reduced at angles greater than 60°.

Considerations For future Projects

The sound levels in Table 1 give the sound level emissions to be used for future projects that have similar equipment. The table shows that the emissions would be the highest for residents on the exit side of the car wash – especially those on axis with the wash tunnel. For residents at 90° off axis (from the exit or entrance), the sound level drops 10 dB (half as loud). You can interpolate the sound level for residents at angles between 0° and 90°.

The levels in Table 1 are given for 50 feet. For residents at greater distances, the level drops off at 6 dB per doubling of distance. So a resident at 100 feet would be 6 dB less than at 50 feet.

Most noise codes have a limit of 55 dB for daytime operations. So if the emissions are higher than this, you should consider reorienting the exit toward a commercial building of the street. If this is difficult, then you can achieve a 10 dB reduction with a well-designed sound fence. Finally, you can search for quieter equipment or reduce the number or speed of the blowers. A door or mass-loaded vinyl strips at the exit would work well and reduce the noise 10-20 dB. But the wash tunnel would need to be designed to allow the door to remain closed while the blowers are on.

If a town is most interested in the impact a wash has on residential neighbors, then an ambient noise study is recommended. In many cases, since car washes are near busy streets, the ambient noise is higher than the towns 55 dB limit. In this case, there is no sense in designing a car wash to meet the stricter 55 dB limit when the ambient noise is already higher. A noise study is also recommended to justify a wash being open later than when the town wants it to close. This is because the ambient noise in the area may not actually drop until after 9:00 PM or even as late as 11:00 PM.

Submitted,



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Final Report

Yucaipa Pointe
Traffic Impact Analysis

Prepared for VantageOne Real Estate Investments
By IBI Group

January 10, 2019

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1. Introduction

VantageOne Real Estate Investments is proposing to build a commercial retail and service development known as Yucaipa Pointe. The project site is located in the City of Yucaipa, south of Yucaipa Boulevard, between Avenue E and 18th Street. Figure 1 shows the project location. The purpose of this report is to conduct a focused traffic analysis for the proposed project. This project is consistent with the land use plan contained in the City's 2015 General Plan. Given this condition, the City identified a focused traffic analysis as the most appropriate scope for this traffic study.

The traffic analysis has been prepared to assess the potential circulation impacts associated with the construction and operation of the new commercial retail and service development. The project proposes approximately 137,000 SF of shopping center, and would include restaurants, fast food establishments, shops, a movie theater, a health club and a car wash.

Two access locations to the shopping center are proposed along Yucaipa Boulevard: primary access to will be provided via a new traffic signal at Knollhaven Lane/Yucaipa Boulevard. A right-turn in/out driveway will be provided on Yucaipa Boulevard between Avenue E and Knollhaven Lane. Three secondary access driveways on the west boundary of the project area will be provided on Avenue E between Yucaipa Boulevard and Dunlap Boulevard and another two driveways on the east side of the project on 18th Street between Yucaipa Boulevard and Avenue E. The proposed site plan is illustrated in Figure 2.

1.1 Report Sections

This report consists of the following sections:

1. Introduction
2. Analysis and Methodology
3. Existing (Year 2018) Conditions
4. Future Traffic Volume Development
5. Future (Year 2020) No Project Conditions
6. Proposed Project
7. Project Impact Analysis (Existing and Future With Project Conditions)
8. Access and Circulation Analysis
9. Mitigation Measures
10. Conclusion

Section 1 provides a brief description of the project and its characteristics. Section 2 presents the methodology used to perform the traffic analysis. Section 3 describes the existing land use, roadway network, intersections, and traffic volume in the study area. Sections 4 and 5 present the traffic volume forecast due to future development and growth in the project area for the Future (Year 2020) No Project scenario. Section 6 includes a description of the project, the proposed trip generation and trip distribution assumptions. Section 7 summarizes any impacts associated with implementation of the project under Existing and Future Conditions. An access and internal circulation analysis is provided in Section 8, which evaluates the performance of the access driveways to the proposed site. Section 9 details any necessary mitigation due to potential impacts caused by the project and finally the traffic study conclusions are presented in Section 10.

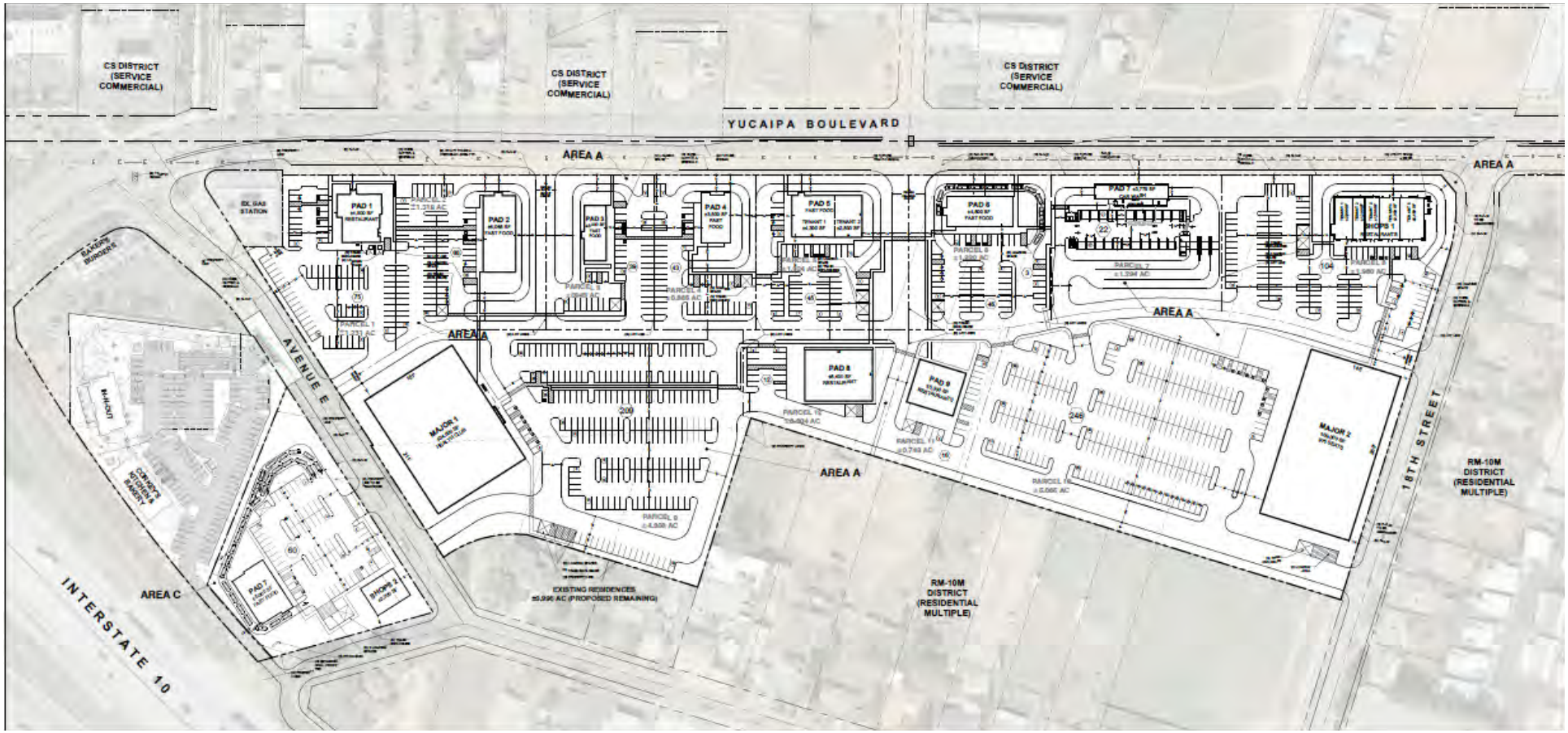
Figure 1 - Project Location



Legend

- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection

Figure 2 - Project Site Plan



2. Analysis and Methodology

The analysis methodology used to perform the traffic analysis is consistent with the City of Yucaipa General Plan (October 2015), Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002), and the San Bernardino County of Governments (SANBAG) Congestion Management Program (July 2016). The methodology used to assess the operation of signalized intersections in San Bernardino County is the 2010 Highway Capacity Manual (HCM) methodology. Analysis of signalized and unsignalized intersections was conducted using the Synchro (Version 10) traffic analysis software.

2.1 Analysis Scenarios and Time Period

The traffic analysis for the Yucaipa Pointe development will include the following scenarios:

- Existing Year (2018) – No project
- Future Year (2020) – No Project
- Existing Year (2018) – With Project
- Future Year (2020) – With Project

Future (Year 2020) was selected as it coincides with the anticipated opening year of the proposed project. An analysis of the AM and PM peak hour for each scenario is included in this report. The AM peak period is between 7:00AM and 9:00AM and the PM peak period is between 4:00PM and 6:00PM.

2.2 Analysis Study Area Locations

Study area intersections were selected based on their locations within the network. More specifically, the selected study intersections are located at key access points for the proposed project where the most traffic volumes would be expected. These intersections were selected to provide a focused analysis of the project's potential traffic impacts.

Study intersections for the Yucaipa Pointe development, selected in coordination with City of Yucaipa staff, include the following intersections:

1. Yucaipa Blvd and Interstate 10 (I-10) Eastbound On-Ramp
2. Yucaipa Blvd and I-10 Westbound On-Ramp
3. Yucaipa Blvd and Avenue E
4. Knollhaven Lane and Yucaipa Blvd
5. 18th Street and Yucaipa Blvd
6. Avenue E and Dunlap Blvd.

The following roadway segments were selected for analysis:

A. Yucaipa Blvd between Avenue E and WB I-10 Ramp
B. Yucaipa Blvd between Avenue E and 18th Street
C. Yucaipa Blvd between Avenue E and 17th Street
D. Avenue E between Yucaipa Blvd and Dunlap Blvd
E. Dunlap Blvd south of Avenue E
F. Avenue E between Dunlap Blvd and 18th Street
G. Avenue E between 18th Street and 17th Street

The following freeway mainline segments were selected for analysis:

H. I-10 Freeway south of Yucaipa Blvd to Live Oak Canyon Road

I. I-10 Freeway north of Yucaipa Blvd to Wabash Road

2.3 Signalized Intersections

The HCM methodology defines LOS as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The six qualitative categories of LOS and corresponding average delay that have been defined are presented below:

Table 1: Categories of LOS from HCM

LOS	Description	Delay (sec)
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.	0 -10
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.	10 – 20
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.	20 – 35
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.	35 – 55
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.	55 - 80
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.	80 or more

Source: Highway Capacity Manual (2010)

Consistent with SANBAG CMP guidelines, the following peak hour factors and lane saturation flow rates were utilized in the analysis to determine intersection LOS:

- Peak Hour Factor: 0.92
- Saturation Flow Rate
    - Exclusive through lanes – 1,800 vehicles per lane per hour (vplph)
    - Exclusive right turn lanes – 1,800 vehicles per lane per hour (vplph)

  - Exclusive left turn lanes – 1,700 vplph (1,600 per lane for dual left turn lanes)
- Signal Cycle Lengths – Minimum 60 seconds and maximum 130 seconds
- Credit for "de facto" right turn lanes (locations where a right turn lane is not striped, but enough width is provided such that vehicles are able to conduct right turns without disrupting through traffic in a shared through-right lane). A minimum of 19 feet from curb line to lane stripe is required.

2.4 Unsignalized Intersections

The two types of unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC). The delay range for unsignalized intersections is different from those of signalized intersections primarily due to driver expectation. The expectation is that signalized intersections are designed to carry higher volumes of traffic and therefore higher levels of delay are acceptable. The HCM methodology estimates the delay based on the worst approach at unsignalized intersections. Table 2 includes the LOS ranges for both intersection types.

Table 2: LOS for Unsignalized intersections

LOS	Description	Delay (sec)
A	Little or no delays	0 – 10
B	Short traffic delays	10 – 15
C	Average traffic delays	15 – 25
D	Long traffic delays	25 – 35
E	Very long traffic delays	35 – 50
F	Extreme traffic delays with intersection capacity exceeded	50 or more

Source: Highway Capacity Manual (2000), Chapter 17.

2.5 Caltrans Intersections

Per the Caltrans *Guide for the Preparation of Traffic Impact Studies*, intersections under the jurisdiction of Caltrans are also analyzed using the HCM methodology.

2.6 Standards of Significance

The City of Yucaipa General Plan establishes LOS C as the minimum acceptable level of service (LOS) on all intersections and road segments with the exception of the following two conditions:

- At roadway intersections where traffic movements are controlled by roundabouts, LOS D shall be acceptable
- On roadway segments where a roundabout controls at least one of the intersections at the ends of the segment, the lower half of LOS D shall be acceptable (V/C ratio of 0.849 or better).

All intersections and roadways that are forecast to operate with levels of service D, E or F are expected to be mitigated to the appropriate minimum standard or to conditions consistent with the no project condition. Some of the intersections fall under Caltrans jurisdiction, and the agency targets LOS at the transition between LOS "C" and LOS "D". For intersection analysis, this limit is the equivalent of having a delay of about 55 seconds per vehicle using the HCM 2010 methodology.

2.7 Roadway Segment Analysis

A LOS analysis was prepared on existing roadway segments within the study area using daily roadway capacities. The roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification needed to meet traffic demand. Roadway segment analysis is typically performed for planning purposes and are affected by such factors as intersections (spacing, configuration, and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic), and pedestrian and bicycle traffic.

Table 3 presents the City of Yucaipa roadway segment capacities and LOS thresholds for each facility type.

Table 3: Daily Roadway Segment Capacities

Facility Type	Lane Geometry	A	B	C	D	E
Major Highway	6 lanes, divided	35,400	41,300	47,200	53,100	59,000
Major Highway	4 lanes, divided	22,800	26,600	30,400	34,200	38,000
Secondary Highway	4 lanes, undivided	18,000	21,000	24,000	27,000	30,000
Controlled/Limited Access Collector Street	2 lanes, undivided	9,600	11,000	12,800	14,400	16,000
Mountain Major	2 lanes, undivided	9,600	11,000	12,800	14,400	16,000
Local Street	2 lanes, undivided	9,600	11,000	12,800	14,400	16,000

Source: City of Yucaipa General Plan, Mountain Major capacities assumed to be the same as local street

2.8 Freeway Mainline Analysis

The mainline analysis was conducted using HCS 10 software consistent with Caltrans requirements. For freeway segments, the measure used to evaluate LOS is density. As stated in the HCM, the upper value shown for LOS E (55.0 passenger cars per mile per lane – pc/mi/in) is the maximum density at which sustained flows at capacity are expected to occur. Deterioration from acceptable LOS A through E to unacceptable LOS F is considered an impact. Furthermore, an increase of 100 trips or more to any segment already operating at LOS F would be considered impacted.

3. Existing (Year 2018) Conditions

This section presents an overview of the existing roadway system within the study area and the methodology used to determine existing traffic volumes.

3.1 Project Location and Study Area

The proposed project site is located on a vacant land parcel south of Yucaipa Boulevard, between Avenue E to the west and 18th Street to the east. The area is bordered to the south by existing single family homes.

3.2 Roadway Network

Key roadway facilities that border the study area are described below. The descriptions of lane configurations are based on designations per the City of Yucaipa's General Plan Circulation Element.

Yucaipa Boulevard: Yucaipa Boulevard is located north and west of the proposed project site and is currently a four lane divided highway designated as an east-west Major highway. Yucaipa Boulevard connects to the I-10 freeway ramps to the west of the project. Yucaipa Boulevard will be reconfigured to a 6 lane divided highway by the proposed 2020 opening date of the project.

Avenue E: Avenue E borders the west and south of the project site and is designated as a local street in this section. It is a two lane undivided roadway. Avenue E will provide two new access points to Area A of the proposed development on the west side of the street, and one access point to Area C on the east side of the street.

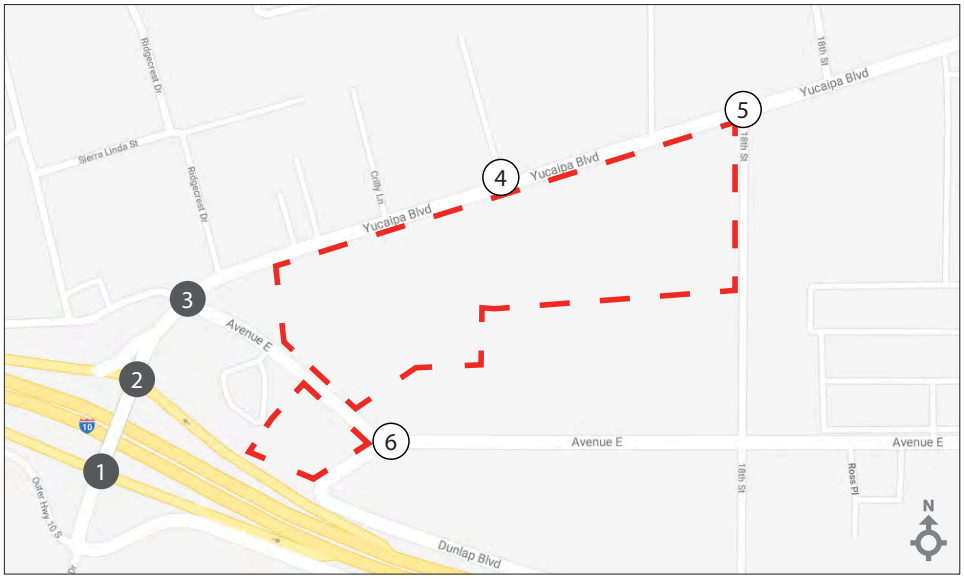
18th Street: 18th Street borders the east of the project site and is designated as a local street. It is a two lane undivided roadway. 18th Street will provide two entrance points to Area A of the proposed development on the east side of the street. The west side of the street are single family homes.

Knollhaven Lane: Knollhaven Lane is an unpaved roadway running north-south that intersects with Yucaipa Boulevard. The proposed project will install a traffic signal at this location, improving all approaches at its intersection with Yucaipa Boulevard.

3.3 Existing Intersection Geometry and Traffic Volumes

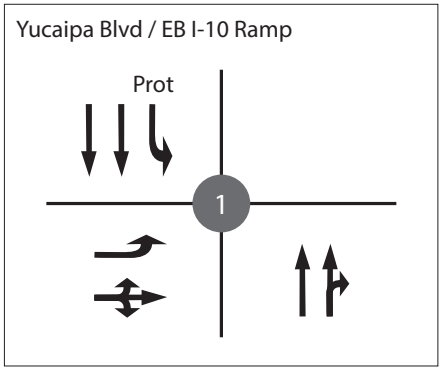
The six (6) study area intersections Existing (Year 2018) lane geometry and control is illustrated in Figure 3. Manual intersection turning movement counts were collected in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on Tuesday December 4th, 2018. Average Daily Traffic (ADT) counts were collected over a 24-hour period on the same day at each of the seven roadway segments. Freeway mainline volumes at the two locations were obtained from Caltrans' Traffic Data Branch (2017). Existing (Year 2018) AM and PM peak hour turning movement count volumes is presented in Figure 4. Traffic count data is included in Appendix A.

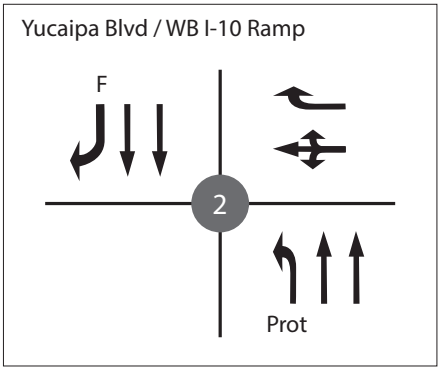
Figure 3 - Study Area Intersection Lane Geometry and Existing 2018 Control

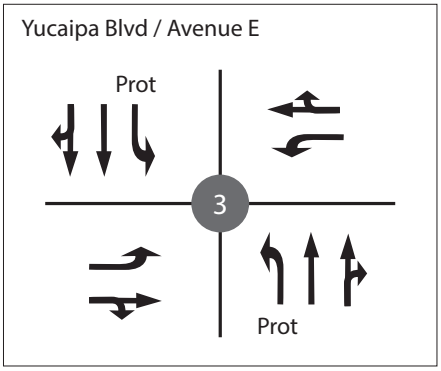


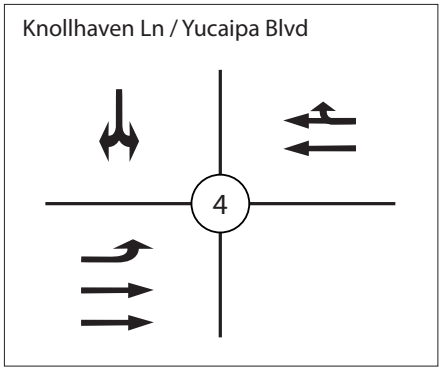
Legend

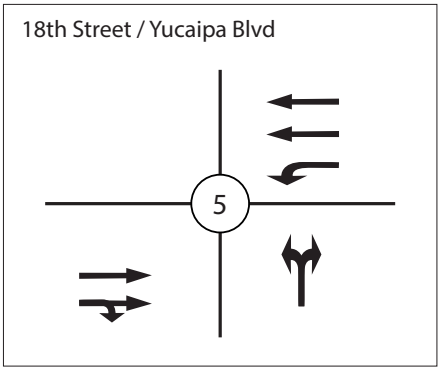
- Project Area
- Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Lane Geometry
- Prot Protected Left
- F Free Right Turn











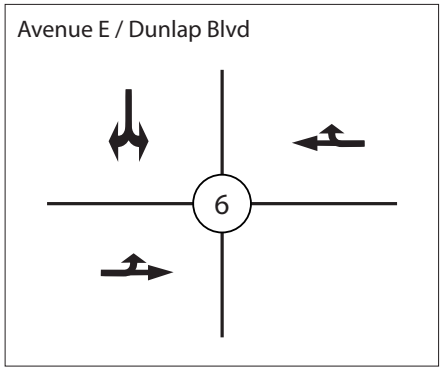
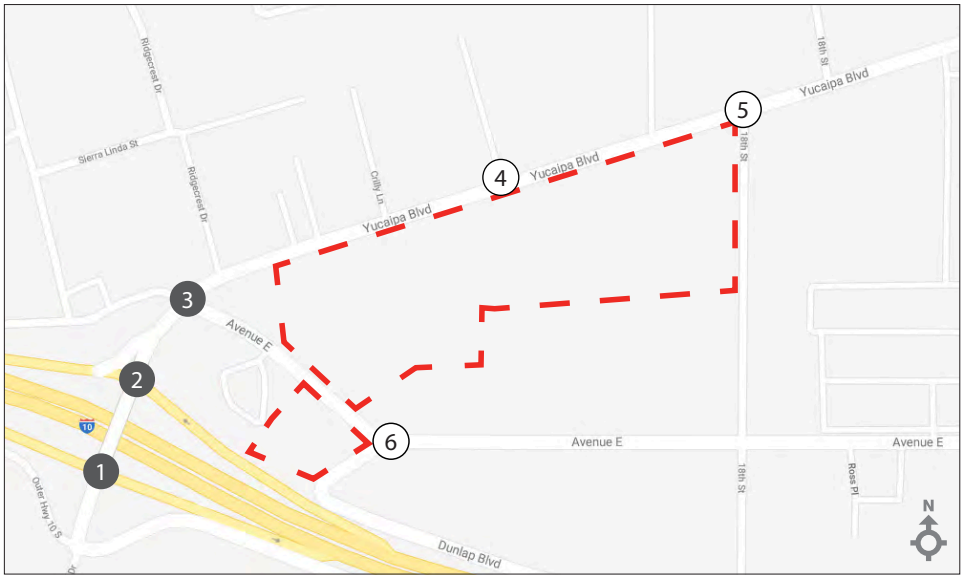
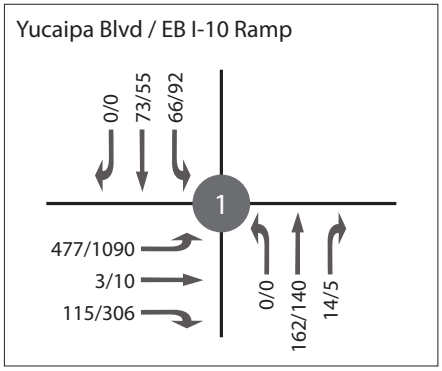


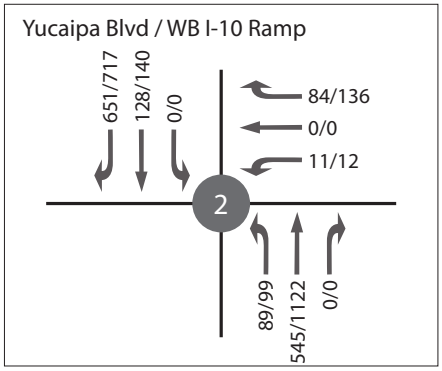
Figure 4 - Existing (Year 2018) AM and PM Peak Hour Traffic Volumes

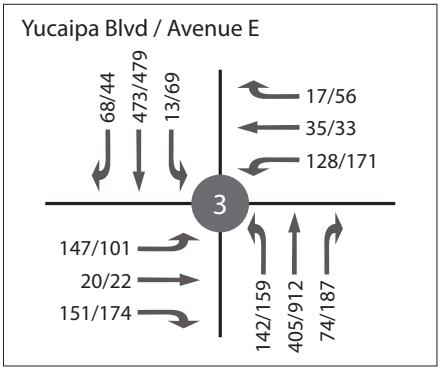


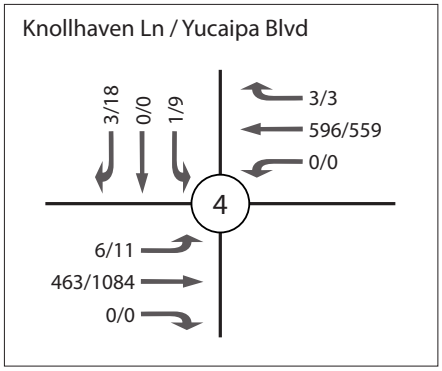
Legend

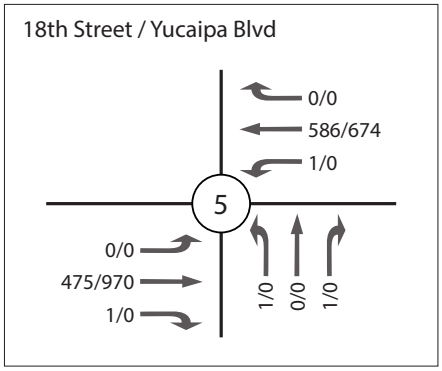
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- XX/YY AM/PM Volumes

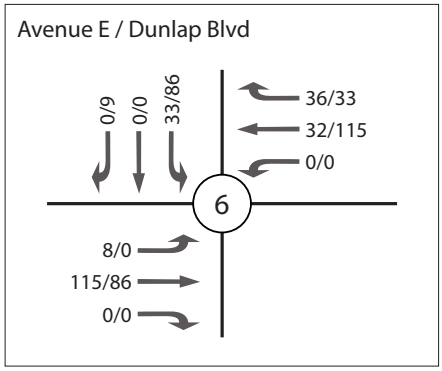












3.4 Existing Intersection LOS

A level of service analysis was conducted to evaluate existing intersection operations during the weekday AM and PM peak hours. Table 4 summarizes the existing levels of service at the study area intersections. Existing level of service calculation worksheets are included in Appendix B.

TABLE 4: Existing Intersection LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Yucaipa Blvd and I-10 EB [1]	Signal	12.4	B	18.0	B
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.9	B	14.0	B
3	Yucaipa Blvd and Avenue E	Signal	25.4	C	56.4	**E**
Unsignalized Intersections		**Control**	**AM Peak Hour**		**PM Peak Hour**	
			Delay	**LOS**	**Delay**	**LOS**
4	Knollhaven Lane and Yucaipa Blvd	TWSC	11.5	B	12.9	B
5	18th Street and Yucaipa Blvd	TWSC	11.7	B	0.0	A
6	Avenue E and Dunlap Blvd	TWSC	9.8	A	10.3	B

[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 4, all intersections operate at satisfactory LOS (LOS C or better), with the exception of the following location:

- Yucaipa Blvd and Avenue E – LOS E in the PM peak hour

3.5 Existing Roadway Segment LOS

Table 5 provides a summary of the Existing (Year 2018) Conditions roadway segment capacity analysis based on the capacity thresholds identified in Table 3. The City of Yucaipa designates LOS C as its threshold of significance and therefore figures from LOS D have been used as an upper threshold of significance for this study.

Table 5: Existing Roadway Segment Analysis

Segment				Lane Geo	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	4D	34,200	23,618	0.69
B	Yucaipa Blvd	Avenue E	Knollhaven Lane	4D	34,200	20,664	0.60
C	Yucaipa Blvd	18th Street	17th Street	4D	34,200	19,926	0.58
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	6,619	0.46
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,205	0.08
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	2,239	0.16
G	Avenue E	18th Street	17th Street	2U	14,400	2,267	0.16

As indicated in section 2.8, the roadway segment analysis is used as a planning tool to evaluate the adequacy of existing roadway segment capacities. A v/c ratio of greater than 1.01 to 1.25 suggest that additional review is required; however, if adjacent intersections provide the lanes needed to achieve acceptable peak hour LOS, then segment capacity improvements between key intersections may not be needed. For roadway segments significantly exceeding capacity (v/c ratios > 1.25) then additional through

lane roadway capacity and intersection improvements are more likely to be needed. All roadway segments are currently operating at an acceptable LOS under Existing (Year 2018) No Project Conditions.

3.6 Existing Freeway Mainline LOS

Table 6 summarizes the existing freeway mainline LOS at the study area mainline segments. The freeway mainline analysis worksheets are contained in Appendix C.

Table 6: Existing Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
H	I-10 South of Yucaipa Boulevard	123,000	18.2	C
I	I-10 North of Yucaipa Boulevard	151,000	22.8	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments are currently operating at acceptable level of service under Existing (Year 2018) No Project Conditions.

4. Future Traffic Volume Development

4.1 Future Traffic Volumes

The future background traffic is composed of existing traffic (based on the count data), background ambient traffic growth per year, and traffic from planned developments (i.e. cumulative projects). The analysis of cumulative conditions is required by the SANBAG Congestion Management Program. Traffic from all cumulative projects (anticipated to be completed by each analysis scenario) plus the annual ambient growth rate is added to baseline existing traffic volumes to forecast Future (Year 2020) Conditions.

4.1.1 Ambient Traffic Growth

All future scenario traffic volumes were developed by applying a linear 1.5 percent annual growth rate to the Existing (2018) traffic volumes. Use of an annual growth rate to account for area-wide growth is common to both current and previous traffic studies within the City and County and has been approved by the City for use on this project.

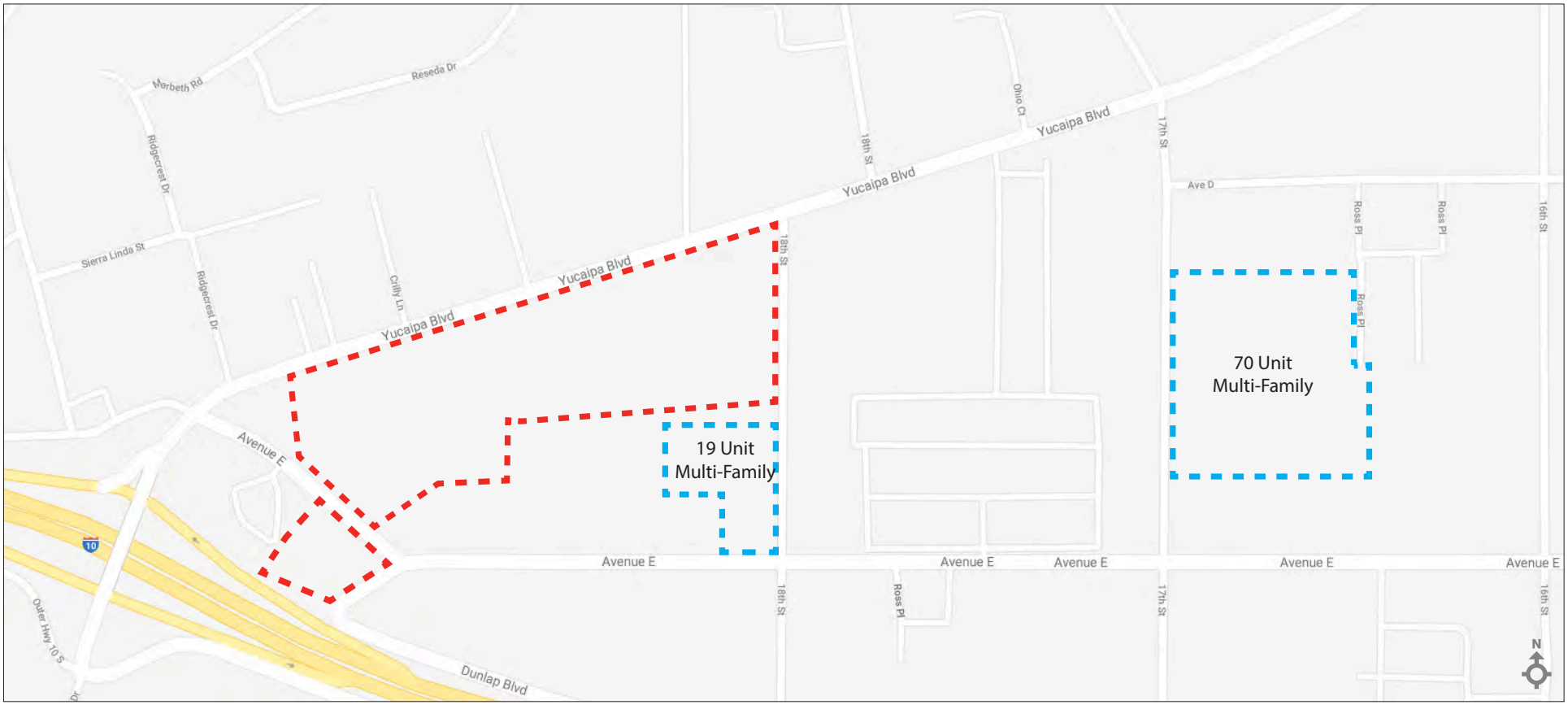
4.1.2 Cumulative Projects

California Environmental Quality Act (CEQA) requires that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list provided by the City comprised of two (2) projects was developed for the purposes of this analysis. Below is a brief description of the cumulative projects included as part of the Future (Year 2020) analysis:

- Lakritz Apartment Homes (APN 0300-191-32): 19-unit apartment home complex
- Tract 18174 (APN 0301-061-03, 0301-072-13, and 0301-072-17): 70-unit condominium project

The location of each related project is shown in Figure 5.

Figure 5 - Cumulative Project Locations



Legend

Project Area

5. Future (Year 2020) No Project

The proposed project is scheduled to be operational by the Year 2020. This section develops the future baseline 2020 conditions in the study area. The future condition network is based on lane improvements and upgrades detailed by the City of Yucaipa and through project design features. Phase I of the Yucaipa Boulevard Widening Project to six lanes between 18th Street and I-10 will be completed by summer 2019 and is therefore reflected in the projected LOS. The existing unsignalized intersection of Knollhaven Place and Yucaipa Boulevard will be converted to a signalized intersection as a project design feature. Figure 6 illustrates the Future (Year 2020) intersection geometry and traffic control.

5.1 Future (Year 2020) Traffic Control and Traffic Volumes

The Future (Year 2020) background traffic is composed of existing traffic (based on count data collected in 2018), background ambient traffic growth per year (identified as 1.5 percent per year for a total of 3 percent over 2 years), and traffic from the cumulative projects listed in Section 4.1.2. The AM and PM peak hour study intersection volumes for the Future (Year 2020) is shown in Figure 7.

5.2 Future (Year 2020) Level of Service (LOS)

A summary of the intersection level of service analysis results for the Future (Year 2020) No Project Condition is included in Table 7.

Table 7: Future (Year 2020) No Project – Intersection LOS

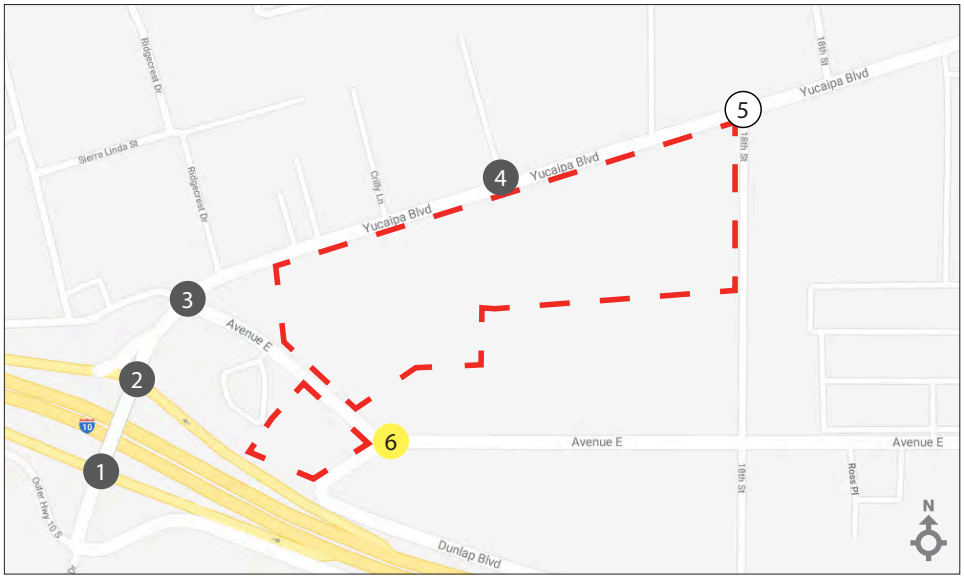
	Signalized Intersections	Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Yucaipa Blvd and I-10 EB [1]	Signal	13.0	B	19.1	B
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.8	B	14.0	B
3	Yucaipa Blvd and Avenue E	Signal	24.2	C	65.8	**E**
	Unsignalized Intersections	**Control**	**AM Peak Hour**		**PM Peak Hour**	
			Delay	**LOS**	**Delay**	**LOS**
4	Knollhaven Lane and Yucaipa Blvd	TWSC	12.5	B	15.2	C
5	18th Street and Yucaipa Blvd	TWSC	12.7	B	18.9	C
6	Avenue E and Dunlap Blvd	Roundabout	4.2	A	4.6	A

[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 7, all intersections are forecast to operate at satisfactory LOS (LOS C or better), with the exception of the following location:

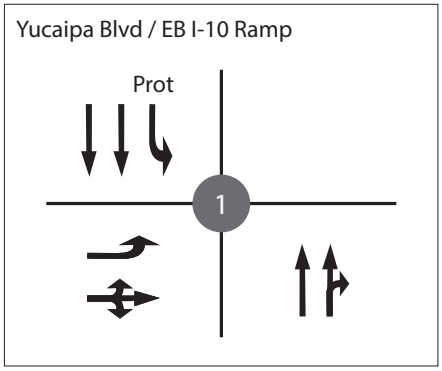
- Yucaipa Blvd and Avenue E – LOS E in the PM peak hour

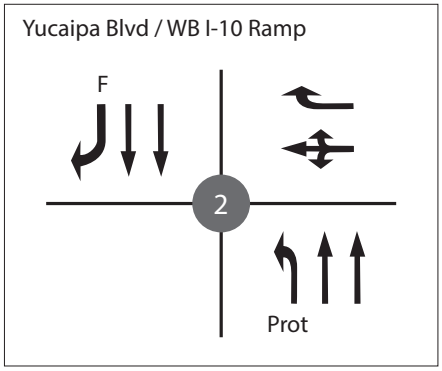
Figure 6 - Study Area Intersection Lane Geometry and Future 2020 Control

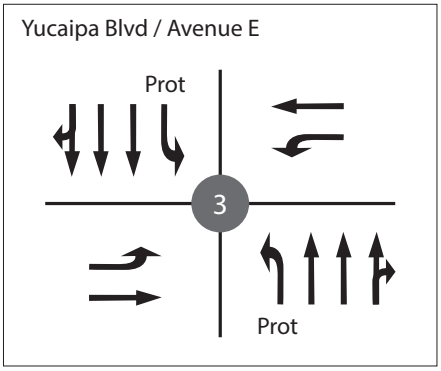


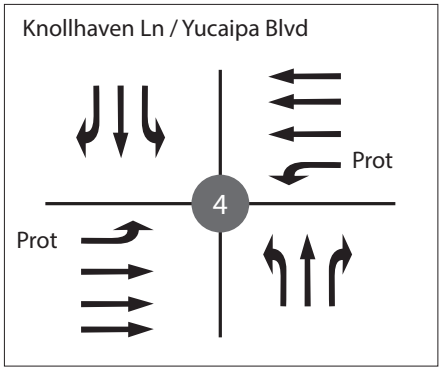
Legend

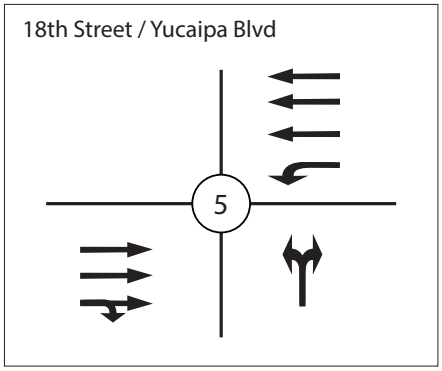
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Proposed Roundabout
- Lane Geometry
- Prot Protected Left
- F Free Right Turn











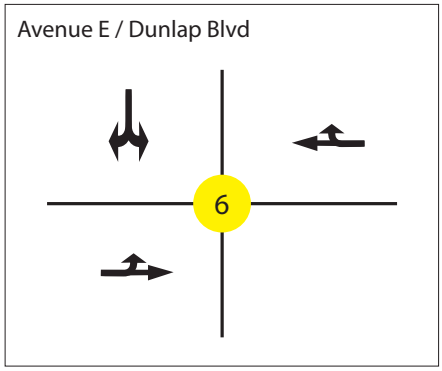
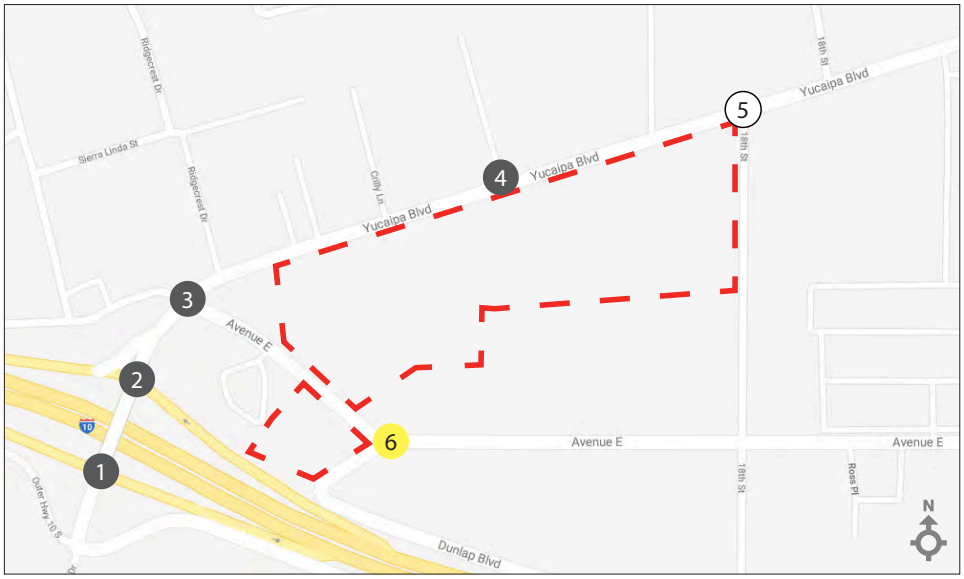
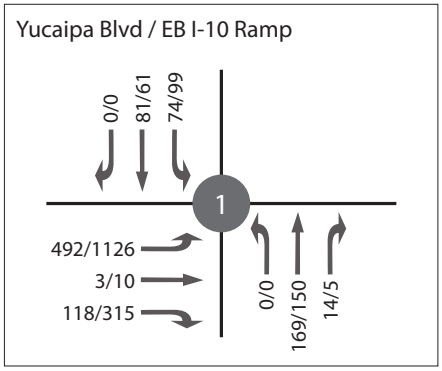


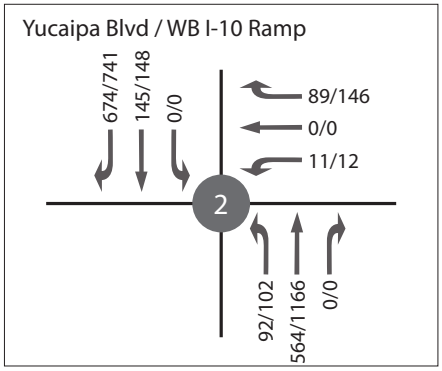
Figure 7 - Future (Year 2020) No Project AM and PM Peak Hour Traffic Volumes

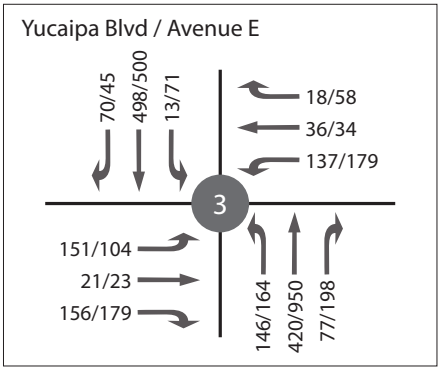


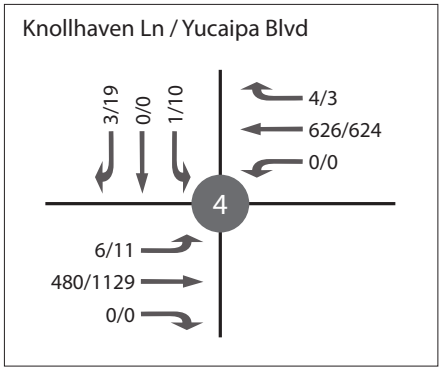
Legend

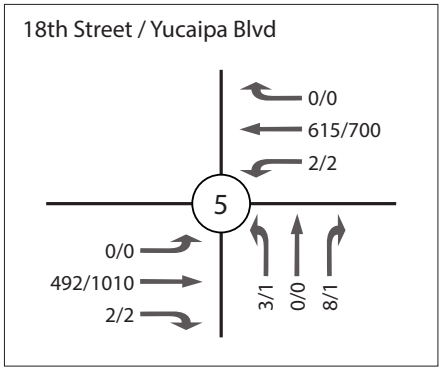
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Proposed Roundabout
- XX/YY AM/PM Volumes

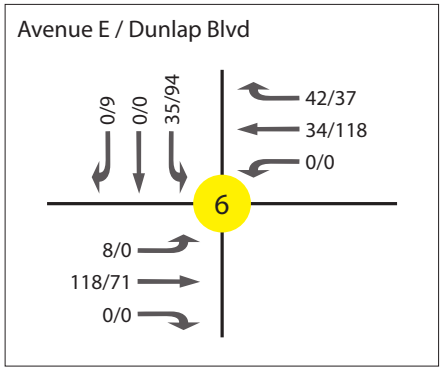












5.3 Future (Year 2020) Roadway Segment LOS

Table 8 provides a summary of the Future (Year 2018) Conditions roadway segment capacity analysis based on the capacity thresholds identified in Table 3.

Table 8: Future (Year 2020) No Project Roadway Segment Analysis

Segment				Lanes	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	5D	43,650	24,327	0.56
B	Yucaipa Blvd	Avenue E	Knollhaven Lane	6D	53,100	21,284	0.40
C	Yucaipa Blvd	18th Street	17th Street	6D	53,100	20,524	0.39
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	6,818	0.47
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,241	0.09
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	2,306	0.16
G	Avenue E	18th Street	17th Street	2U	14,400	2,335	0.16

All roadway segments are forecast to operate at an acceptable LOS under Future (Year 2020) No Project Conditions.

5.4 Future (Year 2020) Freeway Mainline LOS

Table 9 summarizes the existing freeway mainline LOS at the study area mainline segments. The freeway mainline analysis worksheets are contained in Appendix C.

Table 9: Future (Year 2020) Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
H	I-10 South of Yucaipa Boulevard	126,690	18.8	C
I	I-10 North of Yucaipa Boulevard	155,530	23.7	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments are anticipated to operate at acceptable level of service under Future (Year 2020) No Project Conditions.

6. Proposed Project

6.1 Project Description

VantageOne Real Estate Investments is proposing to build a commercial retail and service development known as Yucaipa Pointe, located south of Yucaipa Boulevard, between Avenue E and 18th Street. The project proposes approximately 137,000 SF shopping center to house restaurants, fast food establishments, shops, a movie theater, a health club and a car wash. The following presents the project components:

- Health Club
- Theater
- Restaurants
- Fast-Food Restaurants
- Car Wash
- Retail

Two access locations to the shopping center are proposed along Yucaipa Boulevard: primary access to will be provided via a new traffic signal at Knollhaven Lane/Yucaipa Boulevard. A right-turn in/out driveway will be provided on Yucaipa Boulevard between Avenue E and Knollhaven Lane. Three secondary access driveways on the west boundary of the project area will be provided on Avenue E between Yucaipa Boulevard and Dunlap Boulevard and another two driveways on the east side of the project on 18th Street between Yucaipa Boulevard and Avenue E.

6.2 Trip Generation

Trip generation for the proposed project was calculated using rates from the latest Institute of Transportation Engineers Trip Generation Manual (10th Edition) for Land Use Codes 492 (Health Club), 444 (Movie Theater), 932 (High-Turnover Sit Down Restaurant), 930 (Fast Casual Restaurant), 934 (Fast-Food with Drive Through Window), 948 (Automated Car Wash), and 826 (Specialty Retail). Table 10 below presents the resultant AM and PM peak hour trip generation for the proposed project.

6.3 Trip Distribution and Assignment

According to the site plan, the proposed project will utilize two entrances on Yucaipa Boulevard between Avenue E and 18th Street, three driveways on Avenue E between Yucaipa Boulevard and Dunlap Boulevard, and two driveways on 18th Street between Yucaipa Boulevard and Avenue E. Locally, trips were assigned to and from the project site based on the location of these access points. Regional trip distribution has been estimated based on the anticipated trade area, which defines the capture area for the project. The trip distribution percentages are presented in Figure 8, with the resulting AM and PM peak hour trip assignment depicted in Figure 9.

Table 10: Project Trip Generation

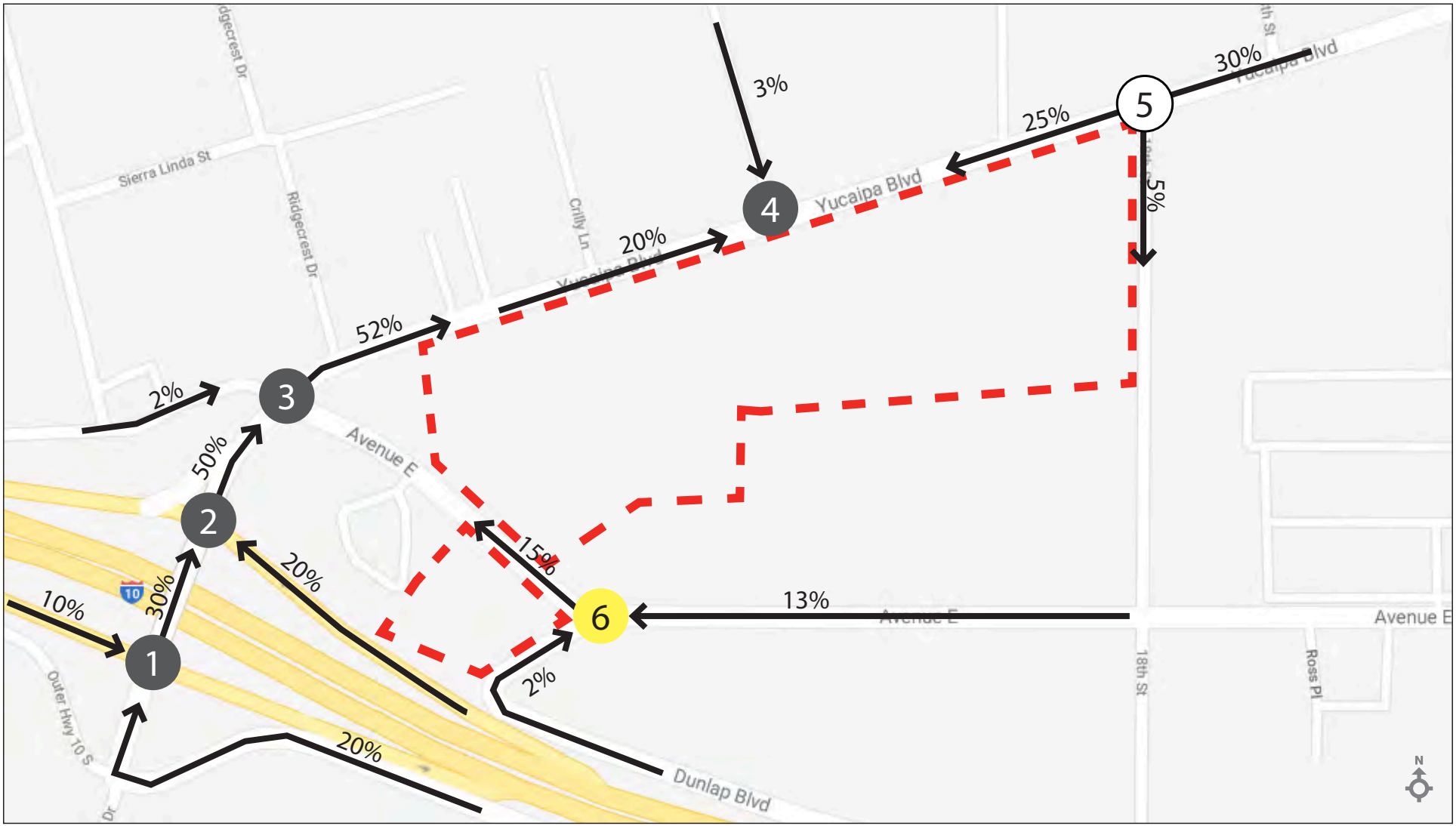
			A.M. Peak Hour			P.M. Peak Hour		
	Unit	ADT[2]	In	Out	Total	In	Out	Total
Trip Rates[1] (Land Use Code)								
Health Club (492)	TSF	32.93	0.67	0.64	1.31	1.97	1.48	3.45
Movie Theater (444)	TSF	78.09	0.11	0.11	0.22	5.80	0.37	6.17
High-Turnover (Sit-Down) Restaurant (932)	TSF	112.18	5.47	4.47	9.94	6.06	3.71	9.77
Fast Casual Restaurant (930)	TSF	315.17	1.39	0.68	2.07	7.77	6.36	14.13
Fast-Food Restaurant with Drive-Through Window (934)	TSF	496.12	23.16	22.26	45.42	16.98	15.67	32.65
Automated Car Wash (948)	TSF	30.40	-	-	-	7.10	7.10	14.20
Specialty Retail (826)	TSF	44.32	-	-	-	1.19	1.52	2.71
Project Trip Generation	**Size**							
Area A								
Major 1 - Health Club	34.000	1,120	23	22	45	67	50	117
Major 2 - Movie Theater with Matinee	39.000	3,046	4	4	9	226	14	241
Pad 1 - High-Turnover (Sit-Down) Restaurant	5.800	651	32	26	58	35	22	57
Pad 2 - Fast-Food Restaurant with Drive-Through Window	6.065	3,009	140	135	275	103	95	198
Pad 3 - Fast-Food Restaurant with Drive-Through Window	3.000	1,488	69	67	136	51	47	98
Pad 4 - Fast-Food Restaurant with Drive-Through Window	3.500	1,736	81	78	159	59	55	114
Pad 5 - Fast-Food Restaurant with Drive-Through Window	4.300	2,133	100	96	195	73	67	140
Pad 5 - Fast Casual Restaurant	2.800	882	4	2	6	22	18	40
Pad 6 - Fast-Food Restaurant with Drive-Through Window	4.800	2,381	111	107	218	81	75	157
Pad 7 - Automated Car Wash	3.779	115	0	0	0	27	27	54
Shops 1 - Fast Casual Restaurant	7.100	2,238	10	5	15	55	45	100
Shops 1 - Fast-Food Restaurant with Drive-Through Window	2.000	992	46	45	91	34	31	65
Pad 8 - High-Turnover (Sit-Down) Restaurant	8.400	942	46	38	83	51	31	82
Pad 9 - High-Turnover (Sit-Down) Restaurant	5.000	561	27	22	50	30	19	49
Area C								
Pad 7 - Fast-Food Restaurant with Drive-Through Window	5.000	2,481	116	111	227	85	78	163
Shops 2 - Fast Casual Restaurant	1.000	315	1	1	2	8	6	14
Shops 2 - Specialty Retail	2.000	89	0	0	0	2	3	5
Total Project Trip Generation		***24,179***	***811***	***757***	***1,568***	***1,010***	***685***	***1,695***

Notes: TSF - thousand square feet

[1]Trip rates referenced from the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition

As shown in Table 10, the proposed project is anticipated to generate approximately 24,179 daily trips, 1,568 AM peak hour trips (811 inbound and 757 outbound), and 1,695 PM peak hour trips (1,010 inbound and 685 outbound).

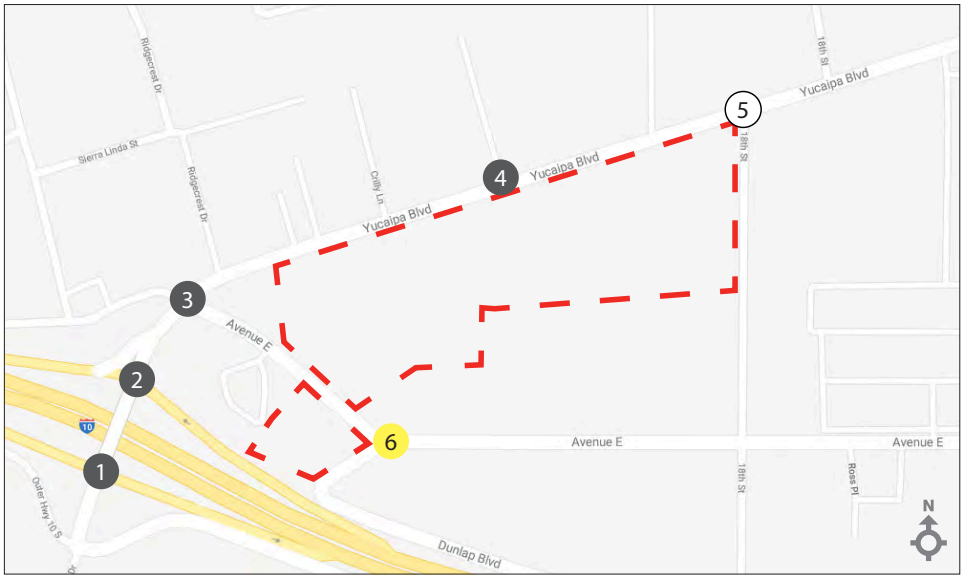
Figure 8 - Project Trip Distribution



Legend

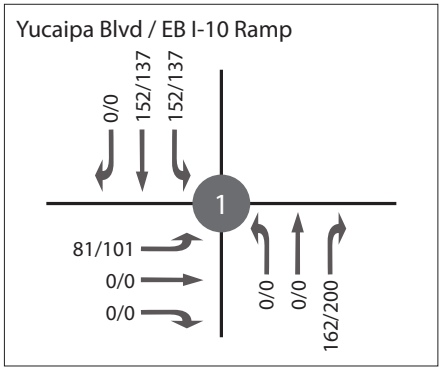
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Proposed Roundabout
- Trip Distribution Percentage

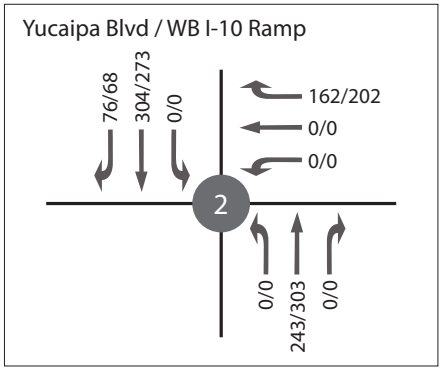
Figure 9 - Project Trip Assignment AM and PM Peak Hour Traffic Volumes

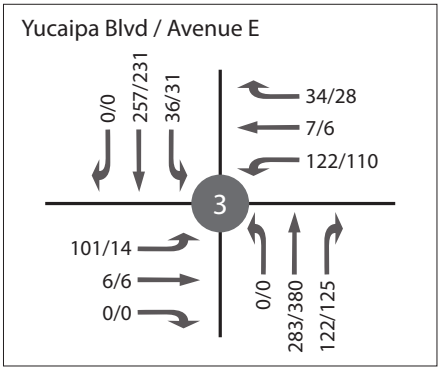


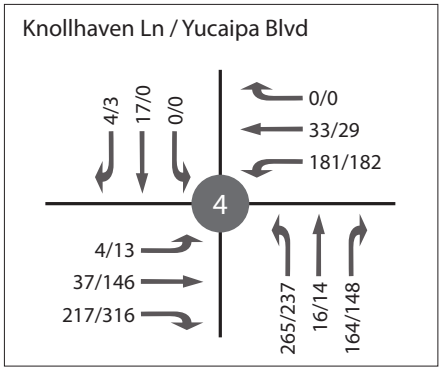
Legend

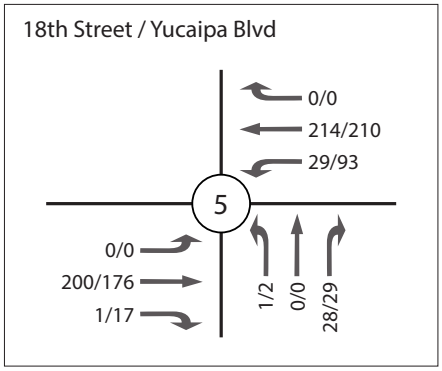
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Proposed Roundabout
- Lane Geometry

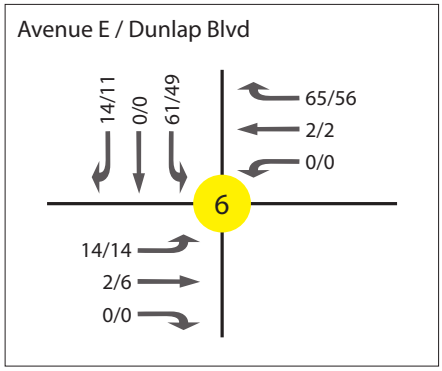












7. Project Impact Analysis

This section evaluates the potential impacts of the proposed project on the study area intersections.

7.1 Existing (Year 2018) With Project Impact Analysis

In an effort to satisfy the CEQA Guideline section 15125(a), an analysis of existing traffic volumes plus traffic generated by the proposed project has been included.

7.1.1 Existing (Year 2018) With Project Intersection LOS

A level of service analysis was conducted to evaluate addition of project traffic to the Existing (Year 2018) intersection operating conditions during the weekday AM and PM peak hours. In order to determine any direct project impacts, traffic from the project was added to existing traffic volumes. All study area intersection lane configurations are assumed to remain unchanged from Existing Conditions, with the exception of Knollhaven Lane and Yucaipa Boulevard, assumed to be a traffic signal, and Avenue E and Dunlap Blvd which has been modelled in three separate alternatives: Roundabout, Two-Way Stop Control, and All-Way Stop Control. Figure 10 illustrates the AM and PM peak hour volumes at the area intersections under Existing (2018) With Project conditions. Table 11 summarizes the Existing (2018) With Project level of service at the study area intersections. Level of service calculation worksheets are included in Appendix B.

Table 11: Existing (Year 2018) With Project AM/PM Peak Hour – Intersection LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour		Impact? (Y/N)
			Delay	LOS	Delay	LOS	
1	Yucaipa Blvd and I-10 EB [1]	Signal	19.1	B	48.1	D	N
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.7	B	13.8	B	N
3	Yucaipa Blvd and Avenue E	Signal	41.3	**D**	159.0	**F**	Y
4	Knollhaven Lane and Yucaipa Blvd	Signal	29.1	C	31.0	C	N
Unsignalized Intersections		**Control**	**AM Peak Hour**		**PM Peak Hour**		**Impact? (Y/N)**
			Delay	**LOS**	**Delay**	**LOS**	
5	18th Street and Yucaipa Blvd	TWSC	11.5	B	15.7	C	N
6	Avenue E and Dunlap Blvd	Roundabout	4.6	A	5.1	A	N
6A	Avenue E and Dunlap Blvd	TWSC	10.8	B	11.6	B	N
6B	Avenue E and Dunlap Blvd	AWSC	8.2	A	8.8	A	N

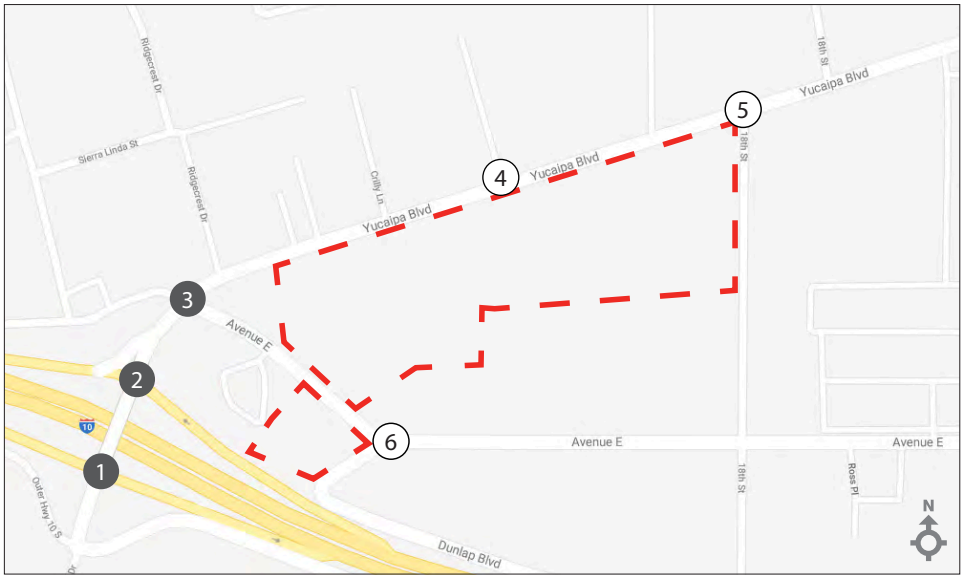
[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 11, all intersections operate at satisfactory LOS (LOS C or better), with the exception of the following location, which is considered an Existing (Year 2018) With Project impact:

- Yucaipa Blvd and Avenue E – LOS D in the AM peak hour and LOS F in the PM peak hour

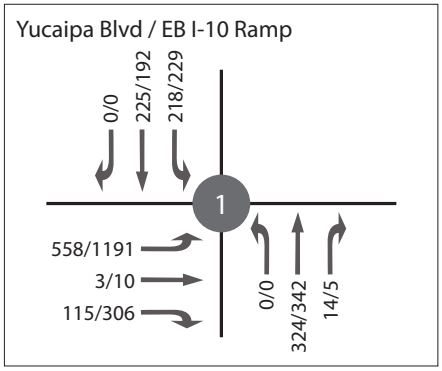
At Avenue E and Dunlap Boulevard, the intersection is forecast to operate satisfactorily under any of the three potential traffic controls. The Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) does not have specific warrant criteria for roundabouts. Implementation of any of the three traffic controls at this location would result in acceptable LOS. However, with safety and geometric considerations, implementation of either a roundabout or an all-way stop control are recommended.

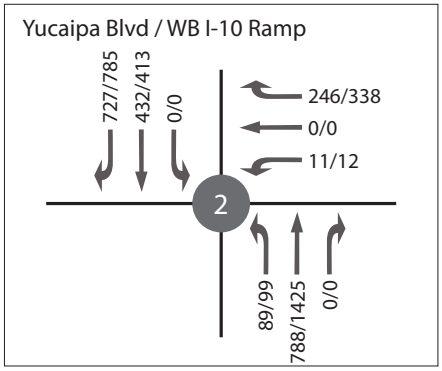
Figure 10 - Existing (Year 2018) With Project AM and PM Peak Hour Traffic Volumes

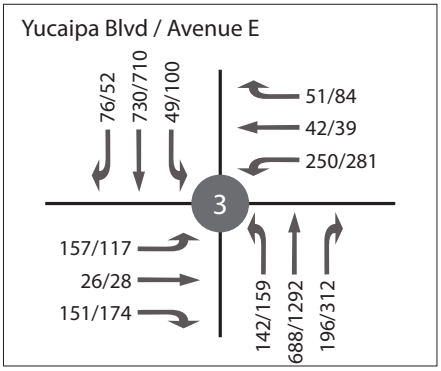


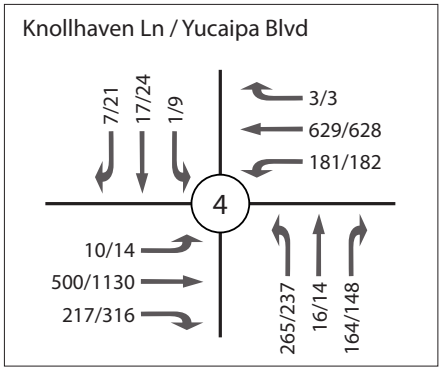
Legend

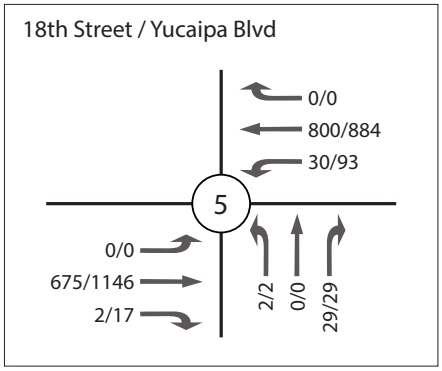
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- XX/YY AM/PM Volumes

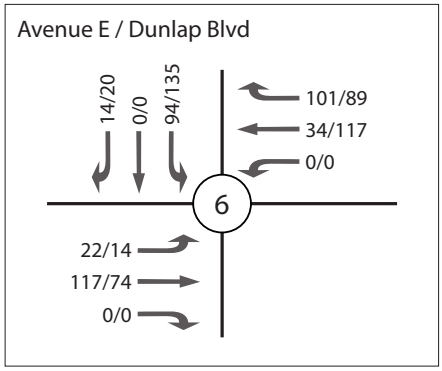












7.1.2 Existing (Year 2018) With Project Roadway Segment LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to the Existing (Year 2018) volumes on study area roadway segments. Table 12 summarizes the level of service for roadway segments with addition of project traffic.

Table 12: Existing (Year 2018) With Project Roadway Segment Analysis

Segment				Lane Geo	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	4D	34,200	35,736	1.04
B	Yucaipa Blvd	Avenue E	Knollhaven Lane	4D	34,200	29,980	0.88
C	Yucaipa Blvd	18th Street	17th Street	4D	34,200	27,198	0.80
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	10,972	0.76
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,689	0.12
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	3,935	0.27
G	Avenue E	18th Street	17th Street	2U	14,400	5,417	0.38

All roadway segments are currently operating at an acceptable LOS under Existing (Year 2018) With Project Conditions, with the exception of:

- Segment A: Yucaipa Blvd between WB I-10 Ramps and Avenue E.

7.1.3 Existing (Year 2018) With Project Freeway Mainline LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to the Existing (Year 2018) volumes on the study area freeway mainline segments. Table 13 summarizes the level of service for freeway segments with addition of project traffic.

Table 13: Existing (Year 2018) With Project Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
H	I-10 South of Yucaipa Boulevard	125,424	18.6	C
I	I-10 North of Yucaipa Boulevard	155,848	23.7	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments would operate at an acceptable level of service under Existing (Year 2018) With Project Conditions.

7.2 Future (Year 2020) With Project Impact Analysis

7.2.1 Future (Year 2020) With Project Intersection LOS

A level of service analysis was conducted to evaluate addition of project traffic to the Future (Year 2020) intersection operating conditions during the weekday AM and PM peak hours. In order to determine any cumulative project impacts, traffic from the project was added to future no project traffic volumes. All study area intersection lane configurations are shown in Figure 6. Avenue E and Dunlap Blvd has been modelled with three separate alternatives: Roundabout, Two Way Stop Control, and All Way Stop Control. Figure 11 illustrates the AM and PM peak hour volumes at the area intersections under Future (Year 2020) With Project conditions. Table 14 summarizes the Future (Year 2020) With Project level of service at the study area intersections. Level of service calculation worksheets are included in Appendix B.

Table 14: Future (Year 2020) With Project AM/PM Peak Hour – Intersection LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour		Impact? (Y/N)
			Delay	LOS	Delay	LOS	
1	Yucaipa Blvd and I-10 EB [1]	Signal	19.3	B	54.8	D	N
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.7	B	14.0	B	N
3	Yucaipa Blvd and Avenue E	Signal	38.9	**D**	168.5	**F**	Y
4	Knollhaven Lane and Yucaipa Blvd	Signal	22.1	C	33.6	C	N
Unsignalized Intersections		**Control**	**AM Peak Hour**		**PM Peak Hour**		**Impact? (Y/N)**
			Delay	**LOS**	**Delay**	**LOS**	
5	18th Street and Yucaipa Blvd	TWSC	13.5	B	21.6	C	N
6	Avenue E and Dunlap Blvd	Roundabout	4.7	A	5.2	A	N
6A	Avenue E and Dunlap Blvd	TWSC	10.9	B	11.8	B	N
6B	Avenue E and Dunlap Blvd	AWSC	8.3	A	8.9	A	N

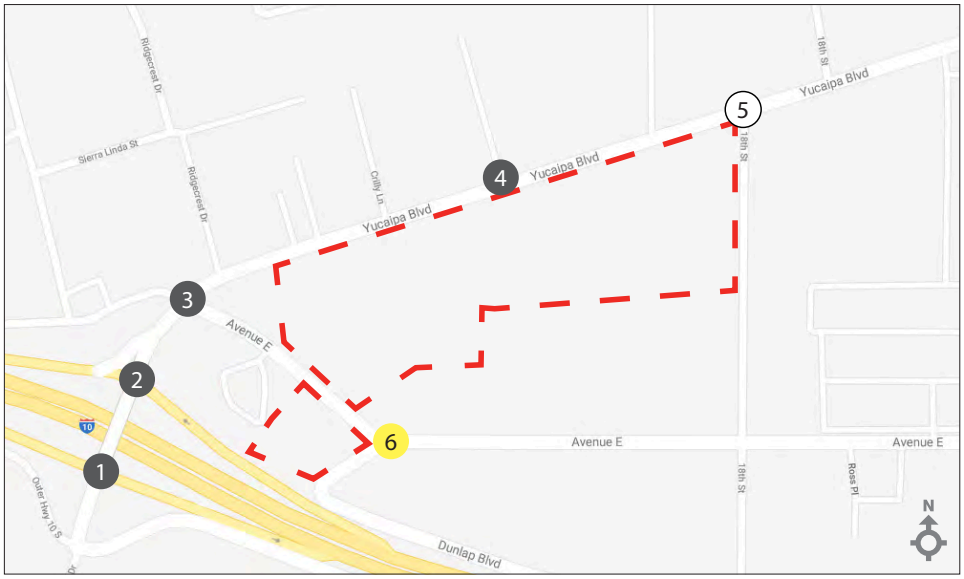
[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 14, all intersections operate at satisfactory LOS (LOS C or better), with the exception of the following location, which is considered a Future (Year 2020) With Project impact:

- Yucaipa Blvd and Avenue E – LOS D in the AM peak hour and LOS F in the PM peak hour

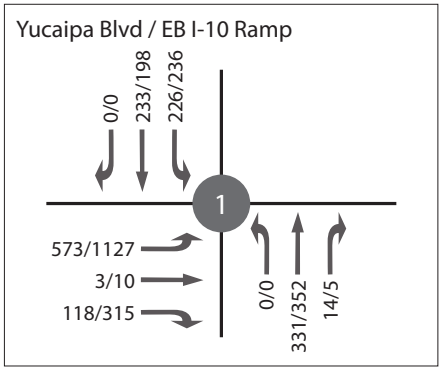
At Avenue E and Dunlap Boulevard, the intersection is forecast to operate satisfactorily under any of the three potential traffic controls. The Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) does not have specific warrant criteria for roundabouts. Implementation of any of the three traffic controls at this location would result in acceptable LOS. However, with safety and geometric considerations, implementation of either a roundabout or an all-way stop control are recommended.

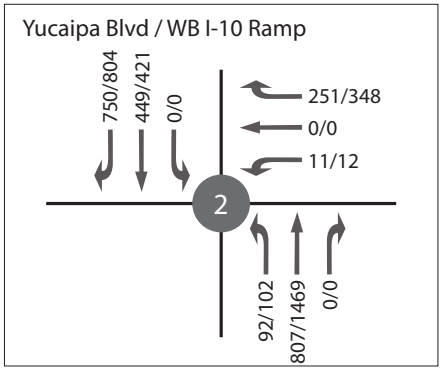
Figure 11 - Future (Year 2020) With Project AM and PM Peak Hour Traffic Volumes

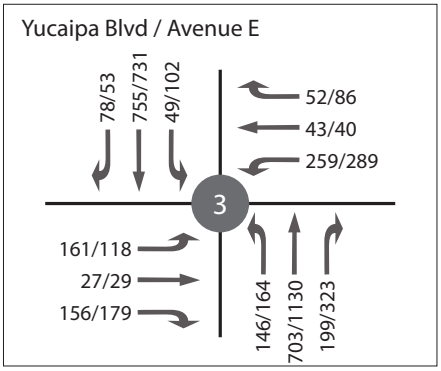


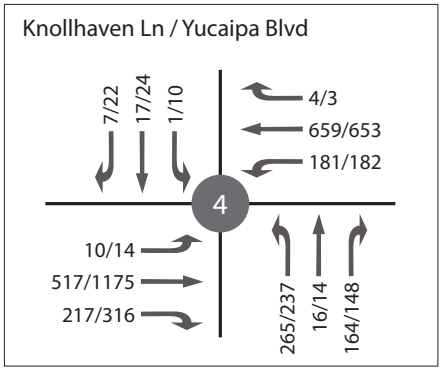
Legend

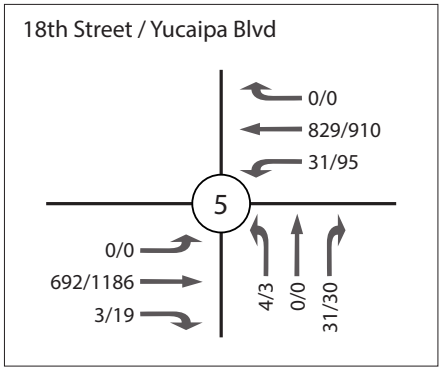
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Proposed Roundabout
- XX/YY AM/PM Volumes

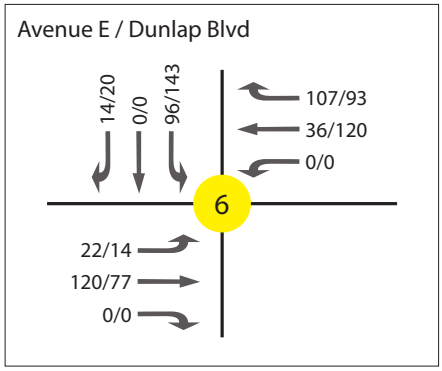












7.2.2 Future (Year 2020) With Project Roadway Segment LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to the Future (Year 2020) volumes on study area roadway segments. Table 15 summarizes the level of service for roadway segments with addition of project traffic.

Table 15: Future (Year 2020) With Project Roadway Segment Analysis

Segment				Lane Geo	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	5D	43,650	36,445	0.83
B	Yucaipa Blvd	Avenue E	Knollhaven Lane	6D	53,100	30,600	0.58
C	Yucaipa Blvd	18th Street	17th Street	6D	53,100	27,796	0.52
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	11,171	0.78
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,725	0.12
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	4,002	0.28
G	Avenue E	18th Street	17th Street	2U	14,400	5,485	0.38

All roadway segments are currently operating at an acceptable LOS under Future (Year 2020) With Project Conditions.

7.2.3 Future (Year 2020) With Project Freeway Mainline LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to Future (Year 2020) volumes on the study area freeway mainline segments. Table 16 summarizes the level of service for freeway segments with addition of project traffic. Mainline analysis worksheets are provided in Appendix C.

Table 16: Future (Year 2020) With Project Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
H	I-10 South of Yucaipa Boulevard	129,114	19.2	C
I	I-10 North of Yucaipa Boulevard	160,378	24.6	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments are forecast to operate at an acceptable level of service under Future (Year 2020) With Project Conditions.

8. Site Access and Circulation Analysis

This section evaluates the potential impacts of the proposed project on the driveways in and out of the site. The access locations are as follows:

- A1: Right-in/Right-out Only Driveway on Yucaipa Blvd between Avenue E and Knollhaven Lane
- A2: Full Access Driveway on 18th south of Yucaipa Blvd
- A3: Full Access Driveway on 18th Street between A2 and Avenue E
- A4: Full Access Driveway on Avenue E north of Dunlap Blvd
- A5: Full Access Driveway on Avenue E south of Yucaipa Blvd
- A6: Full Access Driveway on Avenue E between A4 and A5

Figure 12 illustrates the location of each of the proposed access locations.

8.1 Project Driveway LOS

A level of service analysis was provided at each of the six (6) proposed project driveways. This does not include the full access driveway at Knollhaven Lane and Yucaipa Blvd which is analyzed in the previous scenarios. Exit approaches were assumed to have one lane, unless specified otherwise. No dedicated left-turn lanes were assumed into any of the project driveways, aside from the full access driveway at Knollhaven Lane.

HCS 10 software was used to evaluate LOS. Table 17 below summarizes the results of the Future (Year 2020) With Project driveway level of service. The LOS worksheets for the driveways are provided in Appendix D.

Table 17: Project Driveway LOS Analysis

Intersection		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
A1	Access Driveway and Yucaipa Blvd	TWSC	10.7	B	13.6	B
A2	Access Driveway and 18th Street	TWSC	8.9	A	9.3	A
A3	Access Driveway and 18th Street	TWSC	8.6	A	8.6	A
A4	Access Driveway and Avenue E	TWSC	9.9	A	10.2	B
A5	Access Driveway and Avenue E	TWSC	11.1	B	11.5	B
A6	Access Driveway and Avenue E	TWSC	11.0	B	12.4	B

As shown in Table 18, all intersections operate at satisfactory LOS (LOS C or better).

8.2 Project Driveway Queuing Analysis

In order to fully assess driveway performances, queue lengths for movements at the project ingress and egress locations were considered. HCS 10 software was used to evaluate 95th percentile queues. The purpose of the queuing analysis was to determine the appropriate storage length at each of the driveways. Table 17 below summarizes the results of the Future (Year 2020) With Project driveway level of service. The LOS worksheets for the driveways are provided in Appendix D.

Table 17: Project Driveway Queuing

ID	Peak Hour	Movement	Queue Length (ft.)	Lane Capacity (ft.)	Capacity Exceeded?
A1	AM	NB - R	0.5	65	N
	PM	NB - R	0.8	65	N
A2	AM	NB - L	1.8	330	N
	PM	NB - L	3.3	330	N
	AM	EB - LTR	4.8	300	N
	PM	EB - LTR	5.5	300	N
A3	AM	NB - L	0.5	300	N
	PM	NB - L	1.0	300	N
	AM	EB - LTR	0.8	210	N
	PM	EB - LTR	0.8	210	N
A4	AM	SB - L	0.3	270	N
	PM	SB - L	0.8	270	N
	AM	EB - LTR	1.8	180	N
	PM	EB - LTR	2.3	180	N
A5	AM	SB - L	3.5	390	N
	PM	SB - L	3.8	390	N
	AM	WB - LTR	14.0	75	N
	PM	WB - LTR	13.3	75	N
A6	AM	NB - L	1.3	60	N
	PM	NB - L	1.0	60	N
	AM	EB - LTR	14.0	30	N
	PM	EB - LTR	13.3	30	N
A7[1]	AM	WB - L	235	200	Y
	PM	WB - L	237	200	Y
	AM	NB - L	132	200	N
	PM	NB - L	119	200	N
	AM	NB - TR	44	120	N
	PM	NB - TR	42	120	N

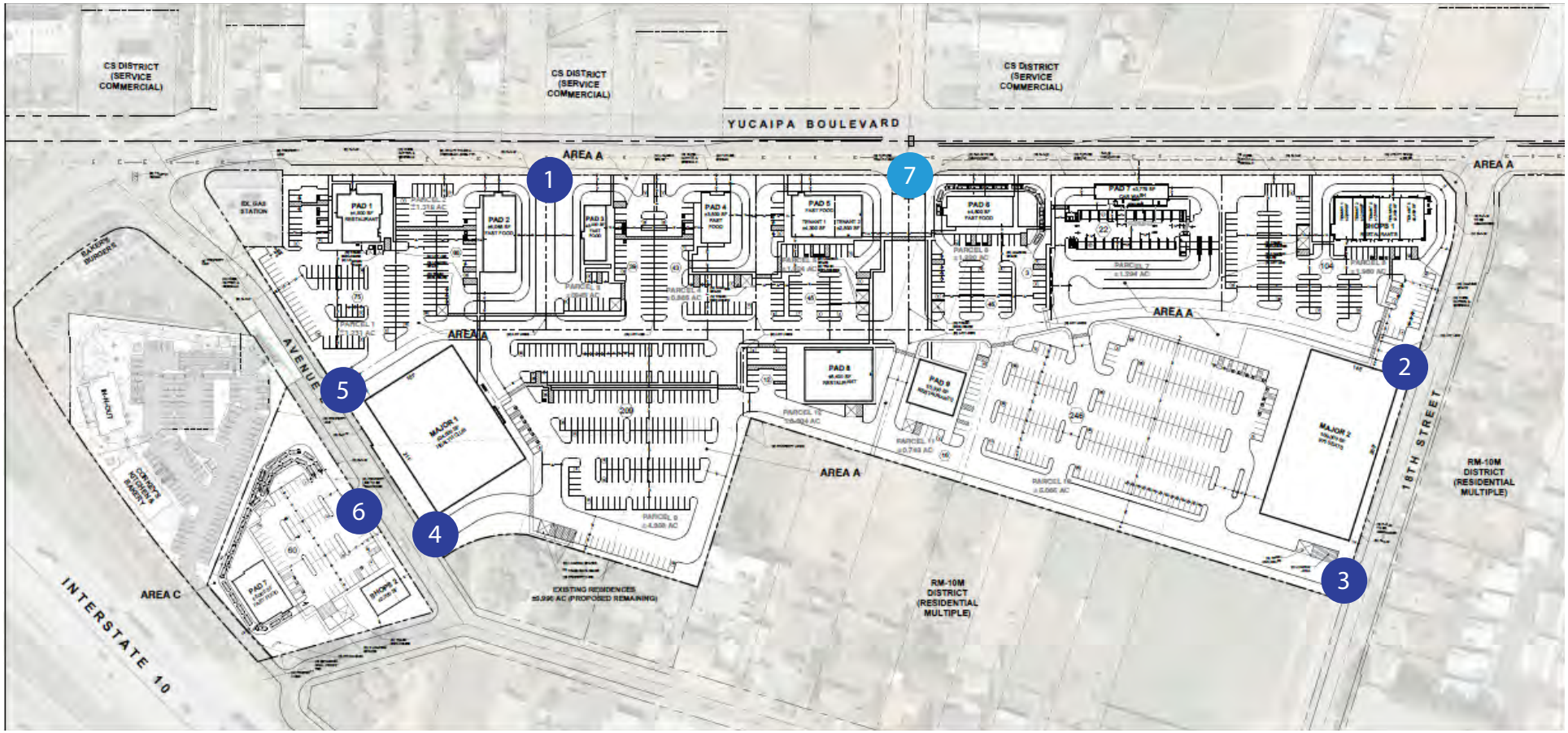
[1]A7 is the full access driveway at Knollhaven Lane and Yucaipa Blvd.

Based on the queuing analysis, the anticipated queue lengths developed by vehicles entering and exiting the driveways would not exceed their respective lane queuing capacity with the exception of:

- WB Left Turn from Yucaipa Blvd into the proposed development at the primary full access driveway (A7)

For the driveways that do not exceed capacity spillover onto to the street network or within the site is not anticipated. Evaluation of the WB Left Turn has shown that the proposed left turn pocket of 200 feet provided by the site plan is not adequate. **It is recommended that the left turn pocket be extended to a minimum of 250 feet to mitigate the queuing effect.**

Figure 12 - Project Access Points



Legend

- # Project Entrance
- # Full Access Driveway

9. Mitigation Measures

The purpose of this section is to provide recommended improvements for the impacted intersections. Improvements for any impacted locations were determined by utilizing the minimum requirements to achieve acceptable LOS. As such, the most cost-effective and simple improvements were considered first, such as restriping of lane configurations, traffic control modifications, and optimization of signal timing. Large-scale improvements, such as installation of a new traffic signal or any lane additions (which may or may not require additional right-of-way), were recommended where necessary to achieve acceptable LOS. Where applicable, mitigation measures identified in the previous studies were utilized.

9.1 Existing (Year 2018) With Project Intersection Impacts

As shown in Table 11, one of the six study area intersections would be impacted with implementation of the proposed project under Existing (Year 2018) Conditions. The project would cause the delay at intersections already operating at unacceptable levels to increase or cause intersections operating at acceptable to become unacceptable. The following mitigation measures are recommend to either achieve acceptable LOS or to achieve at least the pre-project LOS.

TRA-1: Yucaipa Blvd/Avenue E: Optimization of existing signal timing to provide a longer overall cycle length with additional green time allocated to the westbound left and northbound left turn movements would mitigate the impact at this location.

The LOS with the recommended mitigation measures is presented in Table 18 below. Mitigated LOS worksheets are provided in Appendix E.

Table 18: Existing (Year 2018) With Project Mitigated LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
3	Yucaipa Blvd and Avenue E	Signal	41.3	D	159.0	F
	With Mitigation TRA-1		*20.7*	*C*	*32.8*	*C*

9.2 Existing (Year 2018) With Project Roadway Impacts

As shown on Table 12, the project would cause the roadway segment of Yucaipa Blvd between WB I-10 Ramps and Avenue E (Segment A) to go from acceptable to unacceptable. As indicated in Section 2.7, the roadway segment analysis is used as a planning tool to evaluate the adequacy of existing roadway segment capacities. A v/c ratio of greater than 1.01 to 1.25 suggests that additional review is required; however, if adjacent intersections provide the lanes needed to achieve acceptable peak hour LOS, then segment capacity improvements between key intersections may not be needed. The adjacent intersections were found to operate acceptably with mitigations, as such no mitigations are required for the roadway segments under Existing with Project conditions**.**

9.3 Existing (Year 2018) With Project Freeway Impacts

As shown on Table 13, all freeway mainline segments are forecast to operate at acceptable LOS E or better. No mitigations are required for freeway segments under Existing (Year 2018) with Project conditions.

9.4 Future (Year 2020) With Project Intersection Impacts

As shown in Table 14, one of the six study area intersections would be impacted with implementation of the proposed project under Future (Year 2020) conditions. The project would cause the delay at intersections already operating at unacceptable levels to increase or cause intersections operating at acceptable to become unacceptable. The following mitigation measures are recommend to either achieve acceptable LOS or to achieve at least the pre-project LOS.

TRA-1: Yucaipa Blvd/Avenue E: Optimization of existing signal timing to provide a longer overall cycle length with additional green time allocated to the westbound left and northbound left turn movements would mitigate the impact at this location.

The LOS with the recommended mitigation measures is presented in Table 19 below. Mitigated LOS worksheets are provided in Appendix E.

Table 19: Future (Year 2020) With Project Mitigated LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
3	Yucaipa Blvd and Avenue E	Signal	38.9	D	168.5	F
	With Mitigation TRA-1		*22.1*	*C*	*61.9*	*E*

Although the PM peak hour operates at unacceptable LOS E, mitigation measure TRA-1 reduces the delay to better than the pre-project conditions. As such, no impact remains after implementation of the mitigation measure.

9.5 Future (Year 2020) With Project Roadway Impacts

As shown on Table 15, none of the roadway segments were impacted by implementation of the proposed project.

9.6 Future (Year 2020) With Project Freeway Impacts

As shown on Table 16, all freeway mainline segments are forecast to operate at acceptable LOS E or better. No mitigations are required for freeway segments under Future (Year 2020) with Project conditions.

10. Conclusion

Based on the results of the level of service analysis, the proposed project can be implemented without significantly impacting any of the study area intersections, roadway segments, or freeway segments with the recommended improvements and mitigation measures.

Appendix A: Traffic Counts

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Yucaipa
N/S: Yucaipa Boulevard/Hilltop Drive
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

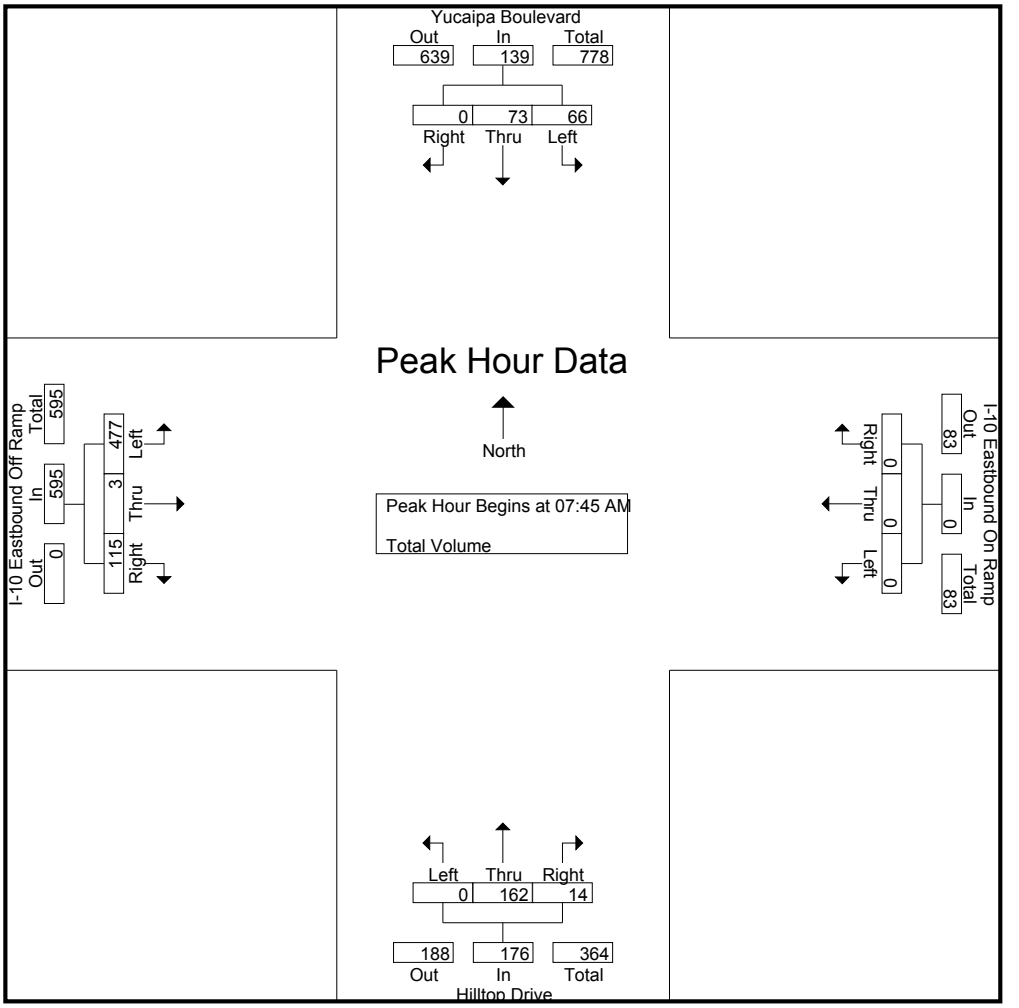
	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	12	0	29	0	0	0	0	0	34	2	36	109	0	13	122	187
07:15 AM	21	13	0	34	0	0	0	0	0	29	4	33	114	1	25	140	207
07:30 AM	21	13	0	34	0	0	0	0	0	36	2	38	116	0	26	142	214
07:45 AM	18	16	0	34	0	0	0	0	0	32	4	36	119	0	35	154	224
Total	77	54	0	131	0	0	0	0	0	131	12	143	458	1	99	558	832
08:00 AM	20	10	0	30	0	0	0	0	0	55	0	55	113	1	28	142	227
08:15 AM	15	26	0	41	0	0	0	0	0	37	4	41	123	1	29	153	235
08:30 AM	13	21	0	34	0	0	0	0	0	38	6	44	122	1	23	146	224
08:45 AM	17	16	0	33	0	0	0	0	0	36	5	41	121	0	28	149	223
Total	65	73	0	138	0	0	0	0	0	166	15	181	479	3	108	590	909
Grand Total	142	127	0	269	0	0	0	0	0	297	27	324	937	4	207	1148	1741
Apprch %	52.8	47.2	0		0	0	0		0	91.7	8.3		81.6	0.3	18		
Total %	8.2	7.3	0	15.5	0	0	0	0	0	17.1	1.6	18.6	53.8	0.2	11.9	65.9	

	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	18	16	0	34	0	0	0	0	0	32	4	36	119	0	**35**	**154**	224
08:00 AM	**20**	10	0	30	0	0	0	0	0	**55**	0	**55**	113	**1**	28	142	227
08:15 AM	15	**26**	0	**41**	0	0	0	0	0	37	4	41	**123**	1	29	153	**235**
08:30 AM	13	21	0	34	0	0	0	0	0	38	**6**	44	122	1	23	146	224
Total Volume	66	73	0	139	0	0	0	0	0	162	14	176	477	3	115	595	910
% App. Total	47.5	52.5	0		0	0	0		0	92	8		80.2	0.5	19.3		
PHF	.825	.702	.000	.848	.000	.000	.000	.000	.000	.736	.583	.800	.970	.750	.821	.966	.968

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Yucaipa
N/S: Yucaipa Boulevard/Hilltop Drive
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				08:00 AM				07:45 AM			
+0 mins.	**21**	13	0	34	0	0	0	0	0	**55**	0	**55**	119	0	**35**	**154**
+15 mins.	18	16	0	34	0	0	0	0	0	37	4	41	113	**1**	28	142
+30 mins.	20	10	0	30	0	0	0	0	0	38	**6**	44	**123**	1	29	153
+45 mins.	15	**26**	0	**41**	0	0	0	0	0	36	5	41	122	1	23	146
Total Volume	74	65	0	139	0	0	0	0	0	166	15	181	477	3	115	595
% App. Total	53.2	46.8	0		0	0	0		0	91.7	8.3		80.2	0.5	19.3	
PHF	.881	.625	.000	.848	.000	.000	.000	.000	.000	.755	.625	.823	.970	.750	.821	.966

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Yucaipa
N/S: Yucaipa Boulevard/Hilltop Drive
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	26	16	0	42	0	0	0	0	0	32	2	34	245	1	78	324	400
04:15 PM	23	23	0	46	0	0	0	0	0	31	1	32	252	1	55	308	386
04:30 PM	28	10	0	38	0	0	0	0	0	45	1	46	245	1	55	301	385
04:45 PM	26	14	0	40	0	0	0	0	0	47	2	49	240	3	77	320	409
Total	103	63	0	166	0	0	0	0	0	155	6	161	982	6	265	1253	1580
05:00 PM	24	11	0	35	0	0	0	0	0	34	0	34	283	2	77	362	431
05:15 PM	23	14	0	37	0	0	0	0	0	32	2	34	300	5	86	391	462
05:30 PM	19	16	0	35	0	0	0	0	0	27	1	28	267	0	66	333	396
05:45 PM	28	14	0	42	0	0	0	0	0	26	1	27	267	0	70	337	406
Total	94	55	0	149	0	0	0	0	0	119	4	123	1117	7	299	1423	1695
Grand Total	197	118	0	315	0	0	0	0	0	274	10	284	2099	13	564	2676	3275
Apprch %	62.5	37.5	0		0	0	0		0	96.5	3.5		78.4	0.5	21.1		
Total %	6	3.6	0	9.6	0	0	0	0	0	8.4	0.3	8.7	64.1	0.4	17.2	81.7	

	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**26**	14	0	**40**	0	0	0	0	0	**47**	**2**	**49**	240	3	77	320	409
05:00 PM	24	11	0	35	0	0	0	0	0	34	0	34	283	2	77	362	431
05:15 PM	23	14	0	37	0	0	0	0	0	32	2	34	**300**	**5**	**86**	**391**	**462**
05:30 PM	19	**16**	0	35	0	0	0	0	0	27	1	28	267	0	66	333	396
Total Volume	92	55	0	147	0	0	0	0	0	140	5	145	1090	10	306	1406	1698
% App. Total	62.6	37.4	0		0	0	0		0	96.6	3.4		77.5	0.7	21.8		
PHF	.885	.859	.000	.919	.000	.000	.000	.000	.000	.745	.625	.740	.908	.500	.890	.899	.919

Counts Unlimited
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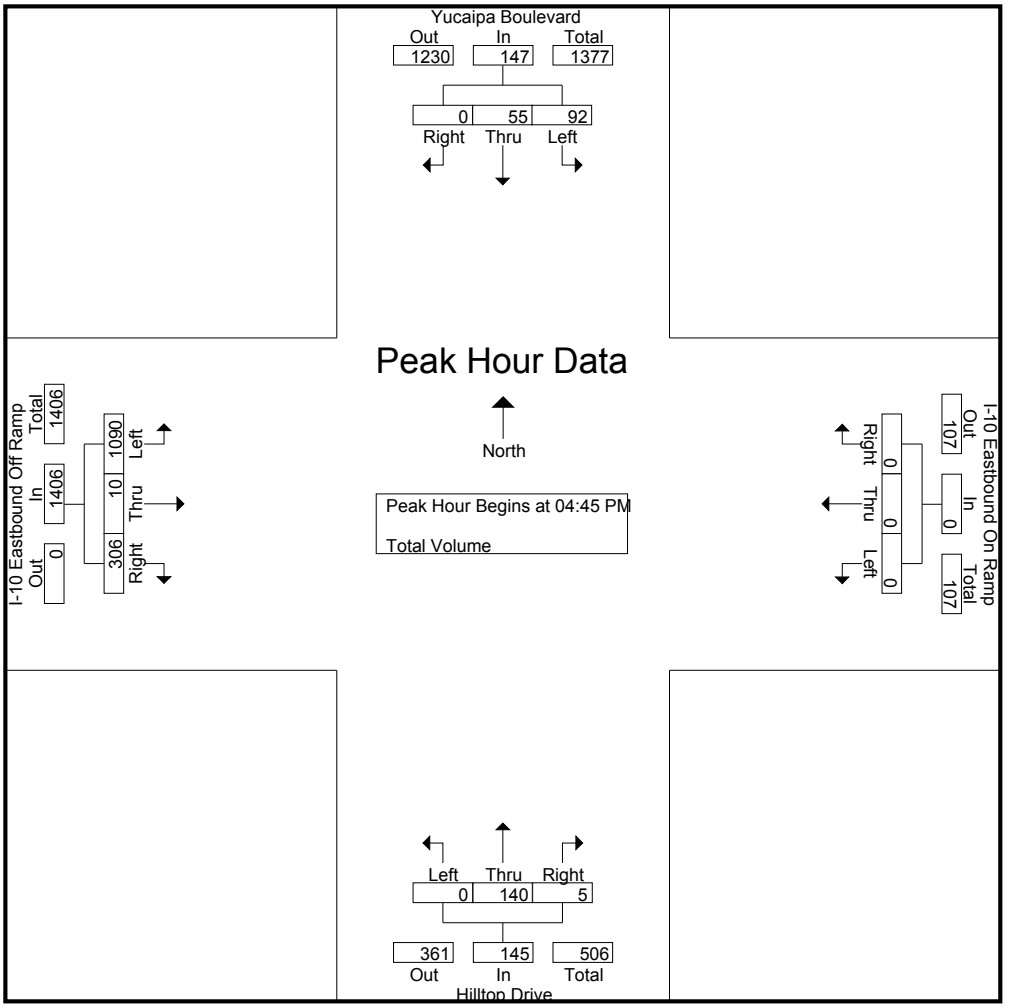
City of Yucaipa
N/S: Yucaipa Boulevard/Hilltop Drive
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				05:00 PM			
+0 mins.	26	16	0	42	0	0	0	0	0	45	1	46	283	2	77	362
+15 mins.	23	**23**	0	**46**	0	0	0	0	0	**47**	**2**	**49**	**300**	**5**	**86**	**391**
+30 mins.	**28**	10	0	38	0	0	0	0	0	34	0	34	267	0	66	333
+45 mins.	26	14	0	40	0	0	0	0	0	32	2	34	267	0	70	337
Total Volume	103	63	0	166	0	0	0	0	0	158	5	163	1117	7	299	1423
% App. Total	62	38	0		0	0	0		0	96.9	3.1		78.5	0.5	21	
PHF	.920	.685	.000	.902	.000	.000	.000	.000	.000	.840	.625	.832	.931	.350	.869	.910

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	29	161	190	1	1	21	23	27	115	0	142	0	0	0	0	355
07:15 AM	0	30	156	186	2	0	7	9	17	128	0	145	0	0	0	0	340
07:30 AM	0	31	160	191	4	0	19	23	20	129	0	149	0	0	0	0	363
07:45 AM	0	31	164	195	3	0	20	23	17	139	0	156	0	0	0	0	374
Total	0	121	641	762	10	1	67	78	81	511	0	592	0	0	0	0	1432
08:00 AM	0	26	161	187	2	0	21	23	32	137	0	169	0	0	0	0	379
08:15 AM	0	40	166	206	2	0	24	26	20	140	0	160	0	0	0	0	392
08:30 AM	0	28	139	167	7	0	26	33	23	137	0	160	0	0	0	0	360
08:45 AM	0	28	147	175	3	2	35	40	18	141	0	159	0	0	0	0	374
Total	0	122	613	735	14	2	106	122	93	555	0	648	0	0	0	0	1505
Grand Total	0	243	1254	1497	24	3	173	200	174	1066	0	1240	0	0	0	0	2937
Apprch %	0	16.2	83.8		12	1.5	86.5		14	86	0		0	0	0		
Total %	0	8.3	42.7	51	0.8	0.1	5.9	6.8	5.9	36.3	0	42.2	0	0	0	0	

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	31	160	191	**4**	0	19	23	20	129	0	149	0	0	0	0	363
07:45 AM	0	31	164	195	3	0	20	23	17	139	0	156	0	0	0	0	374
08:00 AM	0	26	161	187	2	0	21	23	**32**	137	0	**169**	0	0	0	0	379
08:15 AM	0	**40**	**166**	**206**	2	0	**24**	**26**	20	**140**	0	160	0	0	0	0	**392**
Total Volume	0	128	651	779	11	0	84	95	89	545	0	634	0	0	0	0	1508
% App. Total	0	16.4	83.6		11.6	0	88.4		14	86	0		0	0	0		
PHF	.000	.800	.980	.945	.688	.000	.875	.913	.695	.973	.000	.938	.000	.000	.000	.000	.962

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W AM
Site Code : 20218899
Start Date : 12/4/2018
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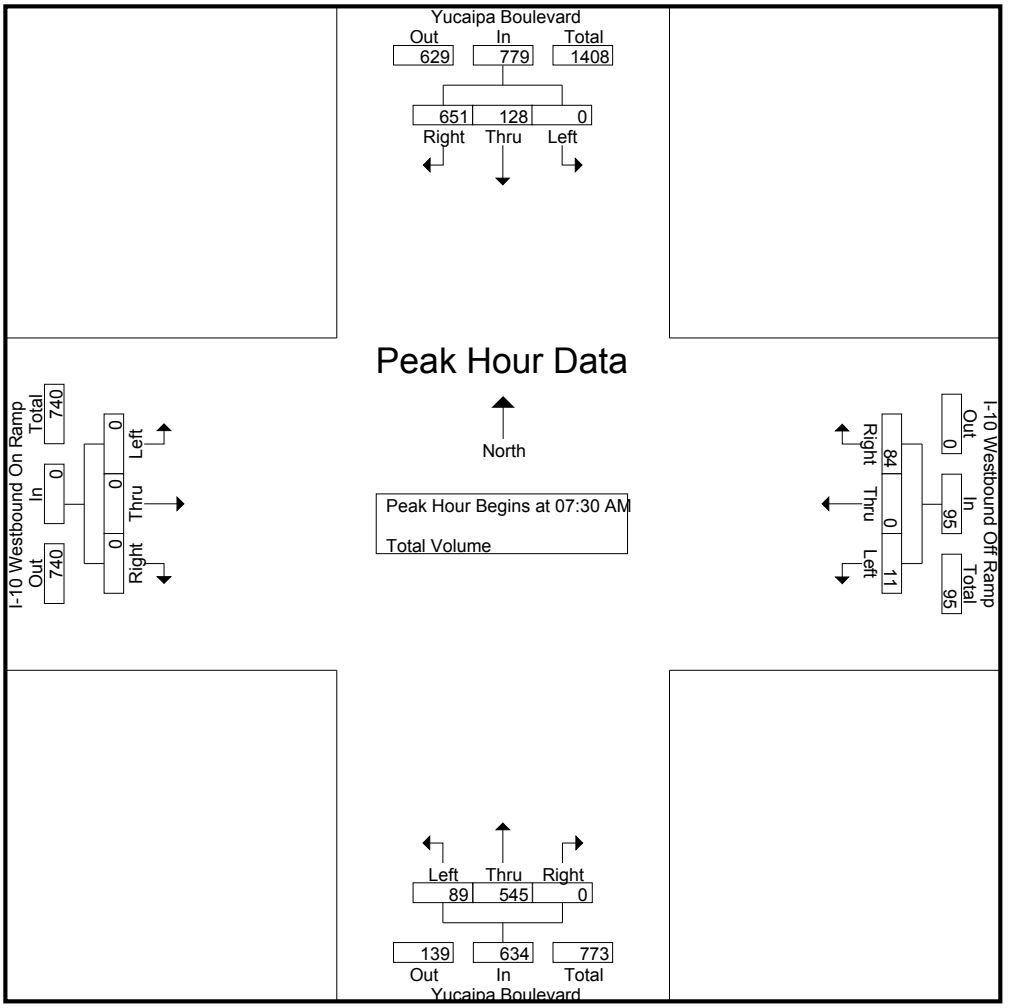

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				08:00 AM				07:00 AM			
+0 mins.	0	31	160	191	2	0	21	23	**32**	137	0	**169**	0	0	0	0
+15 mins.	0	31	164	195	2	0	24	26	20	140	0	160	0	0	0	0
+30 mins.	0	26	161	187	**7**	0	26	33	23	137	0	160	0	0	0	0
+45 mins.	0	**40**	**166**	**206**	3	**2**	**35**	**40**	18	**141**	0	159	0	0	0	0
Total Volume	0	128	651	779	14	2	106	122	93	555	0	648	0	0	0	0
% App. Total	0	16.4	83.6		11.5	1.6	86.9		14.4	85.6	0		0	0	0	
PHF	.000	.800	.980	.945	.500	.250	.757	.763	.727	.984	.000	.959	.000	.000	.000	.000

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	36	163	199	4	0	23	27	26	255	0	281	0	0	0	0	507
04:15 PM	0	38	150	188	4	0	20	24	25	266	0	291	0	0	0	0	503
04:30 PM	0	35	176	211	3	0	35	38	36	257	0	293	0	0	0	0	542
04:45 PM	0	40	182	222	2	0	37	39	27	261	0	288	0	0	0	0	549
Total	0	149	671	820	13	0	115	128	114	1039	0	1153	0	0	0	0	2101
05:00 PM	0	30	188	218	3	0	38	41	16	283	0	299	0	0	0	0	558
05:15 PM	0	35	171	206	4	0	26	30	20	321	0	341	0	0	0	0	577
05:30 PM	0	33	163	196	2	1	25	28	16	283	0	299	0	0	0	0	523
05:45 PM	0	40	134	174	2	0	29	31	14	272	0	286	0	0	0	0	491
Total	0	138	656	794	11	1	118	130	66	1159	0	1225	0	0	0	0	2149
Grand Total	0	287	1327	1614	24	1	233	258	180	2198	0	2378	0	0	0	0	4250
Apprch %	0	17.8	82.2		9.3	0.4	90.3		7.6	92.4	0		0	0	0		
Total %	0	6.8	31.2	38	0.6	0	5.5	6.1	4.2	51.7	0	56	0	0	0	0	

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	35	176	211	3	0	35	38	**36**	257	0	293	0	0	0	0	542
04:45 PM	0	**40**	182	**222**	2	0	37	39	27	261	0	288	0	0	0	0	549
05:00 PM	0	30	**188**	218	3	0	**38**	**41**	16	283	0	299	0	0	0	0	558
05:15 PM	0	35	171	206	**4**	0	26	30	20	**321**	0	**341**	0	0	0	0	**577**
Total Volume	0	140	717	857	12	0	136	148	99	1122	0	1221	0	0	0	0	2226
% App. Total	0	16.3	83.7		8.1	0	91.9		8.1	91.9	0		0	0	0		
PHF	.000	.875	.953	.965	.750	.000	.895	.902	.688	.874	.000	.895	.000	.000	.000	.000	.964

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W PM
Site Code : 20218899
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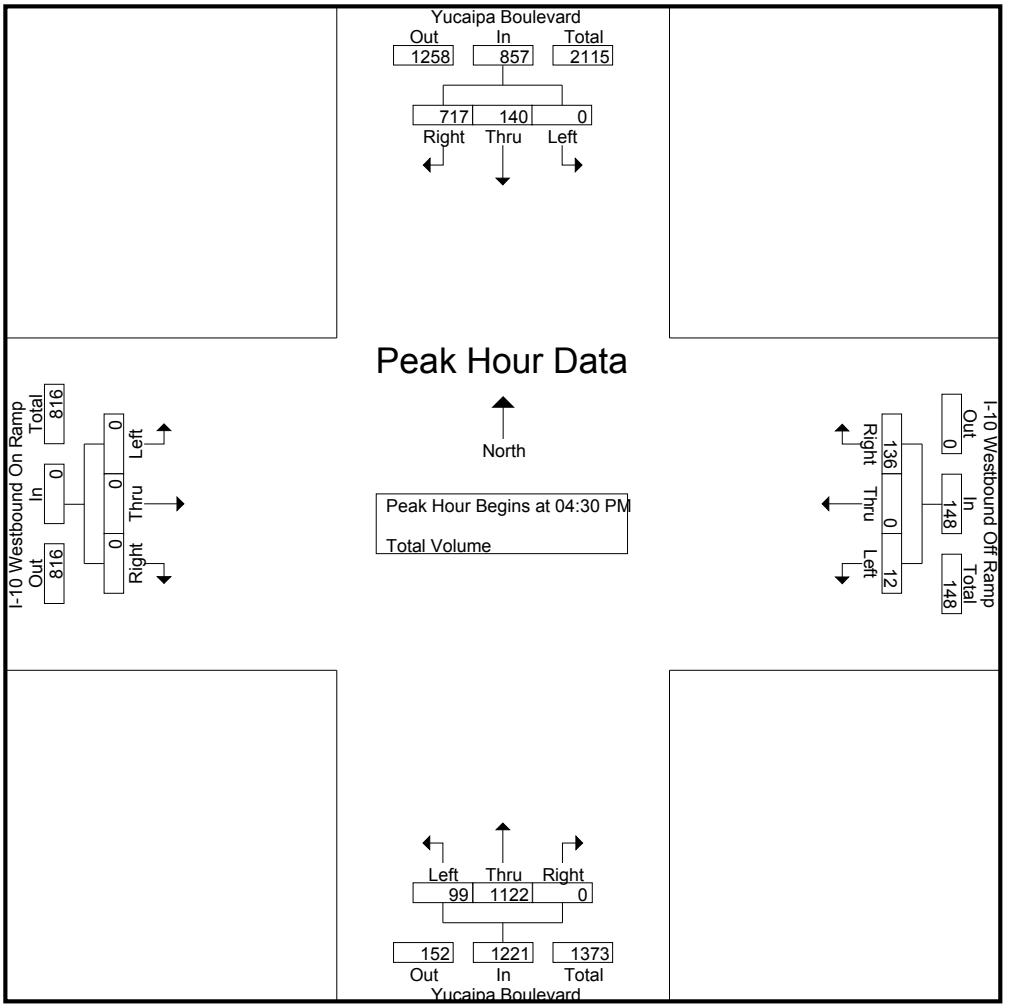

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	0	35	176	211	3	0	35	38	**27**	261	0	288	0	0	0	0
+15 mins.	0	**40**	182	**222**	2	0	37	39	16	283	0	299	0	0	0	0
+30 mins.	0	30	**188**	218	3	0	**38**	**41**	20	**321**	0	**341**	0	0	0	0
+45 mins.	0	35	171	206	**4**	0	26	30	16	283	0	299	0	0	0	0
Total Volume	0	140	717	857	12	0	136	148	79	1148	0	1227	0	0	0	0
% App. Total	0	16.3	83.7		8.1	0	91.9		6.4	93.6	0		0	0	0	
PHF	.000	.875	.953	.965	.750	.000	.895	.902	.731	.894	.000	.900	.000	.000	.000	.000

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: Hampton Road/Avenue E
Weather: Clear

File Name : 03_YUC_Yucaipa Blvd_Hampton_Ave E AM
Site Code : 20218899
Start Date : 12/4/2018
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Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	111	8	121	33	17	6	56	31	86	14	131	36	3	33	72	380
07:15 AM	2	110	10	122	30	3	4	37	22	90	20	132	35	2	35	72	363
07:30 AM	3	119	11	133	31	14	3	48	35	88	20	143	36	6	35	77	401
07:45 AM	4	124	24	152	33	4	5	42	26	109	19	154	37	4	32	73	421
Total	11	464	53	528	127	38	18	183	114	373	73	560	144	15	135	294	1565
08:00 AM	4	109	17	130	27	10	2	39	44	95	22	161	35	6	42	83	413
08:15 AM	2	121	16	139	37	7	7	51	37	113	13	163	39	4	42	85	438
08:30 AM	6	103	15	124	27	5	5	37	39	110	19	168	28	4	33	65	394
08:45 AM	4	103	20	127	33	5	4	42	33	115	30	178	29	4	37	70	417
Total	16	436	68	520	124	27	18	169	153	433	84	670	131	18	154	303	1662
Grand Total	27	900	121	1048	251	65	36	352	267	806	157	1230	275	33	289	597	3227
Apprch %	2.6	85.9	11.5		71.3	18.5	10.2		21.7	65.5	12.8		46.1	5.5	48.4		
Total %	0.8	27.9	3.7	32.5	7.8	2	1.1	10.9	8.3	25	4.9	38.1	8.5	1	9	18.5	

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	119	11	133	31	**14**	3	48	35	88	20	143	36	**6**	35	77	401
07:45 AM	**4**	**124**	**24**	**152**	33	4	5	42	26	109	19	154	37	4	32	73	421
08:00 AM	4	109	17	130	27	10	2	39	**44**	95	**22**	161	35	6	**42**	83	413
08:15 AM	2	121	16	139	**37**	7	**7**	**51**	37	**113**	13	**163**	**39**	4	42	**85**	**438**
Total Volume	13	473	68	554	128	35	17	180	142	405	74	621	147	20	151	318	1673
% App. Total	2.3	85.4	12.3		71.1	19.4	9.4		22.9	65.2	11.9		46.2	6.3	47.5		
PHF	.813	.954	.708	.911	.865	.625	.607	.882	.807	.896	.841	.952	.942	.833	.899	.935	.955

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: Hampton Road/Avenue E
Weather: Clear

File Name : 03_YUC_Yucaipa Blvd_Hampton_Ave E AM
Site Code : 20218899
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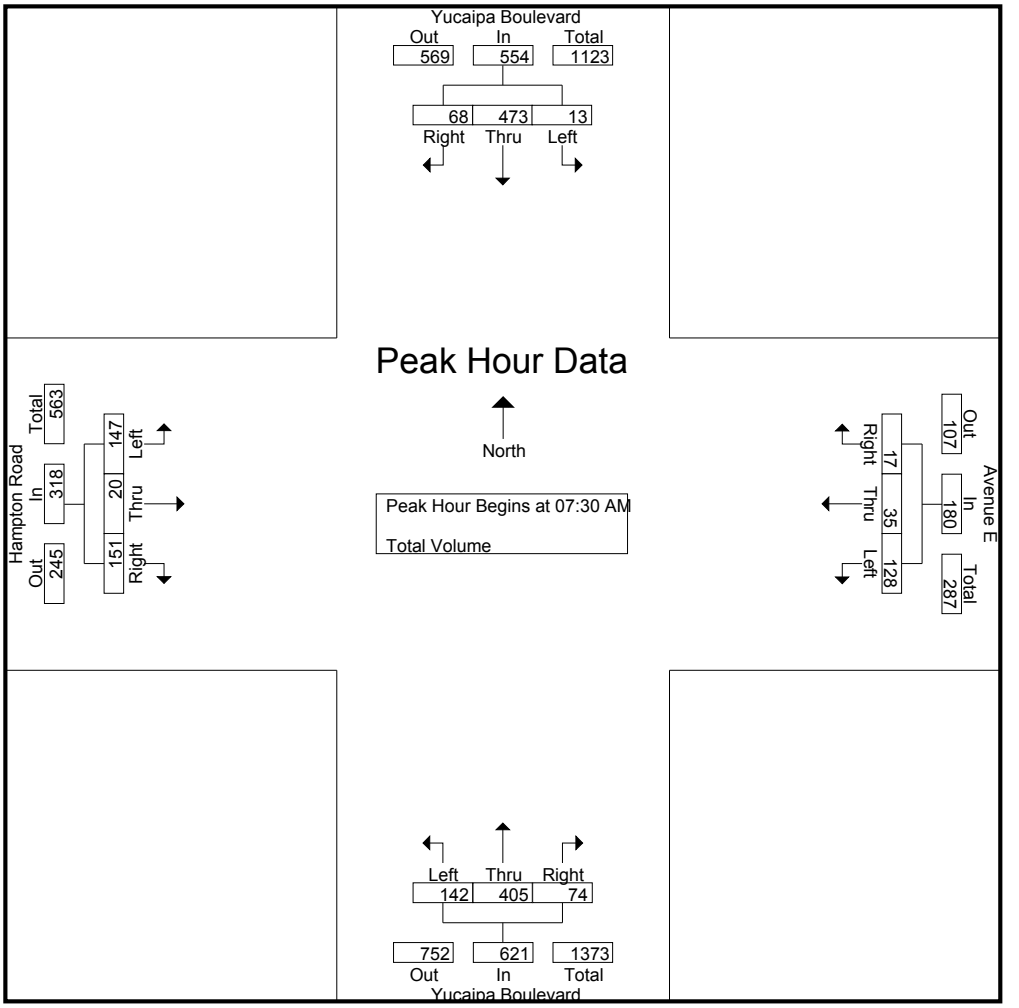

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	3	119	11	133	**33**	**17**	**6**	**56**	**44**	95	22	161	36	**6**	35	77
+15 mins.	**4**	**124**	**24**	**152**	30	3	4	37	37	113	13	163	37	4	32	73
+30 mins.	4	109	17	130	31	14	3	48	39	110	19	168	35	6	**42**	83
+45 mins.	2	121	16	139	33	4	5	42	33	**115**	**30**	**178**	**39**	4	42	**85**
Total Volume	13	473	68	554	127	38	18	183	153	433	84	670	147	20	151	318
% App. Total	2.3	85.4	12.3		69.4	20.8	9.8		22.8	64.6	12.5		46.2	6.3	47.5	
PHF	.813	.954	.708	.911	.962	.559	.750	.817	.869	.941	.700	.941	.942	.833	.899	.935

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: Hampton Road/Avenue E
Weather: Clear

File Name : 03_YUC_Yucaipa Blvd_Hampton_Ave E PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	113	14	137	37	11	14	62	45	189	39	273	32	7	43	82	554
04:15 PM	9	98	10	117	30	8	15	53	39	205	38	282	38	12	55	105	557
04:30 PM	19	134	14	167	43	9	7	59	39	206	47	292	23	4	30	57	575
04:45 PM	15	122	10	147	45	11	15	71	40	193	58	291	37	5	45	87	596
Total	53	467	48	568	155	39	51	245	163	793	182	1138	130	28	173	331	2282
05:00 PM	11	117	15	143	47	8	18	73	45	226	44	315	29	5	44	78	609
05:15 PM	22	114	7	143	36	7	8	51	36	260	44	340	19	9	48	76	610
05:30 PM	21	126	12	159	43	7	15	65	38	233	41	312	16	3	37	56	592
05:45 PM	13	108	12	133	30	10	15	55	39	223	40	302	11	2	29	42	532
Total	67	465	46	578	156	32	56	244	158	942	169	1269	75	19	158	252	2343
Grand Total	120	932	94	1146	311	71	107	489	321	1735	351	2407	205	47	331	583	4625
Apprch %	10.5	81.3	8.2		63.6	14.5	21.9		13.3	72.1	14.6		35.2	8.1	56.8		
Total %	2.6	20.2	2	24.8	6.7	1.5	2.3	10.6	6.9	37.5	7.6	52	4.4	1	7.2	12.6	

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	15	122	10	147	45	**11**	15	71	40	193	**58**	291	**37**	5	45	**87**	596
05:00 PM	11	117	**15**	143	**47**	8	**18**	**73**	**45**	226	44	315	29	5	44	78	609
05:15 PM	**22**	114	7	143	36	7	8	51	36	**260**	44	**340**	19	**9**	**48**	76	**610**
05:30 PM	21	**126**	12	**159**	43	7	15	65	38	233	41	312	16	3	37	56	592
Total Volume	69	479	44	592	171	33	56	260	159	912	187	1258	101	22	174	297	2407
% App. Total	11.7	80.9	7.4		65.8	12.7	21.5		12.6	72.5	14.9		34	7.4	58.6		
PHF	.784	.950	.733	.931	.910	.750	.778	.890	.883	.877	.806	.925	.682	.611	.906	.853	.986

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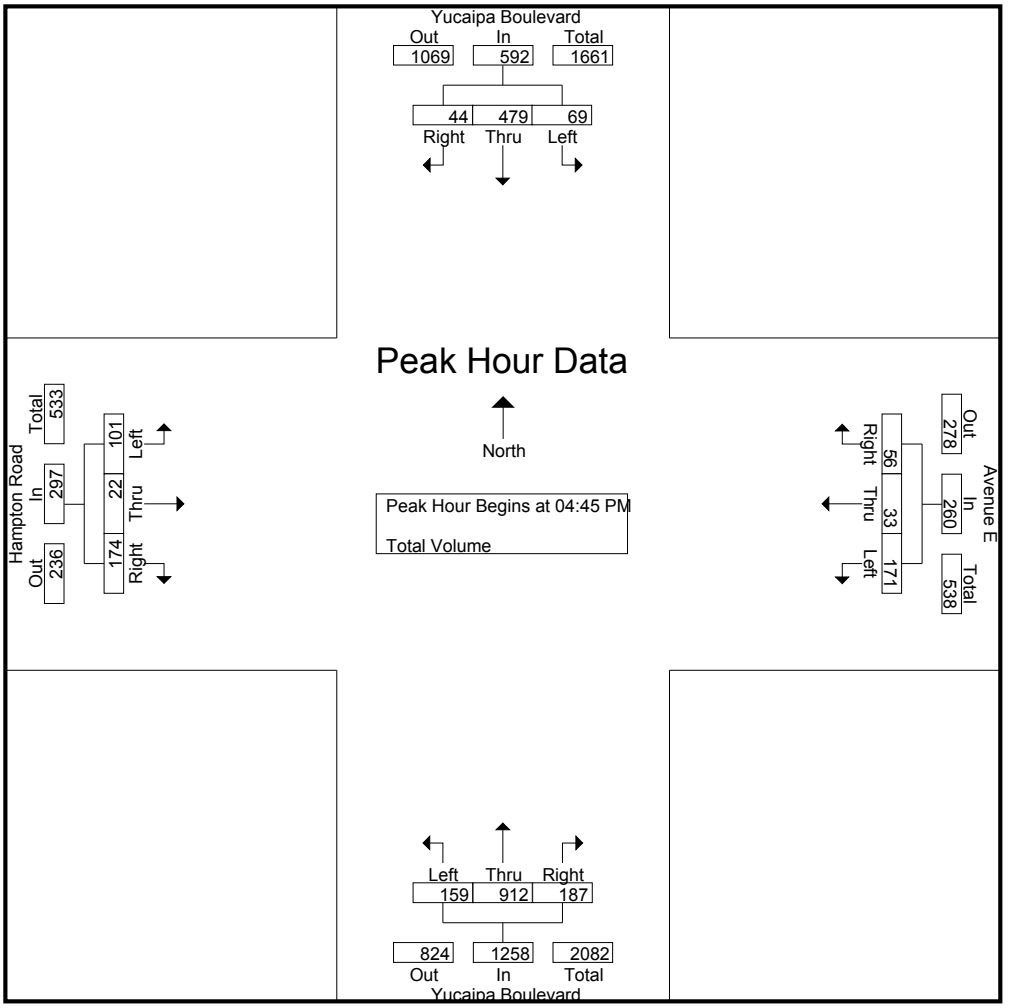
City of Yucaipa
N/S: Yucaipa Boulevard
E/W: Hampton Road/Avenue E
Weather: Clear

File Name : 03_YUC_Yucaipa Blvd_Hampton_Ave E PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				05:00 PM				04:00 PM			
+0 mins.	19	**134**	14	**167**	45	**11**	15	71	**45**	226	**44**	315	32	7	43	82
+15 mins.	15	122	10	147	**47**	8	**18**	**73**	36	**260**	44	**340**	**38**	**12**	**55**	**105**
+30 mins.	11	117	**15**	143	36	7	8	51	38	233	41	312	23	4	30	57
+45 mins.	**22**	114	7	143	43	7	15	65	39	223	40	302	37	5	45	87
Total Volume	67	487	46	600	171	33	56	260	158	942	169	1269	130	28	173	331
% App. Total	11.2	81.2	7.7		65.8	12.7	21.5		12.5	74.2	13.3		39.3	8.5	52.3	
PHF	.761	.909	.767	.898	.910	.750	.778	.890	.878	.906	.960	.933	.855	.583	.786	.788

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City of Yucaipa
N/S: Knollhaven Lane
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 04_YUC_Knollhaven_Yucaipa Blvd AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	1	1	148	0	148	0	99	99	248
07:15 AM	0	0	0	131	0	131	1	110	111	242
07:30 AM	1	1	2	140	1	141	2	109	111	254
07:45 AM	0	0	0	156	2	158	1	127	128	286
Total	1	2	3	575	3	578	4	445	449	1030
08:00 AM	0	2	2	145	0	145	0	105	105	252
08:15 AM	0	0	0	155	0	155	3	122	125	280
08:30 AM	1	1	2	115	0	115	1	136	137	254
08:45 AM	1	2	3	136	0	136	0	140	140	279
Total	2	5	7	551	0	551	4	503	507	1065
Grand Total	3	7	10	1126	3	1129	8	948	956	2095
Apprch %	30	70		99.7	0.3		0.8	99.2		
Total %	0.1	0.3	0.5	53.7	0.1	53.9	0.4	45.3	45.6	

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**1**	1	**2**	140	1	141	2	109	111	254
07:45 AM	0	0	0	**156**	**2**	**158**	1	**127**	**128**	**286**
08:00 AM	0	**2**	2	145	0	145	0	105	105	252
08:15 AM	0	0	0	155	0	155	**3**	122	125	280
Total Volume	1	3	4	596	3	599	6	463	469	1072
% App. Total	25	75		99.5	0.5		1.3	98.7		
PHF	.250	.375	.500	.955	.375	.948	.500	.911	.916	.937

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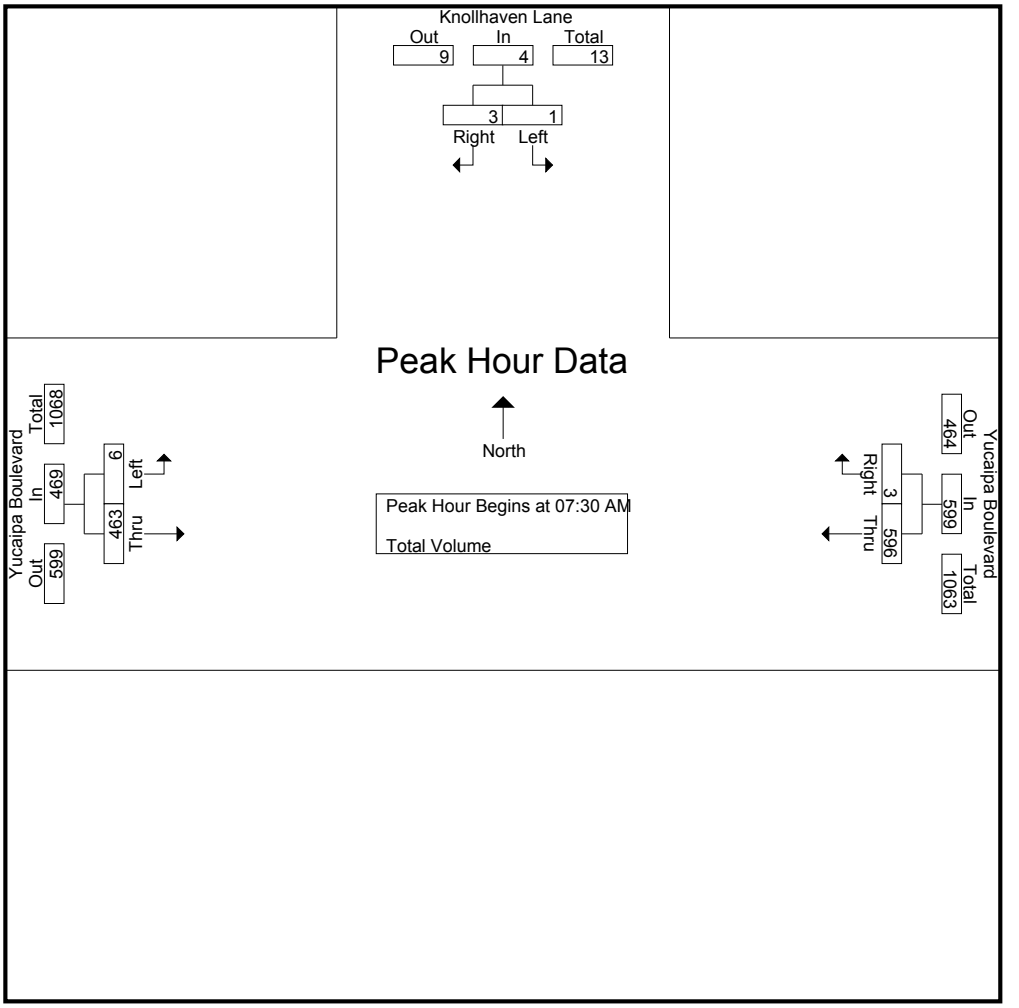
City of Yucaipa
N/S: Knollhaven Lane
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 04_YUC_Knollhaven_Yucaipa Blvd AM
Site Code : 20218899
Start Date : 12/4/2018



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:30 AM			08:00 AM		
+0 mins.	0	**2**	2	140	1	141	0	105	105
+15 mins.	0	0	0	**156**	**2**	**158**	**3**	122	125
+30 mins.	**1**	1	2	145	0	145	1	136	137
+45 mins.	1	2	**3**	155	0	155	0	**140**	**140**
Total Volume	2	5	7	596	3	599	4	503	507
% App. Total	28.6	71.4		99.5	0.5		0.8	99.2	
PHF	.500	.625	.583	.955	.375	.948	.333	.898	.905

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City of Yucaipa
N/S: Knollhaven Lane
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 04_YUC_Knollhaven_Yucaipa Blvd PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	3	2	5	146	0	146	2	193	195	346
04:15 PM	1	1	2	131	0	131	2	239	241	374
04:30 PM	1	1	2	191	0	191	7	236	243	436
04:45 PM	0	4	4	164	0	164	5	212	217	385
Total	5	8	13	632	0	632	16	880	896	1541
05:00 PM	3	5	8	159	1	160	3	266	269	437
05:15 PM	0	7	7	142	0	142	4	281	285	434
05:30 PM	2	4	6	164	1	165	2	280	282	453
05:45 PM	4	2	6	134	1	135	2	257	259	400
Total	9	18	27	599	3	602	11	1084	1095	1724
Grand Total	14	26	40	1231	3	1234	27	1964	1991	3265
Apprch %	35	65		99.8	0.2		1.4	98.6		
Total %	0.4	0.8	1.2	37.7	0.1	37.8	0.8	60.2	61	

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	3	5	**8**	159	**1**	160	3	266	269	437
05:15 PM	0	**7**	7	142	0	142	**4**	**281**	**285**	434
05:30 PM	2	4	6	**164**	1	**165**	2	280	282	**453**
05:45 PM	**4**	2	6	134	1	135	2	257	259	400
Total Volume	9	18	27	599	3	602	11	1084	1095	1724
% App. Total	33.3	66.7		99.5	0.5		1	99		
PHF	.563	.643	.844	.913	.750	.912	.688	.964	.961	.951

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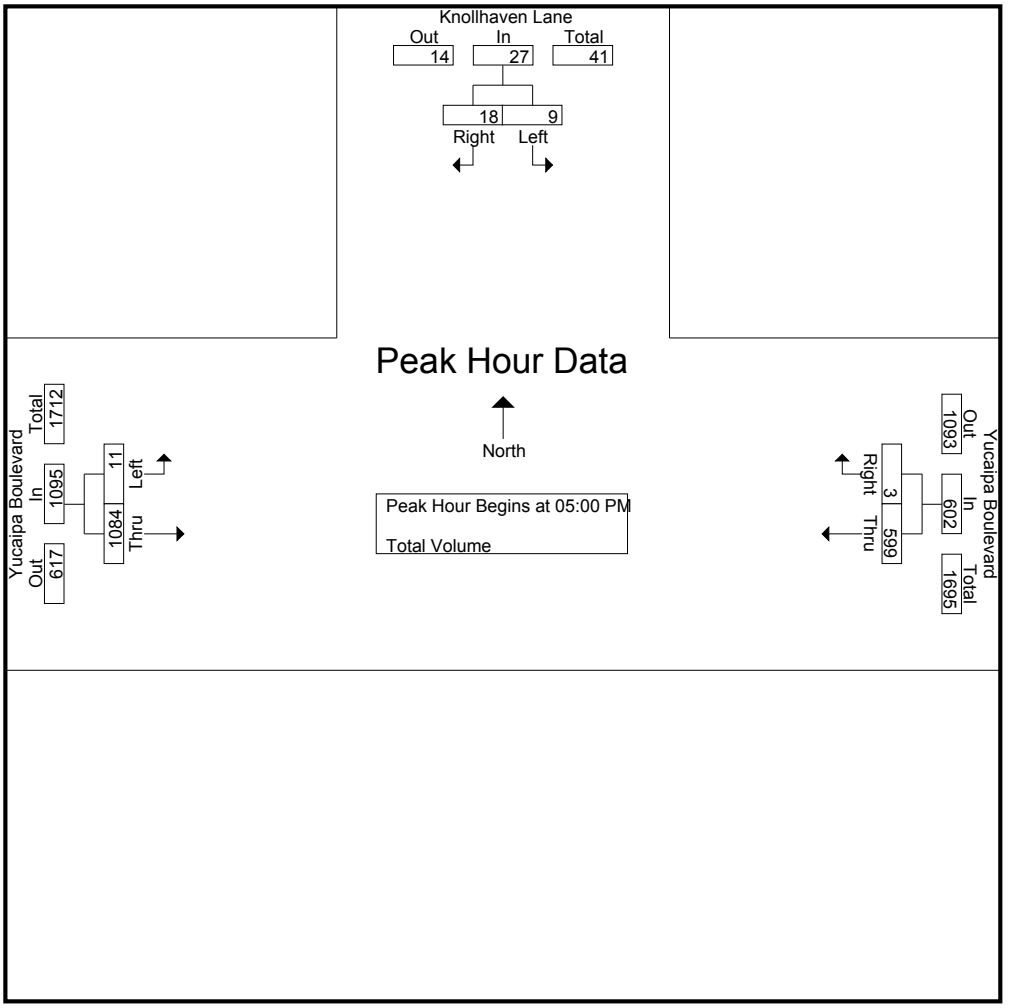
City of Yucaipa
N/S: Knollhaven Lane
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 04_YUC_Knollhaven_Yucaipa Blvd PM
Site Code : 20218899
Start Date : 12/4/2018



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:30 PM			05:00 PM		
+0 mins.	3	5	**8**	**191**	0	**191**	3	266	269
+15 mins.	0	**7**	7	164	0	164	**4**	**281**	**285**
+30 mins.	2	4	6	159	**1**	160	2	280	282
+45 mins.	**4**	2	6	142	0	142	2	257	259
Total Volume	9	18	27	656	1	657	11	1084	1095
% App. Total	33.3	66.7		99.8	0.2		1	99	
PHF	.563	.643	.844	.859	.250	.860	.688	.964	.961

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City of Yucaipa
N/S: 18th Street
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 05_YUC_18th_Yucaipa Blvd AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	134	134	3	2	5	100	0	100	239
07:15 AM	0	135	135	0	0	0	113	0	113	248
07:30 AM	0	140	140	0	1	1	106	0	106	247
07:45 AM	0	166	166	0	0	0	121	1	122	288
Total	0	575	575	3	3	6	440	1	441	1022
08:00 AM	0	153	153	1	0	1	103	0	103	257
08:15 AM	0	140	140	0	0	0	126	0	126	266
08:30 AM	1	127	128	0	1	1	125	0	125	254
08:45 AM	0	141	141	1	0	1	141	0	141	283
Total	1	561	562	2	1	3	495	0	495	1060
Grand Total	1	1136	1137	5	4	9	935	1	936	2082
Apprch %	0.1	99.9		55.6	44.4		99.9	0.1		
Total %	0	54.6	54.6	0.2	0.2	0.4	44.9	0	45	

	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	**166**	**166**	0	0	0	121	**1**	122	**288**
08:00 AM	0	153	153	**1**	0	**1**	103	0	103	257
08:15 AM	0	140	140	0	0	0	**126**	0	**126**	266
08:30 AM	**1**	127	128	0	**1**	1	125	0	125	254
Total Volume	1	586	587	1	1	2	475	1	476	1065
% App. Total	0.2	99.8		50	50		99.8	0.2		
PHF	.250	.883	.884	.250	.250	.500	.942	.250	.944	.924

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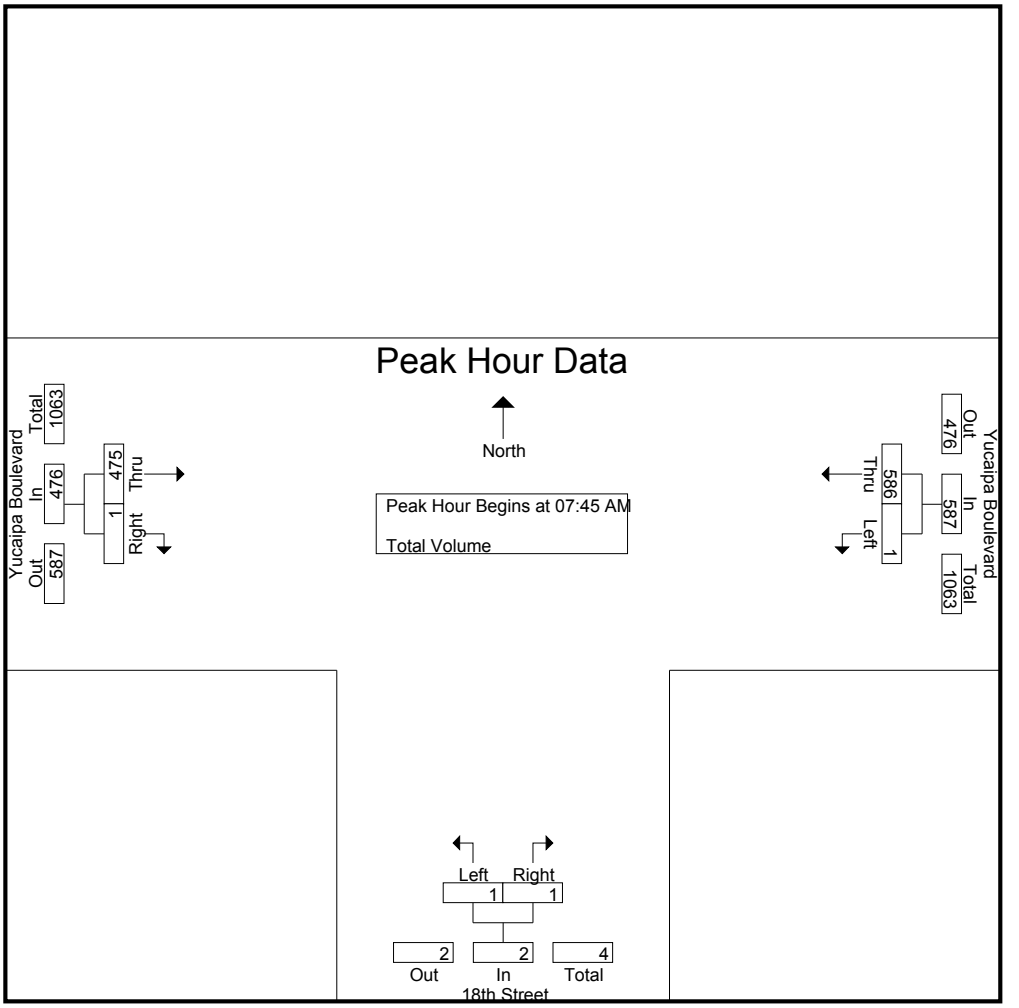
City of Yucaipa
N/S: 18th Street
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 05_YUC_18th_Yucaipa Blvd AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			08:00 AM		
+0 mins.	0	140	140	**3**	**2**	**5**	103	0	103
+15 mins.	0	**166**	**166**	0	0	0	126	0	126
+30 mins.	0	153	153	0	1	1	125	0	125
+45 mins.	0	140	140	0	0	0	**141**	0	**141**
Total Volume	0	599	599	3	3	6	495	0	495
% App. Total	0	100		50	50		100	0	
PHF	.000	.902	.902	.250	.375	.300	.878	.000	.878

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City of Yucaipa
N/S: 18th Street
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 05_YUC_18th_Yucaipa Blvd PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	144	144	1	0	1	208	0	208	353
04:15 PM	0	147	147	0	0	0	230	0	230	377
04:30 PM	0	185	185	0	0	0	229	0	229	414
04:45 PM	0	161	161	0	0	0	206	0	206	367
Total	0	637	637	1	0	1	873	0	873	1511
05:00 PM	0	167	167	0	0	0	281	0	281	448
05:15 PM	0	161	161	0	0	0	254	0	254	415
05:30 PM	0	146	146	0	0	0	249	0	249	395
05:45 PM	0	130	130	0	0	0	242	0	242	372
Total	0	604	604	0	0	0	1026	0	1026	1630
Grand Total	0	1241	1241	1	0	1	1899	0	1899	3141
Apprch %	0	100		100	0		100	0		
Total %	0	39.5	39.5	0	0	0	60.5	0	60.5	

	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	**185**	**185**	0	0	0	229	0	229	414
04:45 PM	0	161	161	0	0	0	206	0	206	367
05:00 PM	0	167	167	0	0	0	**281**	0	**281**	**448**
05:15 PM	0	161	161	0	0	0	254	0	254	415
Total Volume	0	674	674	0	0	0	970	0	970	1644
% App. Total	0	100		0	0		100	0		
PHF	.000	.911	.911	.000	.000	.000	.863	.000	.863	.917

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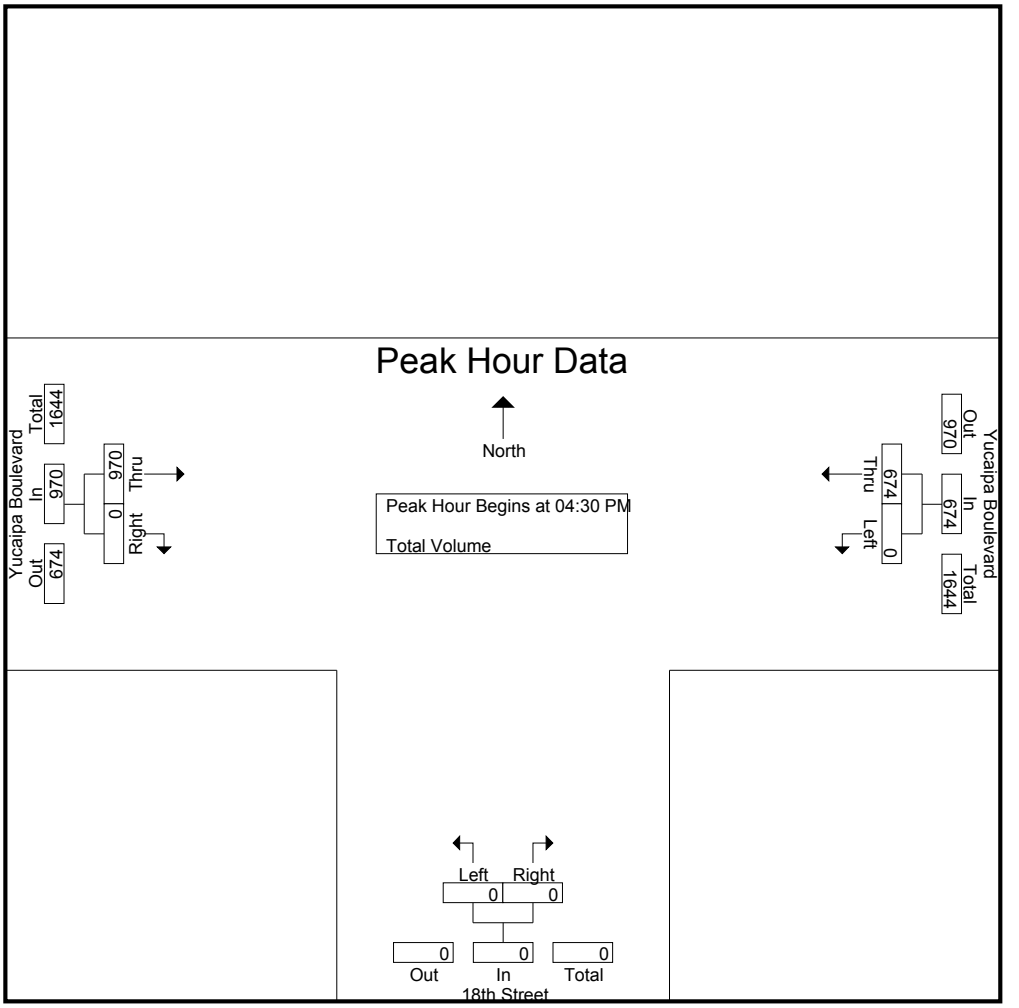
City of Yucaipa
N/S: 18th Street
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 05_YUC_18th_Yucaipa Blvd PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			05:00 PM		
+0 mins.	0	**185**	**185**	**1**	0	**1**	**281**	0	**281**
+15 mins.	0	161	161	0	0	0	254	0	254
+30 mins.	0	167	167	0	0	0	249	0	249
+45 mins.	0	161	161	0	0	0	242	0	242
Total Volume	0	674	674	1	0	1	1026	0	1026
% App. Total	0	100		100	0		100	0	
PHF	.000	.911	.911	.250	.000	.250	.913	.000	.913

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City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	4	7	11	0	28	28	18	0	18	57
07:15 AM	8	8	16	1	25	26	3	0	3	45
07:30 AM	7	10	17	2	32	34	6	0	6	57
07:45 AM	8	13	21	2	27	29	7	0	7	57
Total	27	38	65	5	112	117	34	0	34	216
08:00 AM	9	9	18	0	25	25	10	0	10	53
08:15 AM	8	4	12	4	31	35	10	0	10	57
08:30 AM	6	4	10	1	14	15	11	0	11	36
08:45 AM	16	8	24	0	17	17	9	0	9	50
Total	39	25	64	5	87	92	40	0	40	196
Grand Total	66	63	129	10	199	209	74	0	74	412
Apprch %	51.2	48.8		4.8	95.2		100	0		
Total %	16	15.3	31.3	2.4	48.3	50.7	18	0	18	

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	7	10	17	2	**32**	34	6	0	6	**57**
07:45 AM	8	**13**	**21**	2	27	29	7	0	7	57
08:00 AM	**9**	9	18	0	25	25	**10**	0	**10**	53
08:15 AM	8	4	12	**4**	31	**35**	10	0	10	57
Total Volume	32	36	68	8	115	123	33	0	33	224
% App. Total	47.1	52.9		6.5	93.5		100	0		
PHF	.889	.692	.810	.500	.898	.879	.825	.000	.825	.982

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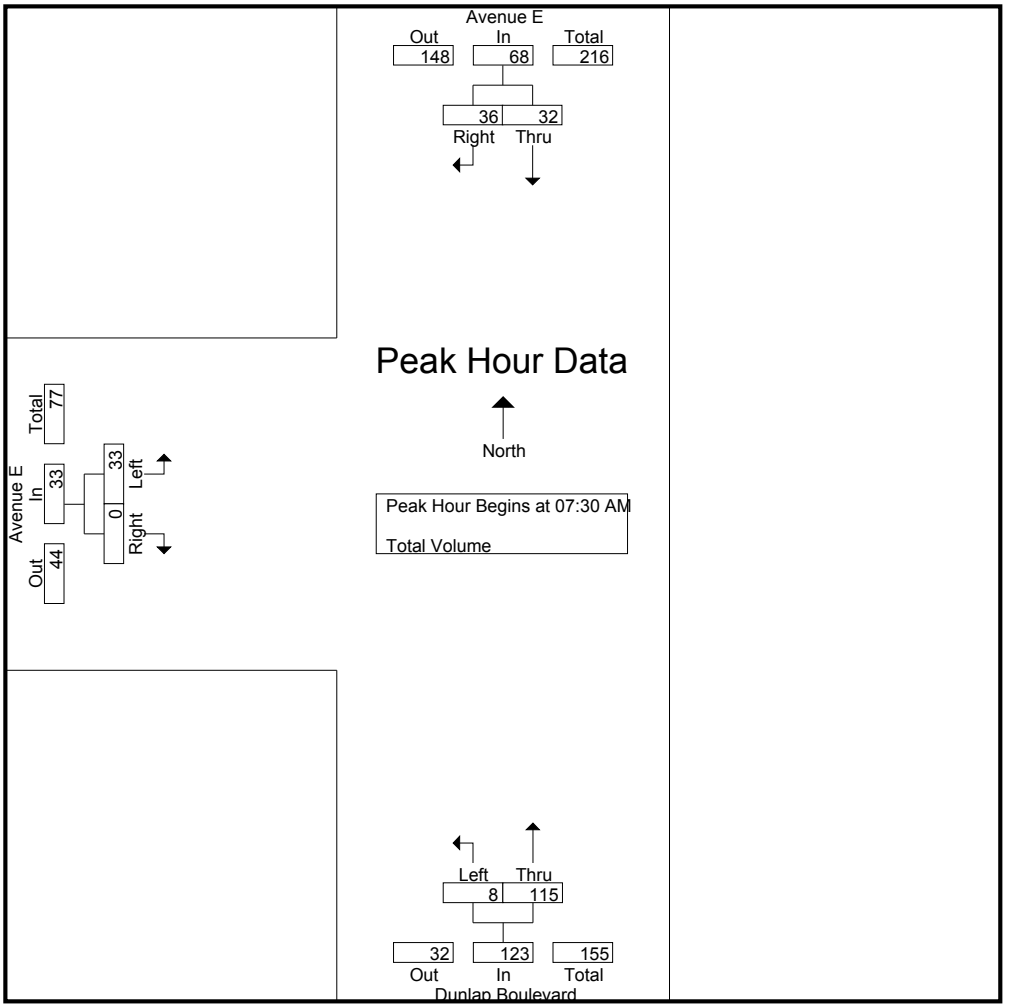
City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			08:00 AM		
+0 mins.	8	8	16	2	**32**	34	10	0	10
+15 mins.	7	10	17	2	27	29	10	0	10
+30 mins.	8	**13**	**21**	0	25	25	**11**	0	**11**
+45 mins.	**9**	9	18	**4**	31	**35**	9	0	9
Total Volume	32	40	72	8	115	123	40	0	40
% App. Total	44.4	55.6		6.5	93.5		100	0	
PHF	.889	.769	.857	.500	.898	.879	.909	.000	.909

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City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	27	4	31	1	22	23	21	2	23	77
04:15 PM	32	8	40	0	16	16	14	2	16	72
04:30 PM	33	8	41	0	12	12	35	0	35	88
04:45 PM	21	10	31	0	17	17	17	3	20	68
Total	113	30	143	1	67	68	87	7	94	305
05:00 PM	29	7	36	0	23	23	20	4	24	83
05:15 PM	25	10	35	0	5	5	13	2	15	55
05:30 PM	21	7	28	0	11	11	15	1	16	55
05:45 PM	23	9	32	0	14	14	3	0	3	49
Total	98	33	131	0	53	53	51	7	58	242
Grand Total	211	63	274	1	120	121	138	14	152	547
Apprch %	77	23		0.8	99.2		90.8	9.2		
Total %	38.6	11.5	50.1	0.2	21.9	22.1	25.2	2.6	27.8	

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	32	8	40	0	16	16	14	2	16	72
04:30 PM	**33**	8	**41**	0	12	12	**35**	0	**35**	**88**
04:45 PM	21	**10**	31	0	17	17	17	3	20	68
05:00 PM	29	7	36	0	**23**	**23**	20	**4**	24	83
Total Volume	115	33	148	0	68	68	86	9	95	311
% App. Total	77.7	22.3		0	100		90.5	9.5		
PHF	.871	.825	.902	.000	.739	.739	.614	.563	.679	.884

Counts Unlimited
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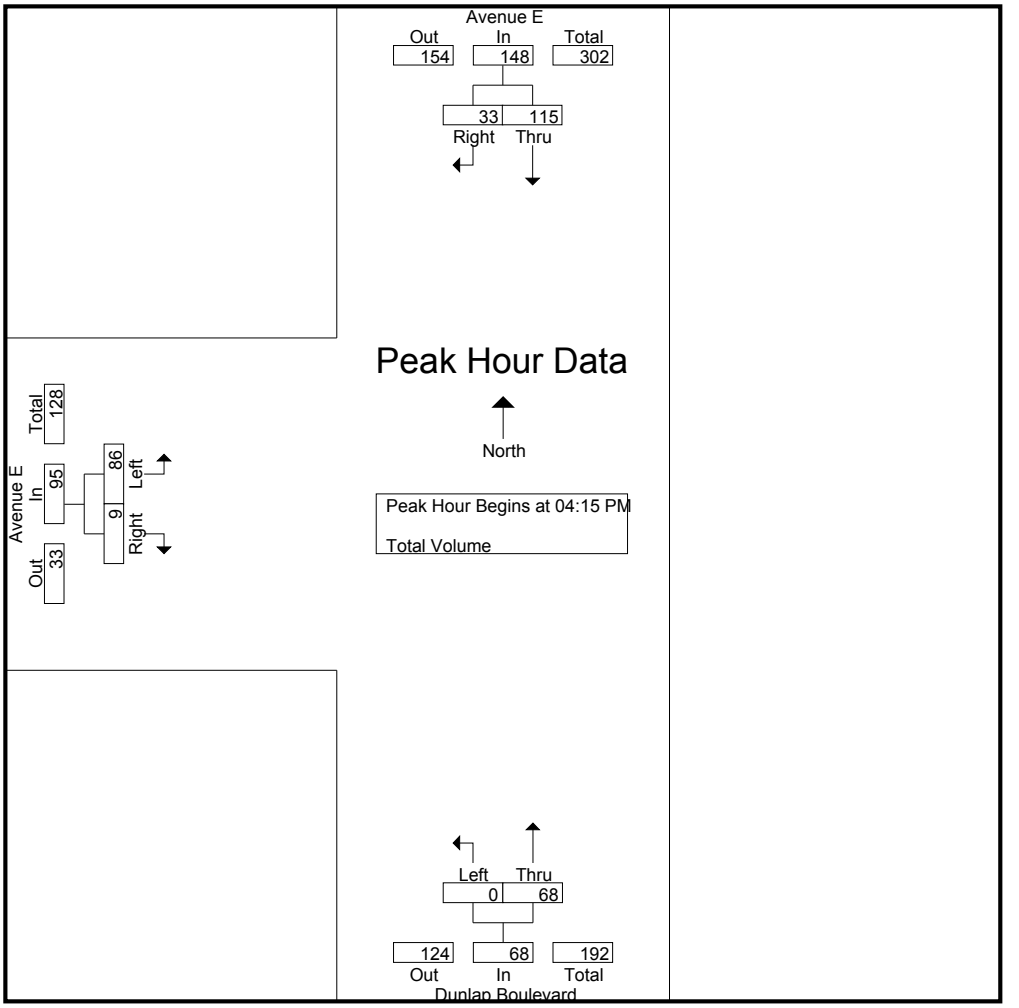
(951) 268-6268

City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			04:15 PM		
+0 mins.	32	8	40	**1**	**22**	**23**	14	2	16
+15 mins.	**33**	8	**41**	0	16	16	**35**	0	**35**
+30 mins.	21	**10**	31	0	12	12	17	3	20
+45 mins.	29	7	36	0	17	17	20	**4**	24
Total Volume	115	33	148	1	67	68	86	9	95
% App. Total	77.7	22.3		1.5	98.5		90.5	9.5	
PHF	.871	.825	.902	.250	.761	.739	.614	.563	.679

Counts Unlimited, Inc.

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City of Yucaipa
Yucaipa Boulevard
B/ Interstate 10 Westbound - Avenue E
24 Hour Directional Volume Count

YUC001
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		23	169			18	181				
12:15		19	181			12	185				
12:30		17	212			16	177				
12:45		7	187	66	749	15	161	61	704	127	1453
01:00		6	204			11	169				
01:15		3	166			6	194				
01:30		3	200			12	168				
01:45		3	215	15	785	10	148	39	679	54	1464
02:00		2	206			11	175				
02:15		7	216			9	166				
02:30		4	246			11	166				
02:45		3	241	16	909	8	**178**	39	685	55	1594
03:00		5	216			15	**212**				
03:15		10	237			20	**208**				
03:30		9	234			33	**206**				
03:45		7	225	31	912	36	177	104	803	135	1715
04:00		13	273			38	163				
04:15		14	282			42	153				
04:30		16	292			65	197				
04:45		49	291	92	1138	58	182	203	695	295	1833
05:00		43	**315**			59	178				
05:15		33	**330**			85	168				
05:30		47	**322**			104	186				
05:45		76	**302**	199	1269	113	157	361	689	560	1958
06:00		68	259			147	122				
06:15		95	306			153	131				
06:30		113	254			181	146				
06:45		118	228	394	1047	165	125	646	524	1040	1571
07:00		131	191			137	116				
07:15		132	186			155	116				
07:30		143	179			165	108				
07:45		154	169	560	725	169	115	626	455	1186	1180
08:00		161	152			148	125				
08:15		163	146			170	76				
08:30		168	139			153	79				
08:45		178	129	670	566	153	73	624	353	1294	919
09:00		147	116			165	99				
09:15		129	106			166	82				
09:30		145	98			139	54				
09:45		173	79	594	399	155	56	625	291	1219	690
10:00		142	64			173	39				
10:15		153	74			164	43				
10:30		162	49			146	38				
10:45		177	39	634	226	149	25	632	145	1266	371
11:00		**179**	24			**178**	37				
11:15		**167**	31			**177**	19				
11:30		**175**	20			**202**	28				
11:45		**179**	29	700	104	**167**	27	724	111	1424	215
Total		3971	8829	3971	8829	4684	6134	4684	6134	8655	14963
Combined Total		12800		12800		10818		10818		23618	
AM Peak	-	11:00	-	-	-	11:00	-	-	-	-	-
Vol.	-	700	-	-	-	724	-	-	-	-	-
P.H.F.		0.978				0.896					
PM Peak	-	-	05:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	1269	-	-	-	804	-	-	-	-
P.H.F.			0.961				0.948				
Percentage		31.0%	69.0%			43.3%	56.7%				
ADT/AADT		ADT 23,618		AADT 23,618							

Counts Unlimited, Inc.

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City of Yucaipa
Yucaipa Boulevard
B/ Avenue E - 18th Street
24 Hour Directional Volume Count

YUC002
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		15	146			11	149				
12:15		14	154			3	161				
12:30		14	202			11	157				
12:45		7	177	50	679	11	137	36	604	86	1283
01:00		9	180			8	127				
01:15		2	158			4	153				
01:30		2	168			4	150				
01:45		2	186	15	692	7	115	23	545	38	1237
02:00		3	193			5	155				
02:15		3	196			6	138				
02:30		1	246			11	137				
02:45		6	225	13	860	9	142	31	572	44	1432
03:00		2	196			13	**183**				
03:15		4	212			20	**166**				
03:30		4	208			33	**149**				
03:45		12	197	22	813	43	**148**	109	646	131	1459
04:00		13	255			39	137				
04:15		21	258			47	117				
04:30		31	236			65	167				
04:45		47	**255**	112	1004	59	147	210	568	322	1572
05:00		48	**273**			55	143				
05:15		45	**287**			86	143				
05:30		50	**264**			93	159				
05:45		67	249	210	1073	93	133	327	578	537	1651
06:00		63	225			138	111				
06:15		100	256			149	121				
06:30		131	225			166	126				
06:45		107	193	401	899	141	92	594	450	995	1349
07:00		138	158			101	97				
07:15		129	146			122	100				
07:30		127	148			133	91				
07:45		151	132	545	584	152	86	508	374	1053	958
08:00		132	136			130	113				
08:15		169	131			139	76				
08:30		143	120			124	66				
08:45		148	104	592	491	127	55	520	310	1112	801
09:00		131	98			147	89				
09:15		126	80			135	70				
09:30		144	85			137	43				
09:45		**174**	65	575	328	155	37	574	239	1149	567
10:00		**167**	55			157	31				
10:15		**147**	65			155	33				
10:30		**158**	43			115	23				
10:45		152	36	624	199	130	18	557	105	1181	304
11:00		163	17			**148**	25				
11:15		151	21			**150**	17				
11:30		164	17			**179**	23				
11:45		151	17	629	72	**142**	18	619	83	1248	155
Total		3788	7694	3788	7694	4108	5074	4108	5074	7896	12768
Combined Total		11482		11482		9182		9182		20664	
AM Peak	-	09:45	-	-	-	11:00	-	-	-	-	-
Vol.	-	646	-	-	-	619	-	-	-	-	-
P.H.F.		0.928				0.865					
PM Peak	-	-	04:45	-	-	-	03:00	-	-	-	-
Vol.	-	-	1079	-	-	-	646	-	-	-	-
P.H.F.			0.940				0.883				
Percentage		33.0%	67.0%			44.7%	55.3%				
ADT/AADT		ADT 20,664		AADT 20,664							

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City of Yucaipa
Yucaipa Boulevard
B/ 18th Street - 17th Street
24 Hour Directional Volume Count

YUC003
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		15	135			9	164				
12:15		18	137			15	166				
12:30		15	165			11	154				
12:45		4	152	52	589	10	158	45	642	97	1231
01:00		6	157			8	136				
01:15		3	128			6	160				
01:30		2	151			3	139				
01:45		4	164	15	600	6	133	23	568	38	1168
02:00		0	152			6	168				
02:15		3	198			5	162				
02:30		0	211			12	163				
02:45		1	192	4	753	12	**168**	35	661	39	1414
03:00		1	176			16	**217**				
03:15		2	192			20	**181**				
03:30		1	182			34	**168**				
03:45		0	181	4	731	47	154	117	720	121	1451
04:00		2	208			38	144				
04:15		4	230			51	147				
04:30		5	229			73	185				
04:45		24	206	35	873	60	161	222	637	257	1510
05:00		29	**281**			70	167				
05:15		22	**254**			93	161				
05:30		29	**249**			104	146				
05:45		43	**242**	123	1026	105	130	372	604	495	1630
06:00		26	219			142	131				
06:15		49	255			153	142				
06:30		62	218			179	141				
06:45		77	203	214	895	147	98	621	512	835	1407
07:00		102	173			134	112				
07:15		113	149			135	102				
07:30		107	147			140	90				
07:45		121	124	443	593	166	85	575	389	1018	982
08:00		103	137			153	121				
08:15		126	121			140	80				
08:30		126	103			128	66				
08:45		141	98	496	459	141	58	562	325	1058	784
09:00		106	87			149	94				
09:15		103	78			140	62				
09:30		110	81			144	42				
09:45		142	72	461	318	**161**	33	594	231	1055	549
10:00		121	49			**171**	43				
10:15		113	59			**167**	30				
10:30		143	40			**149**	23				
10:45		137	29	514	177	133	18	620	114	1134	291
11:00		**149**	20			161	26				
11:15		**135**	18			151	14				
11:30		**148**	13			181	20				
11:45		**155**	14	587	65	142	15	635	75	1222	140
Total		2948	7079	2948	7079	4421	5478	4421	5478	7369	12557
Combined Total		10027		10027		9899		9899		19926	
AM Peak	-	11:00	-	-	-	09:45	-	-	-	-	-
Vol.	-	587	-	-	-	648	-	-	-	-	-
P.H.F.		0.947				0.947					
PM Peak	-	-	05:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	1026	-	-	-	734	-	-	-	-
P.H.F.			0.913				0.846				
Percentage		29.4%	70.6%			44.7%	55.3%				
ADT/AADT		ADT 19,926		AADT 19,926							

Counts Unlimited, Inc.

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City of Yucaipa
Avenue E
B/ Yucaipa Boulevard - Dunlap Boulevard
24 Hour Directional Volume Count

YUC004
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		10	56			11	64				
12:15		8	66			15	63				
12:30		6	57			9	**69**				
12:45		4	45	28	224	8	**59**	43	255	71	479
01:00		1	48			7	**74**				
01:15		2	31			4	**75**				
01:30		0	47			9	48				
01:45		1	48	4	174	3	60	23	257	27	431
02:00		1	40			9	48				
02:15		1	36			3	68				
02:30		4	35			3	66				
02:45		0	51	6	162	1	47	16	229	22	391
03:00		0	56			4	65				
03:15		4	63			4	67				
03:30		6	47			3	95				
03:45		0	57	10	223	4	48	15	275	25	498
04:00		4	56			5	62				
04:15		1	59			7	53				
04:30		2	70			12	59				
04:45		14	**78**	21	263	8	71	32	245	53	508
05:00		9	**60**			10	73				
05:15		5	**65**			9	51				
05:30		7	**75**			21	65				
05:45		12	55	33	255	27	55	67	244	100	499
06:00		16	67			20	64				
06:15		22	74			30	49				
06:30		29	69			34	52				
06:45		31	45	98	255	43	55	127	220	225	475
07:00		19	50			56	47				
07:15		24	59			37	45				
07:30		29	59			48	42				
07:45		27	55	99	223	42	51	183	185	282	408
08:00		32	36			39	51				
08:15		19	37			51	31				
08:30		29	38			37	33				
08:45		38	35	118	146	42	41	169	156	287	302
09:00		30	44			46	32				
09:15		30	37			47	27				
09:30		29	26			35	31				
09:45		39	20	128	127	28	29	156	119	284	246
10:00		38	21			51	18				
10:15		37	23			24	23				
10:30		43	21			49	34				
10:45		39	11	157	76	42	15	166	90	323	166
11:00		**38**	12			**52**	19				
11:15		**41**	16			**48**	13				
11:30		**58**	12			**64**	15				
11:45		**50**	12	187	52	**56**	11	220	58	407	110
Total		889	2180	889	2180	1217	2333	1217	2333	2106	4513
Combined Total		3069		3069		3550		3550		6619	
AM Peak	-	11:00	-	-	-	11:00	-	-	-	-	-
Vol.	-	187	-	-	-	220	-	-	-	-	-
P.H.F.		0.806				0.859					
PM Peak	-	-	04:45	-	-	-	00:30	-	-	-	-
Vol.	-	-	278	-	-	-	277	-	-	-	-
P.H.F.			0.891				0.923				
Percentage		29.0%	71.0%			34.3%	65.7%				
ADT/AADT		ADT 6,619		AADT 6,619							

Counts Unlimited, Inc.

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City of Yucaipa
Dunlap Boulevard
S/ Avenue E
24 Hour Directional Volume Count

YUC005
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	12			4	7				
12:15		1	10			0	14				
12:30		2	10			0	7				
12:45		0	4	6	36	0	13	4	41	10	77
01:00		1	7			0	8				
01:15		1	10			0	8				
01:30		4	9			1	6				
01:45		2	9	8	35	0	9	1	31	9	66
02:00		2	13			0	7				
02:15		1	6			1	2				
02:30		0	11			0	7				
02:45		0	10	3	40	0	13	1	29	4	69
03:00		0	19			0	**11**				
03:15		2	12			1	**13**				
03:30		0	33			1	**11**				
03:45		1	14	3	78	0	**16**	2	51	5	129
04:00		1	23			0	5				
04:15		1	**16**			0	8				
04:30		2	**35**			0	8				
04:45		1	**20**	5	94	9	10	9	31	14	125
05:00		3	**24**			4	7				
05:15		2	15			2	10				
05:30		5	16			4	7				
05:45		7	3	17	58	6	9	16	33	33	91
06:00		5	3			10	5				
06:15		8	5			13	7				
06:30		6	7			8	8				
06:45		4	4	23	19	9	8	40	28	63	47
07:00		18	4			7	5				
07:15		3	7			**9**	6				
07:30		6	1			**12**	12				
07:45		7	3	34	15	**15**	1	43	24	77	39
08:00		10	4			**9**	3				
08:15		10	0			8	3				
08:30		11	4			5	4				
08:45		9	2	40	10	8	6	30	16	70	26
09:00		9	3			8	6				
09:15		12	0			9	1				
09:30		8	3			4	2				
09:45		11	5	40	11	6	5	27	14	67	25
10:00		8	1			3	3				
10:15		8	1			8	3				
10:30		10	2			10	4				
10:45		5	0	31	4	6	0	27	10	58	14
11:00		**18**	1			4	0				
11:15		**8**	1			7	1				
11:30		**10**	3			4	1				
11:45		**17**	2	53	7	8	2	23	4	76	11
Total		263	407	263	407	223	312	223	312	486	719
Combined Total		670		670		535		535		1205	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	53	-	-	-	45	-	-	-	-	-
P.H.F.		0.736				0.750					
PM Peak	-	-	04:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	95	-	-	-	51	-	-	-	-
P.H.F.			0.679				0.797				
Percentage		39.3%	60.7%			41.7%	58.3%				
ADT/AADT		ADT 1,205		AADT 1,205							

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City of Yucaipa
Avenue E
B/ Dunlap Boulevard - 18th Street
24 Hour Directional Volume Count

YUC006
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	14			1	16				
12:15		6	22			5	8				
12:30		2	18			1	15				
12:45		2	13	10	67	1	**22**	8	61	18	128
01:00		1	25			1	**19**				
01:15		1	8			0	**23**				
01:30		1	21			0	**19**				
01:45		1	18	4	72	0	15	1	76	5	148
02:00		1	17			0	12				
02:15		0	10			2	17				
02:30		0	24			0	16				
02:45		1	28	2	79	1	10	3	55	5	134
03:00		0	15			2	28				
03:15		2	24			1	23				
03:30		2	21			3	18				
03:45		1	26	5	86	2	13	8	82	13	168
04:00		0	29			5	23				
04:15		1	**34**			4	16				
04:30		1	**33**			8	12				
04:45		0	**24**	2	120	5	17	22	68	24	188
05:00		2	**33**			7	23				
05:15		2	27			4	5				
05:30		2	22			15	11				
05:45		3	23	9	105	14	14	40	53	49	158
06:00		4	24			15	21				
06:15		8	25			21	14				
06:30		12	24			22	16				
06:45		13	28	37	101	29	11	87	62	124	163
07:00		4	16			28	10				
07:15		8	24			26	13				
07:30		7	18			**34**	5				
07:45		8	11	27	69	**29**	12	117	40	144	109
08:00		9	9			**25**	12				
08:15		8	11			**35**	2				
08:30		6	11			15	5				
08:45		16	14	39	45	17	9	92	28	131	73
09:00		4	8			17	6				
09:15		9	16			15	9				
09:30		12	13			18	8				
09:45		18	10	43	47	5	5	55	28	98	75
10:00		9	7			19	3				
10:15		9	10			9	0				
10:30		10	8			15	6				
10:45		12	7	40	32	10	4	53	13	93	45
11:00		**11**	8			19	5				
11:15		**14**	4			17	1				
11:30		**9**	4			16	3				
11:45		**16**	3	50	19	12	4	64	13	114	32
Total		268	842	268	842	550	579	550	579	818	1421
Combined Total		1110		1110		1129		1129		2239	
AM Peak	-	11:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	50	-	-	-	123	-	-	-	-	-
P.H.F.		0.694				0.879					
PM Peak	-	-	04:15	-	-	-	00:45	-	-	-	-
Vol.	-	-	124	-	-	-	83	-	-	-	-
P.H.F.			0.912				0.902				
Percentage		24.1%	75.9%			48.7%	51.3%				
ADT/AADT		ADT 2,239		AADT 2,239							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
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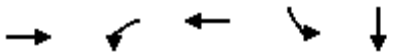
City of Yucaipa
Avenue E
B/ 18th Street - 17th Street
24 Hour Directional Volume Count

YUC007
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	14			1	18				
12:15		6	23			5	9				
12:30		2	16			1	14				
12:45		4	15	12	68	1	24	8	65	20	133
01:00		1	20			1	22				
01:15		1	17			0	24				
01:30		0	16			1	19				
01:45		1	16	3	69	1	17	3	82	6	151
02:00		1	18			0	9				
02:15		0	11			2	15				
02:30		0	25			0	17				
02:45		1	27	2	81	1	8	3	49	5	130
03:00		0	17			2	**31**				
03:15		1	28			1	**26**				
03:30		1	22			2	**21**				
03:45		0	26	2	93	2	**17**	7	95	9	188
04:00		0	23			4	23				
04:15		1	**31**			5	16				
04:30		1	**30**			7	13				
04:45		0	**26**	2	110	4	17	20	69	22	179
05:00		2	**32**			7	22				
05:15		1	24			5	24				
05:30		2	34			14	12				
05:45		3	21	8	111	13	15	39	73	47	184
06:00		3	25			15	19				
06:15		8	23			19	12				
06:30		10	22			25	11				
06:45		10	35	31	105	27	11	86	53	117	158
07:00		6	16			**28**	8				
07:15		11	23			**30**	12				
07:30		7	18			**37**	6				
07:45		10	11	34	68	**32**	9	127	35	161	103
08:00		11	7			26	10				
08:15		8	11			29	2				
08:30		6	10			23	5				
08:45		15	11	40	39	14	10	92	27	132	66
09:00		5	8			17	5				
09:15		5	10			15	9				
09:30		17	14			13	8				
09:45		14	12	41	44	5	5	50	27	91	71
10:00		8	7			16	4				
10:15		11	9			13	0				
10:30		11	8			16	6				
10:45		11	7	41	31	11	5	56	15	97	46
11:00		**14**	8			16	4				
11:15		**13**	4			18	1				
11:30		**12**	4			21	4				
11:45		**14**	5	53	21	9	4	64	13	117	34
Total		269	840	269	840	555	603	555	603	824	1443
Combined Total		1109		1109		1158		1158		2267	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	53	-	-	-	127	-	-	-	-	-
P.H.F.		0.946				0.858					
PM Peak	-	-	04:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	119	-	-	-	95	-	-	-	-
P.H.F.			0.930				0.766				
Percentage		24.3%	75.7%			47.9%	52.1%				
ADT/AADT		ADT 2,267		AADT 2,267							

Appendix B: LOS Worksheets



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	191	72	79	332	314
v/c Ratio	0.35	0.54	0.09	0.33	0.31
Control Delay	18.6	48.7	28.2	8.1	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	48.7	28.2	8.1	6.4
Queue Length 50th (ft)	24	27	14	54	37
Queue Length 95th (ft)	45	#59	23	116	90
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	1070	134	1609	1018	1004
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.54	0.05	0.33	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	162	14	66	73	0	0	0	0	477	3	115
Future Volume (veh/h)	0	162	14	66	73	0	0	0	0	477	3	115
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	176	15	72	79	0				323	276	125
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	330	28	88	797	0				1012	694	314
Arrive On Green	0.00	0.11	0.11	0.05	0.24	0.00				0.60	0.60	0.60
Sat Flow, veh/h	0	3218	264	1681	3441	0				1681	1151	521
Grp Volume(v), veh/h	0	94	97	72	79	0				323	0	401
Grp Sat Flow(s),veh/h/ln	0	1676	1718	1681	1676	0				1681	0	1673
Q Serve(g_s), s	0.0	2.6	2.7	2.1	0.9	0.0				4.7	0.0	6.3
Cycle Q Clear(g_c), s	0.0	2.6	2.7	2.1	0.9	0.0				4.7	0.0	6.3
Prop In Lane	0.00		0.15	1.00		0.00				1.00		0.31
Lane Grp Cap(c), veh/h	0	177	181	88	797	0				1012	0	1008
V/C Ratio(X)	0.00	0.53	0.54	0.82	0.10	0.00				0.32	0.00	0.40
Avail Cap(c_a), veh/h	0	536	550	134	1609	0				1012	0	1008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.2	21.2	23.5	14.9	0.0				4.9	0.0	5.2
Incr Delay (d2), s/veh	0.0	2.4	2.5	20.3	0.1	0.0				0.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	1.4	1.5	0.4	0.0				2.4	0.0	3.1
LnGrp Delay(d),s/veh	0.0	23.6	23.7	43.8	14.9	0.0				5.7	0.0	6.4
LnGrp LOS		C	C	D	B					A		A
Approach Vol, veh/h		191			151						724	
Approach Delay, s/veh		23.7			28.7						6.1	
Approach LOS		C			C						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			6.6	9.3		34.1		15.9
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			4.0	16.0		18.0		24.0
Max Q Clear Time (g_c+I1), s			4.1	4.7		8.3		2.9
Green Ext Time (p_c), s			0.0	0.7		2.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	97	592	139	708	52	51
v/c Ratio	0.49	0.56	0.21	0.47	0.06	0.06
Control Delay	26.5	20.1	16.2	4.4	0.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	20.1	16.2	4.4	0.7	0.7
Queue Length 50th (ft)	29	97	24	127	0	0
Queue Length 95th (ft)	#73	139	40	168	5	4
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1072	1500	818	796
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.34	0.13	0.47	0.06	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

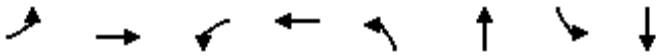
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	545	0	0	128	651	11	0	84	0	0	0
Future Volume (veh/h)	89	545	0	0	128	651	11	0	84	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	97	592	0	0	139	0	0	0	104			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	120	841	0	0	334	149	0	1040	1767			
Arrive On Green	0.14	0.50	0.00	0.00	0.07	0.00	0.00	0.00	0.59			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	97	592	0	0	139	0	0	0	104			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.8	6.8	0.0	0.0	2.0	0.0	0.0	0.0	0.7			
Cycle Q Clear(g_c), s	2.8	6.8	0.0	0.0	2.0	0.0	0.0	0.0	0.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	120	841	0	0	334	149	0	1040	1767			
V/C Ratio(X)	0.81	0.70	0.00	0.00	0.42	0.00	0.00	0.00	0.06			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	1040	1767			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.85	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	21.1	11.0	0.0	0.0	21.9	0.0	0.0	0.0	4.4			
Incr Delay (d2), s/veh	11.5	1.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	3.1	0.0	0.0	1.0	0.0	0.0	0.0	0.3			
LnGrp Delay(d),s/veh	32.6	12.1	0.0	0.0	22.6	0.0	0.0	0.0	4.4			
LnGrp LOS	C	B			C				A			
Approach Vol, veh/h		689			139			104				
Approach Delay, s/veh		15.0			22.6			4.4				
Approach LOS		B			C			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		33.5		16.5			7.6	9.0
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		2.7		8.8			4.8	4.0
Green Ext Time (p_c), s		0.2		3.7			0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	154	520	14	588	139	56	160	186
v/c Ratio	0.42	0.46	0.04	0.52	0.44	0.10	0.39	0.31
Control Delay	30.4	17.5	31.2	27.6	32.2	18.3	30.0	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	17.5	31.2	27.6	32.2	18.3	30.0	7.1
Queue Length 50th (ft)	58	95	7	152	70	17	79	10
Queue Length 95th (ft)	126	144	24	205	129	45	139	59
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1128	368	1129	318	549	406	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.46	0.04	0.52	0.44	0.10	0.39	0.31

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	405	74	13	473	68	128	35	17	147	20	151
Future Volume (veh/h)	142	405	74	13	473	68	128	35	17	147	20	151
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	154	440	80	14	514	74	139	38	18	160	22	164
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	965	174	370	1001	144	341	363	172	470	58	431
Arrive On Green	0.44	0.68	0.68	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2838	513	1681	2944	422	1193	1133	537	1342	181	1346
Grp Volume(v), veh/h	154	259	261	14	292	296	139	0	56	160	0	186
Grp Sat Flow(s),veh/h/ln	1681	1676	1674	1681	1676	1690	1193	0	1670	1342	0	1527
Q Serve(g_s), s	6.3	7.1	7.3	0.7	13.9	14.0	10.2	0.0	2.4	9.5	0.0	9.4
Cycle Q Clear(g_c), s	6.3	7.1	7.3	0.7	13.9	14.0	19.6	0.0	2.4	11.9	0.0	9.4
Prop In Lane	1.00		0.31	1.00		0.25	1.00		0.32	1.00		0.88
Lane Grp Cap(c), veh/h	370	570	569	370	570	575	341	0	534	470	0	489
V/C Ratio(X)	0.42	0.45	0.46	0.04	0.51	0.52	0.41	0.00	0.10	0.34	0.00	0.38
Avail Cap(c_a), veh/h	370	570	569	370	570	575	341	0	534	470	0	489
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	11.7	11.7	30.7	26.4	26.4	33.9	0.0	23.9	28.1	0.0	26.3
Incr Delay (d2), s/veh	3.4	2.6	2.7	0.2	3.3	3.3	3.6	0.0	0.4	2.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.6	3.6	0.3	6.9	7.0	3.7	0.0	1.1	3.8	0.0	4.3
LnGrp Delay(d),s/veh	27.0	14.3	14.4	30.9	29.6	29.7	37.5	0.0	24.3	30.1	0.0	28.6
LnGrp LOS	C	B	B	C	C	C	D		C	C		C
Approach Vol, veh/h		674			602			195			346	
Approach Delay, s/veh		17.2			29.7			33.7			29.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		21.6	2.7	9.3		13.9	8.3	16.0
Green Ext Time (p_c), s		0.5	0.0	3.3		1.5	0.3	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	115	32	36	33	0
Future Vol, veh/h	8	115	32	36	33	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	125	35	39	36	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	74	0	-	0	198	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1526	-	-	-	791	1012
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1526	-	-	-	786	1012
Mov Cap-2 Maneuver	-	-	-	-	786	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	884	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1526	-	-	-	786
HCM Lane V/C Ratio	0.006	-	-	-	0.046
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	475	1	1	586	1	1
Future Vol, veh/h	475	1	1	586	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	516	1	1	637	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	517	0	838	259
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	321	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1045	-	305	740
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1045	-	305	740
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	708	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	537	-	-	1045	-
HCM Lane V/C Ratio	0.004	-	-	0.001	-
HCM Control Delay (s)	11.7	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

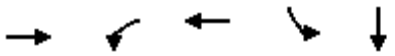
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	463	596	3	1	3
Future Vol, veh/h	6	463	596	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	503	648	3	1	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	651	0	-	0	916	326
Stage 1	-	-	-	-	650	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	931	-	-	-	272	670
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	931	-	-	-	270	670
Mov Cap-2 Maneuver	-	-	-	-	378	-
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	931	-	-	-	562
HCM Lane V/C Ratio	0.007	-	-	-	0.008
HCM Control Delay (s)	8.9	-	-	-	11.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	157	100	60	782	747
v/c Ratio	0.40	0.90	0.08	0.75	0.73
Control Delay	32.4	101.7	21.7	15.2	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	101.7	21.7	15.2	13.0
Queue Length 50th (ft)	35	47	11	223	180
Queue Length 95th (ft)	61	#135	24	426	365
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	714	111	1117	1045	1029
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.90	0.05	0.75	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	140	5	92	55	0	0	0	0	1090	10	306
Future Volume (veh/h)	0	140	5	92	55	0	0	0	0	1090	10	306
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	152	5	100	60	0				764	600	333
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	256	8	112	662	0				1170	743	412
Arrive On Green	0.00	0.08	0.08	0.07	0.20	0.00				0.70	0.70	0.70
Sat Flow, veh/h	0	3402	109	1681	3441	0				1681	1068	593
Grp Volume(v), veh/h	0	77	80	100	60	0				764	0	933
Grp Sat Flow(s),veh/h/ln	0	1676	1746	1681	1676	0				1681	0	1660
Q Serve(g_s), s	0.0	3.3	3.3	4.4	1.1	0.0				19.0	0.0	29.3
Cycle Q Clear(g_c), s	0.0	3.3	3.3	4.4	1.1	0.0				19.0	0.0	29.3
Prop In Lane	0.00		0.06	1.00		0.00				1.00		0.36
Lane Grp Cap(c), veh/h	0	130	135	112	662	0				1170	0	1155
V/C Ratio(X)	0.00	0.59	0.60	0.89	0.09	0.00				0.65	0.00	0.81
Avail Cap(c_a), veh/h	0	358	372	112	1118	0				1170	0	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.5	33.5	34.7	24.6	0.0				6.4	0.0	7.9
Incr Delay (d2), s/veh	0.0	4.2	4.1	52.8	0.1	0.0				2.8	0.0	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	1.8	3.7	0.5	0.0				9.6	0.0	15.2
LnGrp Delay(d),s/veh	0.0	37.7	37.6	87.5	24.7	0.0				9.2	0.0	14.0
LnGrp LOS		D	D	F	C					A		B
Approach Vol, veh/h		157			160						1697	
Approach Delay, s/veh		37.6			63.9						11.9	
Approach LOS		D			E						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			9.0	9.8		56.2		18.8
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			5.0	16.0		42.0		25.0
Max Q Clear Time (g_c+I1), s			6.4	5.3		31.3		3.1
Green Ext Time (p_c), s			0.0	0.5		7.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	108	1220	152	779	81	80
v/c Ratio	0.55	0.74	0.14	0.52	0.14	0.14
Control Delay	33.1	13.3	6.9	4.8	2.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	13.3	6.9	4.8	2.9	2.8
Queue Length 50th (ft)	31	126	14	148	0	0
Queue Length 95th (ft)	#82	187	m25	190	16	16
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1128	1500	579	569
Starvation Cap Reductn	0	8	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.70	0.13	0.52	0.14	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

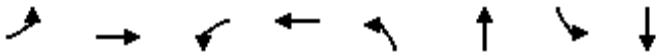
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1122	0	0	140	717	12	0	136	0	0	0
Future Volume (veh/h)	99	1122	0	0	140	717	12	0	136	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	108	1220	0	0	152	0	0	0	162			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	135	1526	0	0	988	442	0	679	1154			
Arrive On Green	0.08	0.46	0.00	0.00	0.39	0.00	0.00	0.00	0.38			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	108	1220	0	0	152	0	0	0	162			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.2	15.6	0.0	0.0	1.5	0.0	0.0	0.0	1.8			
Cycle Q Clear(g_c), s	3.2	15.6	0.0	0.0	1.5	0.0	0.0	0.0	1.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	135	1526	0	0	988	442	0	679	1154			
V/C Ratio(X)	0.80	0.80	0.00	0.00	0.15	0.00	0.00	0.00	0.14			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	679	1154			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	0.66	0.66	0.00	0.00	0.83	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.6	11.7	0.0	0.0	11.2	0.0	0.0	0.0	10.0			
Incr Delay (d2), s/veh	8.7	1.6	0.0	0.0	0.1	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	7.5	0.0	0.0	0.7	0.0	0.0	0.0	0.8			
LnGrp Delay(d),s/veh	31.3	13.3	0.0	0.0	11.2	0.0	0.0	0.0	10.3			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1328			152			162				
Approach Delay, s/veh		14.7			11.2			10.3				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		23.2		26.8			8.0	18.7
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		3.8		17.6			5.2	3.5
Green Ext Time (p_c), s		0.4		5.2			0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	173	1194	75	569	186	97	110	213
v/c Ratio	0.47	1.06	0.20	0.50	0.63	0.18	0.28	0.34
Control Delay	29.5	70.8	33.7	27.7	40.0	11.8	27.9	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	70.8	33.7	27.7	40.0	11.8	27.9	6.9
Queue Length 50th (ft)	69	~410	39	147	100	16	52	11
Queue Length 95th (ft)	m114	#553	79	200	181	53	99	62
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1127	368	1131	296	553	392	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	1.06	0.20	0.50	0.63	0.18	0.28	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	912	187	69	479	44	171	33	56	101	22	174
Future Volume (veh/h)	159	912	187	69	479	44	171	33	56	101	22	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	173	991	203	75	521	48	186	36	61	110	24	189
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	943	193	370	1056	97	316	189	320	429	55	433
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2774	567	1681	3105	285	1164	590	999	1293	172	1354
Grp Volume(v), veh/h	173	598	596	75	281	288	186	0	97	110	0	213
Grp Sat Flow(s),veh/h/ln	1681	1676	1665	1681	1676	1714	1164	0	1588	1293	0	1526
Q Serve(g_s), s	9.0	34.0	34.0	3.6	13.3	13.3	15.0	0.0	4.4	6.7	0.0	11.0
Cycle Q Clear(g_c), s	9.0	34.0	34.0	3.6	13.3	13.3	26.1	0.0	4.4	11.2	0.0	11.0
Prop In Lane	1.00		0.34	1.00		0.17	1.00		0.63	1.00		0.89
Lane Grp Cap(c), veh/h	370	570	566	370	570	583	316	0	508	429	0	488
V/C Ratio(X)	0.47	1.05	1.05	0.20	0.49	0.49	0.59	0.00	0.19	0.26	0.00	0.44
Avail Cap(c_a), veh/h	370	570	566	370	570	583	316	0	508	429	0	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	33.0	33.0	31.8	26.2	26.2	37.2	0.0	24.6	28.7	0.0	26.9
Incr Delay (d2), s/veh	4.2	51.3	52.4	1.2	3.0	3.0	7.8	0.0	0.8	1.4	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	23.8	23.8	1.8	6.6	6.8	5.5	0.0	2.1	2.6	0.0	5.0
LnGrp Delay(d),s/veh	38.1	84.3	85.4	33.1	29.2	29.2	45.0	0.0	25.5	30.1	0.0	29.7
LnGrp LOS	D	F	F	C	C	C	D		C	C		C
Approach Vol, veh/h		1367			644			283			323	
Approach Delay, s/veh		79.0			29.6			38.3			29.8	
Approach LOS		E			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		28.1	5.6	36.0		13.2	11.0	15.3
Green Ext Time (p_c), s		0.5	0.1	0.0		1.6	0.3	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	56.4
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	68	115	33	86	9
Future Vol, veh/h	0	68	115	33	86	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	74	125	36	93	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	161	0	-	0	217	143
Stage 1	-	-	-	-	143	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1418	-	-	-	771	905
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1418	-	-	-	771	905
Mov Cap-2 Maneuver	-	-	-	-	771	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	949	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1418	-	-	-	782
HCM Lane V/C Ratio	-	-	-	-	0.132
HCM Control Delay (s)	0	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	970	0	0	674	0	0
Future Vol, veh/h	970	0	0	674	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1054	0	0	733	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1054	0	1421	527
Stage 1	-	-	-	-	1054	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	656	-	127	496
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	656	-	127	496
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	671	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	656	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

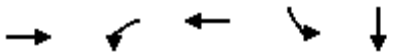
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1084	559	3	9	18
Future Vol, veh/h	11	1084	559	3	9	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	1178	608	3	10	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	611	0	-	0	1223	306
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	613	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	964	-	-	-	172	690
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	964	-	-	-	170	690
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	503	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	964	-	-	-	485
HCM Lane V/C Ratio	0.012	-	-	-	0.061
HCM Control Delay (s)	8.8	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	199	80	88	342	324
v/c Ratio	0.36	0.60	0.10	0.34	0.32
Control Delay	18.7	52.1	27.7	8.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	52.1	27.7	8.2	6.6
Queue Length 50th (ft)	25	32	18	57	40
Queue Length 95th (ft)	46	#71	25	121	94
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	1071	134	1609	1015	1003
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.60	0.05	0.34	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	169	14	74	81	0	0	0	0	492	3	118
Future Volume (veh/h)	0	169	14	74	81	0	0	0	0	492	3	118
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	184	15	80	88	0				333	286	128
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	342	28	98	829	0				996	685	307
Arrive On Green	0.00	0.11	0.11	0.06	0.25	0.00				0.59	0.59	0.59
Sat Flow, veh/h	0	3231	254	1681	3441	0				1681	1156	517
Grp Volume(v), veh/h	0	97	102	80	88	0				333	0	414
Grp Sat Flow(s),veh/h/ln	0	1676	1720	1681	1676	0				1681	0	1673
Q Serve(g_s), s	0.0	2.7	2.8	2.4	1.0	0.0				5.0	0.0	6.7
Cycle Q Clear(g_c), s	0.0	2.7	2.8	2.4	1.0	0.0				5.0	0.0	6.7
Prop In Lane	0.00		0.15	1.00		0.00				1.00		0.31
Lane Grp Cap(c), veh/h	0	182	187	98	829	0				996	0	992
V/C Ratio(X)	0.00	0.53	0.54	0.82	0.11	0.00				0.33	0.00	0.42
Avail Cap(c_a), veh/h	0	536	550	134	1609	0				996	0	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.1	21.1	23.3	14.6	0.0				5.2	0.0	5.5
Incr Delay (d2), s/veh	0.0	2.4	2.4	22.6	0.1	0.0				0.9	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.5	1.7	0.5	0.0				2.6	0.0	3.3
LnGrp Delay(d),s/veh	0.0	23.5	23.5	45.9	14.6	0.0				6.1	0.0	6.8
LnGrp LOS		C	C	D	B					A		A
Approach Vol, veh/h		199			168						747	
Approach Delay, s/veh		23.5			29.5						6.5	
Approach LOS		C			C						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			6.9	9.4		33.6		16.4
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			4.0	16.0		18.0		24.0
Max Q Clear Time (g_c+I1), s			4.4	4.8		8.7		3.0
Green Ext Time (p_c), s			0.0	0.7		2.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	100	613	158	733	55	54
v/c Ratio	0.51	0.54	0.27	0.49	0.07	0.07
Control Delay	27.4	19.6	11.6	6.4	0.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	19.6	11.6	6.4	0.9	0.9
Queue Length 50th (ft)	30	102	20	212	0	0
Queue Length 95th (ft)	#76	142	29	284	5	5
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1072	1500	791	772
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.35	0.15	0.49	0.07	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	564	0	0	145	674	11	0	89	0	0	0
Future Volume (veh/h)	92	564	0	0	145	674	11	0	89	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	100	613	0	0	158	0	0	0	110			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	124	863	0	0	348	156	0	1028	1748			
Arrive On Green	0.15	0.51	0.00	0.00	0.07	0.00	0.00	0.00	0.58			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	100	613	0	0	158	0	0	0	110			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.9	7.0	0.0	0.0	2.3	0.0	0.0	0.0	0.8			
Cycle Q Clear(g_c), s	2.9	7.0	0.0	0.0	2.3	0.0	0.0	0.0	0.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	124	863	0	0	348	156	0	1028	1748			
V/C Ratio(X)	0.81	0.71	0.00	0.00	0.45	0.00	0.00	0.00	0.06			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	1028	1748			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.94	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	21.0	10.7	0.0	0.0	21.9	0.0	0.0	0.0	4.5			
Incr Delay (d2), s/veh	11.1	1.0	0.0	0.0	0.9	0.0	0.0	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	3.2	0.0	0.0	1.1	0.0	0.0	0.0	0.3			
LnGrp Delay(d),s/veh	32.1	11.7	0.0	0.0	22.8	0.0	0.0	0.0	4.6			
LnGrp LOS	C	B			C				A			
Approach Vol, veh/h		713			158			110				
Approach Delay, s/veh		14.6			22.8			4.6				
Approach LOS		B			C			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		33.1		16.9			7.7	9.2
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		2.8		9.0			4.9	4.3
Green Ext Time (p_c), s		0.3		3.9			0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	159	541	14	541	76	149	59	164	193
v/c Ratio	0.43	0.48	0.04	0.33	0.14	0.48	0.11	0.40	0.32
Control Delay	30.7	18.0	31.2	25.2	6.1	33.5	18.0	30.3	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	18.0	31.2	25.2	6.1	33.5	18.0	30.3	7.1
Queue Length 50th (ft)	59	99	7	93	0	76	17	81	10
Queue Length 95th (ft)	131	152	24	123	31	139	47	142	60
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1129	368	1638	560	312	549	406	605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.48	0.04	0.33	0.14	0.48	0.11	0.40	0.32

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	420	77	13	498	70	137	36	18	151	21	156
Future Volume (veh/h)	146	420	77	13	498	70	137	36	18	151	21	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	457	84	14	541	76	149	39	20	164	23	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	963	176	370	1638	510	335	352	181	467	58	430
Arrive On Green	0.44	0.68	0.68	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2832	517	1681	4818	1500	1185	1101	564	1338	182	1345
Grp Volume(v), veh/h	159	269	272	14	541	76	149	0	59	164	0	193
Grp Sat Flow(s),veh/h/ln	1681	1676	1673	1681	1606	1500	1185	0	1665	1338	0	1527
Q Serve(g_s), s	6.5	7.6	7.7	0.7	8.3	3.5	11.2	0.0	2.5	9.8	0.0	9.8
Cycle Q Clear(g_c), s	6.5	7.6	7.7	0.7	8.3	3.5	21.0	0.0	2.5	12.3	0.0	9.8
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.34	1.00		0.88
Lane Grp Cap(c), veh/h	370	570	569	370	1638	510	335	0	533	467	0	489
V/C Ratio(X)	0.43	0.47	0.48	0.04	0.33	0.15	0.45	0.00	0.11	0.35	0.00	0.39
Avail Cap(c_a), veh/h	370	570	569	370	1638	510	335	0	533	467	0	489
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	11.8	11.8	30.7	24.5	22.9	34.6	0.0	24.0	28.3	0.0	26.5
Incr Delay (d2), s/veh	3.6	2.8	2.9	0.2	0.5	0.6	4.2	0.0	0.4	2.1	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.9	3.9	0.3	3.8	1.5	4.0	0.0	1.2	3.9	0.0	4.5
LnGrp Delay(d),s/veh	27.3	14.6	14.6	30.9	25.1	23.6	38.9	0.0	24.4	30.4	0.0	28.8
LnGrp LOS	C	B	B	C	C	C	D		C	C		C
Approach Vol, veh/h		700			631			208			357	
Approach Delay, s/veh		17.5			25.0			34.8			29.6	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		23.0	2.7	9.7		14.3	8.5	10.3
Green Ext Time (p_c), s		0.5	0.0	3.4		1.6	0.3	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	4.2
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	137	83	38
Demand Flow Rate, veh/h	140	85	39
Vehicles Circulating, veh/h	39	9	38
Vehicles Exiting, veh/h	38	170	56
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	3.9	3.7
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	140	85	39
Cap Entry Lane, veh/h	1087	1120	1088
Entry HV Adj Factor	0.982	0.979	0.974
Flow Entry, veh/h	137	83	38
Cap Entry, veh/h	1067	1097	1060
V/C Ratio	0.129	0.076	0.036
Control Delay, s/veh	4.5	3.9	3.7
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	492	2	2	615	3	3
Future Vol, veh/h	492	2	2	615	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	535	2	2	668	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	537	0	807	269
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	271	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	651	-	387	621
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	651	-	386	621
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	688	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	476	-	-	651	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Control Delay (s)	12.7	-	-	10.5	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

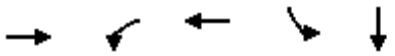
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	480	626	4	1	3
Future Vol, veh/h	6	480	626	4	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	522	680	4	1	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	684	0	-	0	905	342
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	223	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	554	-	-	-	346	558
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	728	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	554	-	-	-	342	558
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	728	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	482
HCM Lane V/C Ratio	0.012	-	-	-	0.009
HCM Control Delay (s)	11.6	-	-	-	12.5
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	168	108	66	808	769
v/c Ratio	0.43	0.86	0.08	0.77	0.75
Control Delay	35.3	90.8	23.0	16.7	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	90.8	23.0	16.7	14.3
Queue Length 50th (ft)	41	55	13	255	208
Queue Length 95th (ft)	68	#146	27	#500	413
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	670	125	1089	1049	1032
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.86	0.06	0.77	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	150	5	99	61	0	0	0	0	1126	10	315
Future Volume (veh/h)	0	150	5	99	61	0	0	0	0	1126	10	315
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	163	5	108	66	0				788	621	342
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	263	8	126	685	0				1169	745	410
Arrive On Green	0.00	0.08	0.08	0.08	0.20	0.00				0.70	0.70	0.70
Sat Flow, veh/h	0	3410	102	1681	3441	0				1681	1071	590
Grp Volume(v), veh/h	0	82	86	108	66	0				788	0	963
Grp Sat Flow(s),veh/h/ln	0	1676	1747	1681	1676	0				1681	0	1661
Q Serve(g_s), s	0.0	3.8	3.8	5.1	1.3	0.0				21.5	0.0	33.6
Cycle Q Clear(g_c), s	0.0	3.8	3.8	5.1	1.3	0.0				21.5	0.0	33.6
Prop In Lane	0.00		0.06	1.00		0.00				1.00		0.36
Lane Grp Cap(c), veh/h	0	133	138	126	685	0				1169	0	1155
V/C Ratio(X)	0.00	0.62	0.62	0.86	0.10	0.00				0.67	0.00	0.83
Avail Cap(c_a), veh/h	0	335	349	126	1090	0				1169	0	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	35.7	35.7	36.6	25.8	0.0				7.0	0.0	8.8
Incr Delay (d2), s/veh	0.0	4.6	4.5	40.5	0.1	0.0				3.1	0.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	2.0	3.8	0.6	0.0				10.9	0.0	17.3
LnGrp Delay(d),s/veh	0.0	40.3	40.2	77.1	25.9	0.0				10.1	0.0	15.9
LnGrp LOS		D	D	E	C					B		B
Approach Vol, veh/h		168			174						1751	
Approach Delay, s/veh		40.2			57.7						13.3	
Approach LOS		D			E						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			10.0	10.3		59.7		20.3
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			6.0	16.0		46.0		26.0
Max Q Clear Time (g_c+I1), s			7.1	5.8		35.6		3.3
Green Ext Time (p_c), s			0.0	0.6		7.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	111	1267	161	805	86	86
v/c Ratio	0.56	0.76	0.14	0.54	0.15	0.15
Control Delay	34.0	13.6	6.7	6.5	3.2	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	13.6	6.7	6.5	3.2	3.2
Queue Length 50th (ft)	31	134	15	225	0	0
Queue Length 95th (ft)	#84	198	m24	295	18	18
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1136	1500	570	561
Starvation Cap Reductn	0	7	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.73	0.14	0.54	0.15	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1166	0	0	148	741	12	0	146	0	0	0
Future Volume (veh/h)	102	1166	0	0	148	741	12	0	146	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	111	1267	0	0	161	0	0	0	173			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	139	1559	0	0	1014	454	0	662	1125			
Arrive On Green	0.08	0.47	0.00	0.00	0.40	0.00	0.00	0.00	0.37			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	111	1267	0	0	161	0	0	0	173			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.2	16.2	0.0	0.0	1.5	0.0	0.0	0.0	1.9			
Cycle Q Clear(g_c), s	3.2	16.2	0.0	0.0	1.5	0.0	0.0	0.0	1.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	139	1559	0	0	1014	454	0	662	1125			
V/C Ratio(X)	0.80	0.81	0.00	0.00	0.16	0.00	0.00	0.00	0.15			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	662	1125			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	0.63	0.63	0.00	0.00	0.91	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.5	11.5	0.0	0.0	10.9	0.0	0.0	0.0	10.4			
Incr Delay (d2), s/veh	8.8	1.8	0.0	0.0	0.1	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	7.8	0.0	0.0	0.7	0.0	0.0	0.0	0.8			
LnGrp Delay(d),s/veh	31.3	13.3	0.0	0.0	11.0	0.0	0.0	0.0	10.7			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1378			161			173				
Approach Delay, s/veh		14.7			11.0			10.7				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.7		27.3			8.1	19.1
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		3.9		18.2			5.2	3.5
Green Ext Time (p_c), s		0.5		5.0			0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	178	1248	77	543	49	195	100	113	220
v/c Ratio	0.48	1.11	0.21	0.33	0.09	0.67	0.18	0.29	0.35
Control Delay	29.9	87.9	33.7	25.2	6.0	42.8	11.7	28.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	87.9	33.7	25.2	6.0	42.8	11.7	28.0	7.0
Queue Length 50th (ft)	72	~449	40	93	0	107	16	54	11
Queue Length 95th (ft)	m115	#594	81	124	22	#206	54	101	63
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1128	368	1638	546	290	553	390	622
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	1.11	0.21	0.33	0.09	0.67	0.18	0.29	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	950	198	71	500	45	179	34	58	104	23	179
Future Volume (veh/h)	164	950	198	71	500	45	179	34	58	104	23	179
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	178	1033	215	77	543	49	195	37	63	113	25	195
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	940	195	370	1638	510	310	188	320	426	55	433
Arrive On Green	0.15	0.23	0.23	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2766	574	1681	4818	1500	1156	588	1001	1290	173	1353
Grp Volume(v), veh/h	178	625	623	77	543	49	195	0	100	113	0	220
Grp Sat Flow(s),veh/h/ln	1681	1676	1663	1681	1606	1500	1156	0	1588	1290	0	1526
Q Serve(g_s), s	9.7	34.0	34.0	3.7	8.4	2.2	16.1	0.0	4.6	7.0	0.0	11.5
Cycle Q Clear(g_c), s	9.7	34.0	34.0	3.7	8.4	2.2	27.6	0.0	4.6	11.5	0.0	11.5
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.63	1.00		0.89
Lane Grp Cap(c), veh/h	370	570	566	370	1638	510	310	0	508	426	0	488
V/C Ratio(X)	0.48	1.10	1.10	0.21	0.33	0.10	0.63	0.00	0.20	0.27	0.00	0.45
Avail Cap(c_a), veh/h	370	570	566	370	1638	510	310	0	508	426	0	488
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	38.6	38.6	31.9	24.5	22.5	38.0	0.0	24.7	28.9	0.0	27.0
Incr Delay (d2), s/veh	4.4	66.8	68.7	1.3	0.5	0.4	9.4	0.0	0.9	1.5	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	26.3	26.4	1.9	3.8	1.0	6.0	0.0	2.1	2.7	0.0	5.2
LnGrp Delay(d),s/veh	41.8	105.4	107.3	33.2	25.1	22.9	47.3	0.0	25.5	30.4	0.0	30.0
LnGrp LOS	D	F	F	C	C	C	D		C	C		C
Approach Vol, veh/h		1426			669			295			333	
Approach Delay, s/veh		98.3			25.9			39.9			30.1	
Approach LOS		F			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		29.6	5.7	36.0		13.5	11.7	10.4
Green Ext Time (p_c), s		0.3	0.1	0.0		1.6	0.3	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.8
HCM 2010 LOS	E

Intersection	
Intersection Delay, s/veh	4.6
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	77	168	112
Demand Flow Rate, veh/h	79	172	114
Vehicles Circulating, veh/h	104	0	131
Vehicles Exiting, veh/h	141	183	41
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.6	4.8
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	79	172	114
Cap Entry Lane, veh/h	1018	1130	991
Entry HV Adj Factor	0.980	0.979	0.982
Flow Entry, veh/h	77	168	112
Cap Entry, veh/h	998	1106	974
V/C Ratio	0.078	0.152	0.115
Control Delay, s/veh	4.3	4.6	4.8
LOS	A	A	A
95th %tile Queue, veh	0	1	0

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1010	2	2	700	1	1
Future Vol, veh/h	1010	2	2	700	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1098	2	2	761	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1100	0	1407	550
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	308	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	350	-	193	410
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	350	-	192	410
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	659	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	262	-	-	350	-
HCM Lane V/C Ratio	0.008	-	-	0.006	-
HCM Control Delay (s)	18.9	-	-	15.3	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0	-	-	0	-

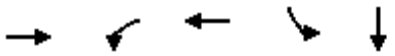
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1129	624	3	10	19
Future Vol, veh/h	11	1129	624	3	10	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	1227	678	3	11	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	681	0	-	0	1195	341
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	515	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	556	-	-	-	247	559
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	556	-	-	-	242	559
Mov Cap-2 Maneuver	-	-	-	-	242	-
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	556	-	-	-	385
HCM Lane V/C Ratio	0.022	-	-	-	0.082
HCM Control Delay (s)	11.6	-	-	-	15.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	367	237	245	376	359
v/c Ratio	0.55	0.75	0.16	0.57	0.54
Control Delay	24.1	39.7	9.2	19.5	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	39.7	9.2	19.5	16.3
Queue Length 50th (ft)	62	81	25	107	85
Queue Length 95th (ft)	91	#173	36	#238	183
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	893	335	1788	659	665
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.41	0.71	0.14	0.57	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	324	14	218	225	0	0	0	0	558	3	115
Future Volume (veh/h)	0	324	14	218	225	0	0	0	0	558	3	115
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	352	15	237	245	0				726	0	0
Adj No. of Lanes	0	2	0	1	2	0				2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	512	22	283	1313	0				1597	838	0
Arrive On Green	0.00	0.16	0.16	0.17	0.39	0.00				0.47	0.00	0.00
Sat Flow, veh/h	0	3366	139	1681	3441	0				3361	1765	0
Grp Volume(v), veh/h	0	180	187	237	245	0				726	0	0
Grp Sat Flow(s),veh/h/ln	0	1676	1740	1681	1676	0				1681	1765	0
Q Serve(g_s), s	0.0	6.1	6.1	8.2	2.9	0.0				8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.1	6.1	8.2	2.9	0.0				8.7	0.0	0.0
Prop In Lane	0.00		0.08	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	262	272	283	1313	0				1597	838	0
V/C Ratio(X)	0.00	0.69	0.69	0.84	0.19	0.00				0.45	0.00	0.00
Avail Cap(c_a), veh/h	0	447	464	336	1788	0				1597	838	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.88	0.88	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.9	23.9	24.1	12.0	0.0				10.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	3.1	13.1	0.1	0.0				0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	3.1	4.8	1.3	0.0				4.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	27.1	27.0	37.2	12.0	0.0				11.5	0.0	0.0
LnGrp LOS		C	C	D	B					B		
Approach Vol, veh/h		367			482						726	
Approach Delay, s/veh		27.0			24.4						11.5	
Approach LOS		C			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			14.1	13.4		32.5		27.5
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			12.0	16.0		20.0		32.0
Max Q Clear Time (g_c+I1), s			10.2	8.1		10.7		4.9
Green Ext Time (p_c), s			0.1	1.3		2.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	97	857	470	790	140	139
v/c Ratio	0.49	0.61	0.46	0.53	0.21	0.21
Control Delay	29.9	12.6	15.1	3.1	4.7	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	12.6	15.1	3.1	4.7	4.7
Queue Length 50th (ft)	27	88	88	12	3	3
Queue Length 95th (ft)	#67	113	m104	m154	34	34
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1098	1500	674	667
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.49	0.43	0.53	0.21	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

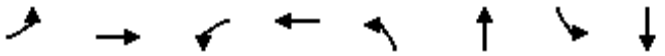
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	788	0	0	432	727	11	0	246	0	0	0
Future Volume (veh/h)	89	788	0	0	432	727	11	0	246	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	97	857	0	0	470	0	0	0	280			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	121	1203	0	0	693	310	0	849	1444			
Arrive On Green	0.07	0.36	0.00	0.00	0.35	0.00	0.00	0.00	0.48			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	97	857	0	0	470	0	0	0	280			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.8	11.0	0.0	0.0	6.0	0.0	0.0	0.0	2.7			
Cycle Q Clear(g_c), s	2.8	11.0	0.0	0.0	6.0	0.0	0.0	0.0	2.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	121	1203	0	0	693	310	0	849	1444			
V/C Ratio(X)	0.80	0.71	0.00	0.00	0.68	0.00	0.00	0.00	0.19			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	849	1444			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	0.50	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.8	13.8	0.0	0.0	14.9	0.0	0.0	0.0	7.4			
Incr Delay (d2), s/veh	9.5	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.6	5.1	0.0	0.0	2.8	0.0	0.0	0.0	1.1			
LnGrp Delay(d),s/veh	32.3	14.5	0.0	0.0	15.5	0.0	0.0	0.0	7.7			
LnGrp LOS	C	B			B				A			
Approach Vol, veh/h		954			470			280				
Approach Delay, s/veh		16.3			15.5			7.7				
Approach LOS		B			B			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		28.1		21.9			7.6	14.3
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		4.7		13.0			4.8	8.0
Green Ext Time (p_c), s		0.8		4.9			0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	154	961	53	876	272	101	171	192
v/c Ratio	0.42	0.85	0.14	0.77	0.87	0.18	0.44	0.32
Control Delay	31.4	31.6	47.3	23.6	60.4	13.4	31.3	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	31.6	47.3	23.6	60.4	13.4	31.3	7.5
Queue Length 50th (ft)	61	225	37	102	162	20	86	12
Queue Length 95th (ft)	129	#310	m53	146	#314	58	149	62
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1128	368	1131	313	555	390	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.85	0.14	0.77	0.87	0.18	0.44	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Future Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	154	748	213	53	793	83	272	46	55	171	28	164
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	876	250	370	1042	109	336	235	281	426	72	419
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2578	734	1681	3064	321	1186	733	877	1288	224	1310
Grp Volume(v), veh/h	154	486	475	53	434	442	272	0	101	171	0	192
Grp Sat Flow(s),veh/h/ln	1681	1676	1635	1681	1676	1708	1186	0	1610	1288	0	1534
Q Serve(g_s), s	7.9	27.0	27.0	2.5	23.0	23.1	22.3	0.0	4.6	11.1	0.0	9.7
Cycle Q Clear(g_c), s	7.9	27.0	27.0	2.5	23.0	23.1	32.0	0.0	4.6	15.7	0.0	9.7
Prop In Lane	1.00		0.45	1.00		0.19	1.00		0.54	1.00		0.85
Lane Grp Cap(c), veh/h	370	570	556	370	570	581	336	0	515	426	0	491
V/C Ratio(X)	0.42	0.85	0.85	0.14	0.76	0.76	0.81	0.00	0.20	0.40	0.00	0.39
Avail Cap(c_a), veh/h	370	570	556	370	570	581	336	0	515	426	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.5	30.7	30.7	31.4	29.4	29.4	39.2	0.0	24.7	30.3	0.0	26.4
Incr Delay (d2), s/veh	3.4	15.0	15.3	0.8	9.3	9.1	18.7	0.0	0.8	2.8	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	14.8	14.5	1.3	12.1	12.3	9.2	0.0	2.1	4.3	0.0	4.4
LnGrp Delay(d),s/veh	36.9	45.7	46.0	32.2	38.6	38.5	57.8	0.0	25.5	33.2	0.0	28.8
LnGrp LOS	D	D	D	C	D	D	E		C	C		C
Approach Vol, veh/h		1115			929			373			363	
Approach Delay, s/veh		44.6			38.2			49.1			30.8	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	4.5	29.0		17.7	9.9	25.1
Green Ext Time (p_c), s		0.0	0.1	2.7		1.5	0.3	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	4.6
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	151	147	117
Demand Flow Rate, veh/h	154	150	119
Vehicles Circulating, veh/h	104	24	38
Vehicles Exiting, veh/h	53	234	136
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	4.5	4.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	154	150	119
Cap Entry Lane, veh/h	1018	1103	1088
Entry HV Adj Factor	0.983	0.982	0.983
Flow Entry, veh/h	151	147	117
Cap Entry, veh/h	1001	1083	1070
V/C Ratio	0.151	0.136	0.109
Control Delay, s/veh	5.0	4.5	4.3
LOS	A	A	A
95th %tile Queue, veh	1	0	0

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	117	34	101	94	14
Future Vol, veh/h	22	117	34	101	94	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	127	37	110	102	15
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.4	7.7	8.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	0%	87%
Vol Thru, %	84%	25%	0%
Vol Right, %	0%	75%	13%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	139	135	108
LT Vol	22	0	94
Through Vol	117	34	0
RT Vol	0	101	14
Lane Flow Rate	151	147	117
Geometry Grp	1	1	1
Degree of Util (X)	0.185	0.16	0.152
Departure Headway (Hd)	4.397	3.936	4.666
Convergence, Y/N	Yes	Yes	Yes
Cap	819	914	770
Service Time	2.409	1.949	2.685
HCM Lane V/C Ratio	0.184	0.161	0.152
HCM Control Delay	8.4	7.7	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.6	0.5

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	117	34	101	94	14
Future Vol, veh/h	22	117	34	101	94	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	127	37	110	102	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	147	0	-	0	267	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1435	-	-	-	722	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	855	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1435	-	-	-	709	965
Mov Cap-2 Maneuver	-	-	-	-	709	-
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	855	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1435	-	-	-	734
HCM Lane V/C Ratio	0.017	-	-	-	0.16
HCM Control Delay (s)	7.6	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

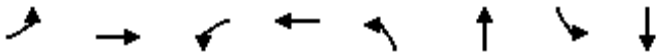
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	675	2	30	800	2	29
Future Vol, veh/h	675	2	30	800	2	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	734	2	33	870	2	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	736	0	1236	368
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	501	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	865	-	168	629
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	865	-	162	629
Mov Cap-2 Maneuver	-	-	-	-	287	-
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	574	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	584	-	-	865	-
HCM Lane V/C Ratio	0.058	-	-	0.038	-
HCM Control Delay (s)	11.5	-	-	9.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	779	197	687	288	195	1	26
v/c Ratio	0.04	0.85	0.78	0.76	0.59	0.24	0.00	0.06
Control Delay	27.6	56.9	63.7	39.9	45.2	4.0	27.0	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	56.9	63.7	39.9	45.2	4.0	27.0	21.5
Queue Length 50th (ft)	6	265	123	211	89	6	1	8
Queue Length 95th (ft)	m9	m#324	#235	279	132	44	5	29
Internal Link Dist (ft)		925		1050		192		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	913	251	904	487	796	302	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.85	0.78	0.76	0.59	0.24	0.00	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

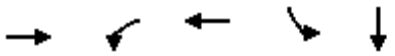
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Future Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	11	543	236	197	684	3	288	17	178	1	18	8
Adj No. of Lanes	1	2	0	1	2	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	605	262	243	1366	6	326	52	541	384	259	115
Arrive On Green	0.01	0.27	0.27	0.14	0.40	0.40	0.10	0.39	0.39	0.22	0.22	0.22
Sat Flow, veh/h	1681	2279	988	1681	3424	15	3261	133	1387	1183	1159	515
Grp Volume(v), veh/h	11	399	380	197	335	352	288	0	195	1	0	26
Grp Sat Flow(s),veh/h/ln	1681	1676	1590	1681	1676	1762	1630	0	1520	1183	0	1674
Q Serve(g_s), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Cycle Q Clear(g_c), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Prop In Lane	1.00		0.62	1.00		0.01	1.00		0.91	1.00		0.31
Lane Grp Cap(c), veh/h	19	445	422	243	669	703	326	0	593	384	0	374
V/C Ratio(X)	0.59	0.90	0.90	0.81	0.50	0.50	0.88	0.00	0.33	0.00	0.00	0.07
Avail Cap(c_a), veh/h	224	447	424	364	669	703	326	0	593	384	0	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	21.2	21.3	24.9	13.5	13.5	26.7	0.0	12.8	18.1	0.0	18.4
Incr Delay (d2), s/veh	19.0	15.6	16.8	8.1	0.6	0.6	23.6	0.0	1.5	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.2	8.0	3.7	4.2	4.4	3.4	0.0	2.5	0.0	0.0	0.4
LnGrp Delay(d),s/veh	48.5	36.9	38.0	33.0	14.1	14.1	50.2	0.0	14.3	18.1	0.0	18.7
LnGrp LOS	D	D	D	C	B	B	D		B	B		B
Approach Vol, veh/h		790			884			483			27	
Approach Delay, s/veh		37.6			18.3			35.7			18.7	
Approach LOS		D			B			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.4	12.7	19.9	10.0	17.4	4.7	27.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	13.0	16.0	6.0	9.0	8.0	21.0
Max Q Clear Time (g_c+I1), s		7.4	8.8	15.8	7.2	2.7	2.4	11.0
Green Ext Time (p_c), s		0.8	0.2	0.1	0.0	0.0	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	377	249	209	842	797
v/c Ratio	0.70	0.96	0.17	0.96	0.92
Control Delay	43.1	86.0	19.7	43.8	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	86.0	19.7	43.8	35.3
Queue Length 50th (ft)	106	142	41	461	391
Queue Length 95th (ft)	153	#289	65	#761	#689
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	595	260	1266	877	869
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.96	0.17	0.96	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	342	5	229	192	0	0	0	0	1191	10	306
Future Volume (veh/h)	0	342	5	229	192	0	0	0	0	1191	10	306
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	372	5	249	209	0				820	677	333
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	468	6	261	1134	0				963	640	315
Arrive On Green	0.00	0.14	0.14	0.16	0.34	0.00				0.57	0.57	0.57
Sat Flow, veh/h	0	3476	45	1681	3441	0				1681	1118	550
Grp Volume(v), veh/h	0	184	193	249	209	0				820	0	1010
Grp Sat Flow(s),veh/h/ln	0	1676	1757	1681	1676	0				1681	0	1668
Q Serve(g_s), s	0.0	9.6	9.6	13.2	4.0	0.0				36.6	0.0	51.6
Cycle Q Clear(g_c), s	0.0	9.6	9.6	13.2	4.0	0.0				36.6	0.0	51.6
Prop In Lane	0.00		0.03	1.00		0.00				1.00		0.33
Lane Grp Cap(c), veh/h	0	232	243	261	1134	0				963	0	956
V/C Ratio(X)	0.00	0.79	0.80	0.95	0.18	0.00				0.85	0.00	1.06
Avail Cap(c_a), veh/h	0	298	312	261	1267	0				963	0	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.5	37.6	37.7	21.0	0.0				16.0	0.0	19.2
Incr Delay (d2), s/veh	0.0	10.7	10.4	41.1	0.1	0.0				9.4	0.0	45.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.1	5.4	9.1	1.8	0.0				19.4	0.0	35.4
LnGrp Delay(d),s/veh	0.0	48.3	48.0	78.8	21.1	0.0				25.4	0.0	64.6
LnGrp LOS		D	D	E	C					C		F
Approach Vol, veh/h		377			458						1830	
Approach Delay, s/veh		48.1			52.5						47.1	
Approach LOS		D			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	16.4		55.6		34.4
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			14.0	16.0		48.0		34.0
Max Q Clear Time (g_c+I1), s			15.2	11.6		53.6		6.0
Green Ext Time (p_c), s			0.0	0.9		0.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	48.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	108	1549	449	853	189	191
v/c Ratio	0.45	0.83	0.36	0.57	0.38	0.38
Control Delay	27.3	15.4	14.6	1.6	10.6	10.8
Queue Delay	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	27.3	16.6	14.6	1.6	10.6	10.8
Queue Length 50th (ft)	32	190	58	0	23	24
Queue Length 95th (ft)	71	277	93	0	68	70
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	274	1889	1246	1500	501	497
Starvation Cap Reductn	0	158	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.89	0.36	0.57	0.38	0.38

Intersection Summary

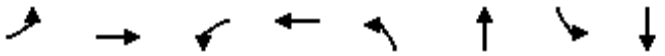
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1425	0	0	413	785	12	0	338	0	0	0
Future Volume (veh/h)	99	1425	0	0	413	785	12	0	338	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	108	1549	0	0	449	0	0	0	381			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	137	1789	0	0	1272	569	0	566	963			
Arrive On Green	0.08	0.53	0.00	0.00	0.38	0.00	0.00	0.00	0.32			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	108	1549	0	0	449	0	0	0	381			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.5	22.0	0.0	0.0	5.3	0.0	0.0	0.0	5.4			
Cycle Q Clear(g_c), s	3.5	22.0	0.0	0.0	5.3	0.0	0.0	0.0	5.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	137	1789	0	0	1272	569	0	566	963			
V/C Ratio(X)	0.79	0.87	0.00	0.00	0.35	0.00	0.00	0.00	0.40			
Avail Cap(c_a), veh/h	275	1890	0	0	1272	569	0	566	963			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.35	0.35	0.00	0.00	0.47	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	24.8	11.1	0.0	0.0	12.2	0.0	0.0	0.0	14.5			
Incr Delay (d2), s/veh	3.6	1.6	0.0	0.0	0.1	0.0	0.0	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	10.3	0.0	0.0	2.4	0.0	0.0	0.0	2.4			
LnGrp Delay(d),s/veh	28.4	12.7	0.0	0.0	12.3	0.0	0.0	0.0	15.7			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1657			449			381				
Approach Delay, s/veh		13.7			12.3			15.7				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		21.7		33.3			8.5	24.9
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		31.0			9.0	18.0
Max Q Clear Time (g_c+I1), s		7.4		24.0			5.5	7.3
Green Ext Time (p_c), s		1.0		5.3			0.1	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	173	1743	109	829	305	133	125	219
v/c Ratio	0.47	1.55	0.30	0.73	1.05	0.23	0.35	0.35
Control Delay	38.9	276.9	50.1	22.0	101.2	10.5	29.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	276.9	50.1	22.0	101.2	10.5	29.4	7.4
Queue Length 50th (ft)	96	~828	75	93	~212	19	61	13
Queue Length 95th (ft)	163	#970	m110	136	#378	62	112	67
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1128	368	1133	291	568	362	620
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	1.55	0.30	0.73	1.05	0.23	0.35	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Future Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	173	1404	339	109	772	57	305	42	91	125	30	189
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	916	216	370	1077	79	311	159	345	394	67	423
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2695	635	1681	3166	234	1157	497	1077	1252	210	1322
Grp Volume(v), veh/h	173	860	883	109	409	420	305	0	133	125	0	219
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1676	1723	1157	0	1575	1252	0	1531
Q Serve(g_s), s	9.0	34.0	34.0	5.4	21.3	21.3	20.7	0.0	6.3	8.2	0.0	11.3
Cycle Q Clear(g_c), s	9.0	34.0	34.0	5.4	21.3	21.3	32.0	0.0	6.3	14.5	0.0	11.3
Prop In Lane	1.00		0.38	1.00		0.14	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	370	570	562	370	570	586	311	0	504	394	0	490
V/C Ratio(X)	0.47	1.51	1.57	0.29	0.72	0.72	0.98	0.00	0.26	0.32	0.00	0.45
Avail Cap(c_a), veh/h	370	570	562	370	570	586	311	0	504	394	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	33.0	33.0	32.5	28.8	28.8	41.9	0.0	25.3	30.6	0.0	27.0
Incr Delay (d2), s/veh	4.2	238.0	265.6	2.0	7.6	7.4	46.4	0.0	1.3	2.1	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	53.4	56.9	2.7	11.0	11.2	12.4	0.0	2.9	3.1	0.0	5.2
LnGrp Delay(d),s/veh	38.1	271.0	298.6	34.6	36.4	36.2	88.3	0.0	26.5	32.8	0.0	29.9
LnGrp LOS	D	F	F	C	D	D	F		C	C		C
Approach Vol, veh/h		1916			938			438			344	
Approach Delay, s/veh		262.7			36.1			69.5			30.9	
Approach LOS		F			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	7.4	36.0		16.5	11.0	23.3
Green Ext Time (p_c), s		0.0	0.2	0.0		1.6	0.3	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	159.0
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	5.1
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	95	224	169
Demand Flow Rate, veh/h	97	229	172
Vehicles Circulating, veh/h	150	15	130
Vehicles Exiting, veh/h	152	232	114
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.7	5.2	5.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	97	229	172
Cap Entry Lane, veh/h	973	1113	992
Entry HV Adj Factor	0.983	0.980	0.983
Flow Entry, veh/h	95	224	169
Cap Entry, veh/h	956	1091	975
V/C Ratio	0.100	0.206	0.173
Control Delay, s/veh	4.7	5.2	5.3
LOS	A	A	A
95th %tile Queue, veh	0	1	1

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	74	117	89	135	20
Future Vol, veh/h	14	74	117	89	135	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	80	127	97	147	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	224	0	-	0	286	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	110	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1345	-	-	-	704	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1345	-	-	-	696	867
Mov Cap-2 Maneuver	-	-	-	-	696	-
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	915	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1345	-	-	-	714
HCM Lane V/C Ratio	0.011	-	-	-	0.236
HCM Control Delay (s)	7.7	0	-	-	11.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.9

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	74	117	89	135	20
Future Vol, veh/h	14	74	117	89	135	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	80	127	97	147	22
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.3	8.7	9.1
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	0%	87%
Vol Thru, %	84%	57%	0%
Vol Right, %	0%	43%	13%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	88	206	155
LT Vol	14	0	135
Through Vol	74	117	0
RT Vol	0	89	20
Lane Flow Rate	96	224	168
Geometry Grp	1	1	1
Degree of Util (X)	0.123	0.262	0.222
Departure Headway (Hd)	4.621	4.205	4.734
Convergence, Y/N	Yes	Yes	Yes
Cap	776	855	758
Service Time	2.647	2.225	2.761
HCM Lane V/C Ratio	0.124	0.262	0.222
HCM Control Delay	8.3	8.7	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	1.1	0.8

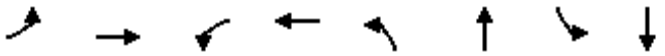
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1146	17	93	884	2	29
Future Vol, veh/h	1146	17	93	884	2	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1246	18	101	961	2	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1264	0	1938	632
Stage 1	-	-	-	-	1255	-
Stage 2	-	-	-	-	683	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	546	-	57	423
Stage 1	-	-	-	-	232	-
Stage 2	-	-	-	-	463	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	546	-	46	423
Mov Cap-2 Maneuver	-	-	-	-	132	-
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	463	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	370	-	-	546	-
HCM Lane V/C Ratio	0.091	-	-	0.185	-
HCM Control Delay (s)	15.7	-	-	13.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.7	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	1571	198	686	258	176	10	49
v/c Ratio	0.06	1.75	0.79	0.76	0.53	0.22	0.03	0.11
Control Delay	29.1	369.0	64.0	39.9	43.7	4.0	27.4	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	369.0	64.0	39.9	43.7	4.0	27.4	17.9
Queue Length 50th (ft)	10	~809	123	211	79	5	5	12
Queue Length 95th (ft)	m9	m#476	#237	279	119	42	18	41
Internal Link Dist (ft)		925		1050		192		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	900	251	904	487	787	307	459
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	1.75	0.79	0.76	0.53	0.22	0.03	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

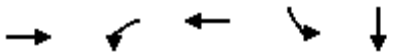
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Future Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1228	343	198	683	3	258	15	161	10	26	23
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1304	364	242	2365	10	353	43	464	306	145	128
Arrive On Green	0.01	0.35	0.35	0.14	0.48	0.48	0.11	0.33	0.33	0.17	0.17	0.17
Sat Flow, veh/h	1681	3746	1046	1681	4951	22	3261	129	1390	1204	865	765
Grp Volume(v), veh/h	15	1053	518	198	443	243	258	0	176	10	0	49
Grp Sat Flow(s),veh/h/ln	1681	1606	1580	1681	1606	1761	1630	0	1519	1204	0	1630
Q Serve(g_s), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Prop In Lane	1.00		0.66	1.00		0.01	1.00		0.91	1.00		0.47
Lane Grp Cap(c), veh/h	24	1118	550	242	1534	841	353	0	507	306	0	273
V/C Ratio(X)	0.62	0.94	0.94	0.82	0.29	0.29	0.73	0.00	0.35	0.03	0.00	0.18
Avail Cap(c_a), veh/h	244	1119	550	390	1534	841	473	0	507	306	0	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	21.8	21.8	28.6	10.9	10.9	29.8	0.0	17.3	24.1	0.0	24.6
Incr Delay (d2), s/veh	22.7	15.0	24.8	7.0	0.1	0.2	3.8	0.0	1.9	0.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	12.0	13.3	4.1	2.5	2.8	2.6	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	56.4	36.8	46.6	35.6	11.0	11.1	33.6	0.0	19.2	24.3	0.0	26.1
LnGrp LOS	E	D	D	D	B	B	C		B	C		C
Approach Vol, veh/h		1586			884			434			59	
Approach Delay, s/veh		40.2			16.6			27.7			25.8	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.0	13.9	28.0	11.5	15.5	5.0	36.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		23.0	16.0	24.0	10.0	9.0	10.0	30.0
Max Q Clear Time (g_c+I1), s		8.0	9.9	23.9	7.3	3.8	2.6	7.8
Green Ext Time (p_c), s		0.9	0.3	0.1	0.2	0.1	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	375	246	253	386	368
v/c Ratio	0.56	0.77	0.17	0.59	0.56
Control Delay	24.1	41.5	9.1	20.4	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	41.5	9.1	20.4	17.0
Queue Length 50th (ft)	63	84	26	111	89
Queue Length 95th (ft)	92	#182	37	#250	#193
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	893	335	1788	653	659
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.73	0.14	0.59	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	331	14	226	233	0	0	0	0	573	3	118
Future Volume (veh/h)	0	331	14	226	233	0	0	0	0	573	3	118
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	360	15	246	253	0				745	0	0
Adj No. of Lanes	0	2	0	1	2	0				2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	521	22	292	1339	0				1570	824	0
Arrive On Green	0.00	0.16	0.16	0.17	0.40	0.00				0.47	0.00	0.00
Sat Flow, veh/h	0	3369	136	1681	3441	0				3361	1765	0
Grp Volume(v), veh/h	0	183	192	246	253	0				745	0	0
Grp Sat Flow(s),veh/h/ln	0	1676	1741	1681	1676	0				1681	1765	0
Q Serve(g_s), s	0.0	6.2	6.2	8.5	2.9	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.2	6.2	8.5	2.9	0.0				9.1	0.0	0.0
Prop In Lane	0.00		0.08	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	266	276	292	1339	0				1570	824	0
V/C Ratio(X)	0.00	0.69	0.69	0.84	0.19	0.00				0.47	0.00	0.00
Avail Cap(c_a), veh/h	0	447	464	336	1788	0				1570	824	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.84	0.84	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.8	23.9	24.0	11.7	0.0				10.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	3.1	13.4	0.1	0.0				1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	3.2	5.0	1.3	0.0				4.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	27.0	27.0	37.3	11.8	0.0				12.0	0.0	0.0
LnGrp LOS		C	C	D	B					B		
Approach Vol, veh/h		375			499						745	
Approach Delay, s/veh		27.0			24.4						12.0	
Approach LOS		C			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			14.4	13.5		32.0		28.0
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			12.0	16.0		20.0		32.0
Max Q Clear Time (g_c+I1), s			10.5	8.2		11.1		4.9
Green Ext Time (p_c), s			0.1	1.3		2.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	100	877	488	815	143	142
v/c Ratio	0.51	0.60	0.53	0.54	0.22	0.22
Control Delay	30.8	12.1	16.1	5.1	5.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	12.1	16.1	5.1	5.2	5.2
Queue Length 50th (ft)	28	90	82	311	5	4
Queue Length 95th (ft)	#74	116	m100	m376	37	36
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1072	1500	650	643
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.50	0.46	0.54	0.22	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	807	0	0	449	750	11	0	251	0	0	0
Future Volume (veh/h)	92	807	0	0	449	750	11	0	251	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	100	877	0	0	488	0	0	0	286			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	125	1223	0	0	706	316	0	838	1425			
Arrive On Green	0.07	0.36	0.00	0.00	0.35	0.00	0.00	0.00	0.48			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	100	877	0	0	488	0	0	0	286			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.9	11.2	0.0	0.0	6.2	0.0	0.0	0.0	2.8			
Cycle Q Clear(g_c), s	2.9	11.2	0.0	0.0	6.2	0.0	0.0	0.0	2.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	125	1223	0	0	706	316	0	838	1425			
V/C Ratio(X)	0.80	0.72	0.00	0.00	0.69	0.00	0.00	0.00	0.20			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	838	1425			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	0.76	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.8	13.7	0.0	0.0	14.8	0.0	0.0	0.0	7.6			
Incr Delay (d2), s/veh	9.0	0.6	0.0	0.0	0.9	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	5.2	0.0	0.0	2.9	0.0	0.0	0.0	1.2			
LnGrp Delay(d),s/veh	31.8	14.3	0.0	0.0	15.7	0.0	0.0	0.0	7.9			
LnGrp LOS	C	B			B				A			
Approach Vol, veh/h		977			488			286				
Approach Delay, s/veh		16.1			15.7			7.9				
Approach LOS		B			B			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		27.8		22.2			7.7	14.5
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		4.8		13.2			4.9	8.2
Green Ext Time (p_c), s		0.8		5.0			0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	159	980	53	821	85	282	104	175	199
v/c Ratio	0.43	0.87	0.14	0.50	0.15	0.92	0.19	0.45	0.33
Control Delay	31.8	33.2	49.5	18.9	5.0	69.0	13.3	31.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	33.2	49.5	18.9	5.0	69.0	13.3	31.6	7.5
Queue Length 50th (ft)	64	232	37	66	4	172	21	88	13
Queue Length 95th (ft)	133	#326	m66	80	m14	#332	60	153	63
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1128	368	1638	560	307	557	387	608
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.87	0.14	0.50	0.15	0.92	0.19	0.45	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Future Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	764	216	53	821	85	282	47	57	175	29	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	878	248	370	1638	510	330	233	282	423	72	419
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2582	730	1681	4818	1500	1179	727	882	1285	223	1310
Grp Volume(v), veh/h	159	496	484	53	821	85	282	0	104	175	0	199
Grp Sat Flow(s),veh/h/ln	1681	1676	1636	1681	1606	1500	1179	0	1609	1285	0	1534
Q Serve(g_s), s	8.2	27.7	27.7	2.5	13.6	4.0	21.9	0.0	4.7	11.5	0.0	10.1
Cycle Q Clear(g_c), s	8.2	27.7	27.7	2.5	13.6	4.0	32.0	0.0	4.7	16.2	0.0	10.1
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.55	1.00		0.85
Lane Grp Cap(c), veh/h	370	570	556	370	1638	510	330	0	515	423	0	491
V/C Ratio(X)	0.43	0.87	0.87	0.14	0.50	0.17	0.86	0.00	0.20	0.41	0.00	0.41
Avail Cap(c_a), veh/h	370	570	556	370	1638	510	330	0	515	423	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	30.9	30.9	31.4	26.3	23.1	40.0	0.0	24.7	30.6	0.0	26.6
Incr Delay (d2), s/veh	3.6	16.5	16.8	0.8	1.1	0.7	23.7	0.0	0.9	3.0	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	15.4	15.1	1.3	6.2	1.7	9.9	0.0	2.2	4.4	0.0	4.6
LnGrp Delay(d),s/veh	37.2	47.4	47.8	32.2	27.4	23.8	63.7	0.0	25.6	33.6	0.0	29.0
LnGrp LOS	D	D	D	C	C	C	E		C	C		C
Approach Vol, veh/h		1139			959			386			374	
Approach Delay, s/veh		46.2			27.3			53.4			31.2	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	4.5	29.7		18.2	10.2	15.6
Green Ext Time (p_c), s		0.0	0.1	2.4		1.5	0.3	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	38.9
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	4.7
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	154	155	119
Demand Flow Rate, veh/h	157	158	121
Vehicles Circulating, veh/h	106	24	40
Vehicles Exiting, veh/h	55	239	142
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	4.6	4.4
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	157	158	121
Cap Entry Lane, veh/h	1016	1103	1086
Entry HV Adj Factor	0.983	0.982	0.983
Flow Entry, veh/h	154	155	119
Cap Entry, veh/h	999	1084	1068
V/C Ratio	0.154	0.143	0.111
Control Delay, s/veh	5.0	4.6	4.4
LOS	A	A	A
95th %tile Queue, veh	1	0	0

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	120	36	107	96	14
Future Vol, veh/h	22	120	36	107	96	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	130	39	116	104	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	155	0	-	0	275	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1425	-	-	-	715	959
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1425	-	-	-	702	959
Mov Cap-2 Maneuver	-	-	-	-	702	-
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	853	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1425	-	-	-	727
HCM Lane V/C Ratio	0.017	-	-	-	0.164
HCM Control Delay (s)	7.6	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	120	36	107	96	14
Future Vol, veh/h	22	120	36	107	96	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	130	39	116	104	15
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.5	7.8	8.6
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	87%
Vol Thru, %	85%	25%	0%
Vol Right, %	0%	75%	13%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	142	143	110
LT Vol	22	0	96
Through Vol	120	36	0
RT Vol	0	107	14
Lane Flow Rate	154	155	120
Geometry Grp	1	1	1
Degree of Util (X)	0.189	0.17	0.156
Departure Headway (Hd)	4.411	3.946	4.694
Convergence, Y/N	Yes	Yes	Yes
Cap	815	911	765
Service Time	2.426	1.961	2.712
HCM Lane V/C Ratio	0.189	0.17	0.157
HCM Control Delay	8.5	7.8	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.6	0.6

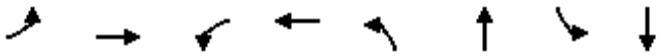
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	692	3	31	829	4	31
Future Vol, veh/h	692	3	31	829	4	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	752	3	34	901	4	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	755	0	1182	378
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	428	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	513	-	251	529
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	513	-	234	529
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	572	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	462	-	-	513	-
HCM Lane V/C Ratio	0.082	-	-	0.066	-
HCM Control Delay (s)	13.5	-	-	12.5	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	798	197	720	288	195	1	26
v/c Ratio	0.04	0.61	0.78	0.55	0.59	0.24	0.00	0.06
Control Delay	27.6	47.0	63.7	33.2	45.2	4.0	27.0	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	47.0	63.7	33.2	45.2	4.0	27.0	21.5
Queue Length 50th (ft)	6	182	123	144	89	6	1	8
Queue Length 95th (ft)	m9	m217	#235	185	132	44	5	29
Internal Link Dist (ft)		925		1050		211		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	1319	251	1300	487	796	302	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.61	0.78	0.55	0.59	0.24	0.00	0.06

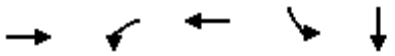
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Future Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	764	216	53	821	85	282	47	57	175	29	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	885	250	68	1277	398	495	290	352	590	89	523
Arrive On Green	0.12	0.34	0.34	0.04	0.27	0.27	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1681	2582	730	1681	4818	1500	1179	727	882	1285	223	1310
Grp Volume(v), veh/h	159	496	484	53	821	85	282	0	104	175	0	199
Grp Sat Flow(s),veh/h/ln	1681	1676	1636	1681	1606	1500	1179	0	1609	1285	0	1534
Q Serve(g_s), s	5.1	15.2	15.2	1.7	8.3	2.4	11.9	0.0	2.3	5.6	0.0	4.9
Cycle Q Clear(g_c), s	5.1	15.2	15.2	1.7	8.3	2.4	16.9	0.0	2.3	7.9	0.0	4.9
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.55	1.00		0.85
Lane Grp Cap(c), veh/h	198	574	560	68	1277	398	495	0	642	590	0	612
V/C Ratio(X)	0.80	0.86	0.86	0.78	0.64	0.21	0.57	0.00	0.16	0.30	0.00	0.33
Avail Cap(c_a), veh/h	244	610	595	122	1401	436	495	0	642	590	0	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	16.9	16.9	26.1	17.9	15.7	17.2	0.0	10.6	13.1	0.0	11.4
Incr Delay (d2), s/veh	12.1	9.9	10.1	14.4	0.7	0.2	4.7	0.0	0.5	1.3	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	8.5	8.3	1.1	3.7	1.0	4.5	0.0	1.1	2.2	0.0	2.3
LnGrp Delay(d),s/veh	35.7	26.8	27.0	40.5	18.6	16.0	21.9	0.0	11.2	14.4	0.0	12.8
LnGrp LOS	D	C	C	D	B	B	C		B	B		B
Approach Vol, veh/h		1139			959			386			374	
Approach Delay, s/veh		28.1			19.6			19.0			13.6	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.9	6.2	22.8		25.9	10.5	18.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	4.0	20.0		19.0	8.0	16.0
Max Q Clear Time (g_c+I1), s		18.9	3.7	17.2		9.9	7.1	10.3
Green Ext Time (p_c), s		0.0	0.0	1.6		1.2	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	388	257	215	867	820
v/c Ratio	0.72	0.99	0.18	0.99	0.95
Control Delay	43.5	93.4	19.7	50.9	40.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	93.4	19.7	50.9	40.1
Queue Length 50th (ft)	109	148	42	~505	420
Queue Length 95th (ft)	157	#301	66	#793	#721
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	595	260	1266	875	866
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.99	0.17	0.99	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	352	5	236	198	0	0	0	0	1227	10	315
Future Volume (veh/h)	0	352	5	236	198	0	0	0	0	1227	10	315
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	383	5	257	215	0				844	698	342
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	478	6	261	1144	0				958	638	313
Arrive On Green	0.00	0.14	0.14	0.16	0.34	0.00				0.57	0.57	0.57
Sat Flow, veh/h	0	3477	44	1681	3441	0				1681	1119	548
Grp Volume(v), veh/h	0	189	199	257	215	0				844	0	1040
Grp Sat Flow(s),veh/h/ln	0	1676	1757	1681	1676	0				1681	0	1668
Q Serve(g_s), s	0.0	9.8	9.9	13.7	4.1	0.0				39.0	0.0	51.3
Cycle Q Clear(g_c), s	0.0	9.8	9.9	13.7	4.1	0.0				39.0	0.0	51.3
Prop In Lane	0.00		0.03	1.00		0.00				1.00		0.33
Lane Grp Cap(c), veh/h	0	237	248	261	1144	0				958	0	951
V/C Ratio(X)	0.00	0.80	0.80	0.98	0.19	0.00				0.88	0.00	1.09
Avail Cap(c_a), veh/h	0	298	312	261	1267	0				958	0	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.4	37.4	37.9	20.9	0.0				16.7	0.0	19.3
Incr Delay (d2), s/veh	0.0	11.6	11.2	49.5	0.1	0.0				11.5	0.0	58.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	5.6	9.9	1.9	0.0				20.9	0.0	38.6
LnGrp Delay(d),s/veh	0.0	49.0	48.6	87.4	21.0	0.0				28.2	0.0	77.6
LnGrp LOS		D	D	F	C					C		F
Approach Vol, veh/h		388			472						1884	
Approach Delay, s/veh		48.8			57.1						55.5	
Approach LOS		D			E						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	16.7		55.3		34.7
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			14.0	16.0		48.0		34.0
Max Q Clear Time (g_c+I1), s			15.7	11.9		53.3		6.1
Green Ext Time (p_c), s			0.0	0.8		0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	54.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	111	1597	458	879	194	197
v/c Ratio	0.49	0.81	0.33	0.59	0.42	0.43
Control Delay	31.6	13.8	13.4	1.7	13.3	13.5
Queue Delay	0.0	2.3	0.0	0.0	0.0	0.0
Total Delay	31.6	16.1	13.4	1.7	13.3	13.5
Queue Length 50th (ft)	37	201	60	0	30	31
Queue Length 95th (ft)	80	287	93	0	83	85
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	251	2011	1400	1500	467	463
Starvation Cap Reductn	0	276	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.92	0.33	0.59	0.42	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1469	0	0	421	809	12	0	348	0	0	0
Future Volume (veh/h)	102	1469	0	0	421	809	12	0	348	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	111	1597	0	0	458	0	0	0	392			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	141	1869	0	0	1365	611	0	546	928			
Arrive On Green	0.08	0.56	0.00	0.00	0.41	0.00	0.00	0.00	0.31			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	111	1597	0	0	458	0	0	0	392			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.9	24.2	0.0	0.0	5.6	0.0	0.0	0.0	6.2			
Cycle Q Clear(g_c), s	3.9	24.2	0.0	0.0	5.6	0.0	0.0	0.0	6.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	141	1869	0	0	1365	611	0	546	928			
V/C Ratio(X)	0.79	0.85	0.00	0.00	0.34	0.00	0.00	0.00	0.42			
Avail Cap(c_a), veh/h	252	2012	0	0	1365	611	0	546	928			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.30	0.30	0.00	0.00	0.70	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	27.0	11.2	0.0	0.0	12.2	0.0	0.0	0.0	16.5			
Incr Delay (d2), s/veh	3.0	1.1	0.0	0.0	0.1	0.0	0.0	0.0	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.9	11.2	0.0	0.0	2.6	0.0	0.0	0.0	2.7			
LnGrp Delay(d),s/veh	30.0	12.4	0.0	0.0	12.3	0.0	0.0	0.0	17.9			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1708			458			392				
Approach Delay, s/veh		13.5			12.3			17.9				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.6		37.4			9.0	28.4
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		36.0			9.0	23.0
Max Q Clear Time (g_c+I1), s		8.2		26.2			5.9	7.6
Green Ext Time (p_c), s		1.0		7.3			0.1	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	178	1797	111	795	58	314	136	128	227
v/c Ratio	0.48	1.59	0.30	0.49	0.11	1.10	0.24	0.36	0.36
Control Delay	39.2	297.8	52.6	18.1	4.8	117.6	10.5	29.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	297.8	52.6	18.1	4.8	117.6	10.5	29.7	7.4
Queue Length 50th (ft)	100	~867	77	62	1	~229	19	62	14
Queue Length 95th (ft)	167	#1008	134	76	m8	#397	63	115	69
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1128	368	1638	546	285	569	359	624
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	1.59	0.30	0.49	0.11	1.10	0.24	0.36	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Future Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	178	1446	351	111	795	58	314	43	93	128	32	195
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	916	216	370	1638	510	304	159	345	391	69	421
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2694	635	1681	4818	1500	1149	498	1077	1248	216	1316
Grp Volume(v), veh/h	178	884	913	111	795	58	314	0	136	128	0	227
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1606	1500	1149	0	1575	1248	0	1532
Q Serve(g_s), s	9.2	34.0	34.0	5.5	13.0	2.7	20.2	0.0	6.4	8.5	0.0	11.8
Cycle Q Clear(g_c), s	9.2	34.0	34.0	5.5	13.0	2.7	32.0	0.0	6.4	14.9	0.0	11.8
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	370	570	562	370	1638	510	304	0	504	391	0	490
V/C Ratio(X)	0.48	1.55	1.62	0.30	0.49	0.11	1.03	0.00	0.27	0.33	0.00	0.46
Avail Cap(c_a), veh/h	370	570	562	370	1638	510	304	0	504	391	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	33.0	33.0	32.6	26.1	22.7	42.3	0.0	25.3	30.9	0.0	27.1
Incr Delay (d2), s/veh	4.4	256.5	289.3	2.1	1.0	0.5	60.6	0.0	1.3	2.2	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	56.3	60.6	2.8	5.9	1.2	13.5	0.0	3.0	3.2	0.0	5.4
LnGrp Delay(d),s/veh	38.5	289.5	322.3	34.6	27.1	23.1	102.9	0.0	26.6	33.1	0.0	30.3
LnGrp LOS	D	F	F	C	C	C	F		C	C		C
Approach Vol, veh/h		1975			964			450			355	
Approach Delay, s/veh		282.0			27.7			79.8			31.3	
Approach LOS		F			C			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	7.5	36.0		16.9	11.2	15.0
Green Ext Time (p_c), s		0.0	0.2	0.0		1.6	0.3	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	168.5
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	99	231	177
Demand Flow Rate, veh/h	101	236	180
Vehicles Circulating, veh/h	158	15	133
Vehicles Exiting, veh/h	155	244	118
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	5.2	5.4
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	101	236	180
Cap Entry Lane, veh/h	965	1113	989
Entry HV Adj Factor	0.983	0.980	0.983
Flow Entry, veh/h	99	231	177
Cap Entry, veh/h	949	1091	973
V/C Ratio	0.105	0.212	0.182
Control Delay, s/veh	4.8	5.2	5.4
LOS	A	A	A
95th %tile Queue, veh	0	1	1

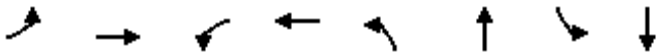
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1186	19	95	910	3	30
Future Vol, veh/h	1186	19	95	910	3	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1289	21	103	989	3	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1310	0	1902	655
Stage 1	-	-	-	-	1300	-
Stage 2	-	-	-	-	602	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	277	-	106	350
Stage 1	-	-	-	-	158	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	277	-	67	350
Mov Cap-2 Maneuver	-	-	-	-	67	-
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	464	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	21.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	253	-	-	277	-
HCM Lane V/C Ratio	0.142	-	-	0.373	-
HCM Control Delay (s)	21.6	-	-	25.5	-
HCM Lane LOS	C	-	-	D	-
HCM 95th %tile Q(veh)	0.5	-	-	1.7	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	1620	198	713	258	176	11	50
v/c Ratio	0.06	1.24	0.79	0.55	0.53	0.22	0.04	0.11
Control Delay	29.4	153.9	64.0	33.1	43.7	4.0	27.5	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	153.9	64.0	33.1	43.7	4.0	27.5	17.7
Queue Length 50th (ft)	10	~478	123	142	79	5	5	12
Queue Length 95th (ft)	m9	m272	#237	183	119	42	19	41
Internal Link Dist (ft)		925		1050		211		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	1307	251	1300	487	787	307	459
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	1.24	0.79	0.55	0.53	0.22	0.04	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Future Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1277	343	198	710	3	258	15	161	11	26	24
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1261	338	224	2240	9	304	48	519	369	192	177
Arrive On Green	0.01	0.33	0.33	0.13	0.45	0.45	0.09	0.37	0.37	0.23	0.23	0.23
Sat Flow, veh/h	1681	3782	1015	1681	4952	21	3261	129	1390	1204	846	781
Grp Volume(v), veh/h	15	1084	536	198	460	253	258	0	176	11	0	50
Grp Sat Flow(s),veh/h/ln	1681	1606	1586	1681	1606	1761	1630	0	1519	1204	0	1627
Q Serve(g_s), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Prop In Lane	1.00		0.64	1.00		0.01	1.00		0.91	1.00		0.48
Lane Grp Cap(c), veh/h	24	1071	529	224	1453	797	304	0	567	369	0	369
V/C Ratio(X)	0.62	1.01	1.01	0.88	0.32	0.32	0.85	0.00	0.31	0.03	0.00	0.14
Avail Cap(c_a), veh/h	90	1071	529	224	1453	797	304	0	567	369	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	25.0	25.0	31.9	13.1	13.1	33.5	0.0	16.7	22.6	0.0	23.1
Incr Delay (d2), s/veh	2.4	11.6	15.4	31.2	0.1	0.2	19.5	0.0	1.4	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.7	13.1	6.0	3.0	3.3	3.4	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	39.1	36.6	40.4	63.2	13.3	13.4	53.0	0.0	18.1	22.8	0.0	23.9
LnGrp LOS	D	F	F	E	B	B	D		B	C		C
Approach Vol, veh/h		1635			911			434			61	
Approach Delay, s/veh		37.9			24.1			38.8			23.7	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		32.0	14.0	29.0	11.0	21.0	5.1	37.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0	10.0	25.0	7.0	17.0	4.0	31.0
Max Q Clear Time (g_c+I1), s		8.2	10.7	27.0	7.8	3.8	2.7	8.9
Green Ext Time (p_c), s		1.0	0.0	0.0	0.0	0.2	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Appendix C: Freeway Mainline Analysis

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing Conditions*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5596*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*123000*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5596*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1274*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing Conditions*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6870*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*151000*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*6870*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1564*	pc/h/ln
S	*68.5*	mph
D = v_p / S	*22.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future No Project*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5764*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*126690*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5764*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1312*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future No Project*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7077*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*155530*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*7077*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1611*	pc/h/ln
S	*68.0*	mph
D = v_p / S	*23.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing With Project*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5707*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*125424*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5707*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1299*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing With Project*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7091*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*155848*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*7091*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1614*	pc/h/ln
S	*68.0*	mph
D = v_p / S	*23.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future With Project*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5875*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*129114*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5875*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1338*	pc/h/ln
S	*69.8*	mph
D = v_p / S	*19.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future With Project*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7297*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*160378*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*7297*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1661*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*24.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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Appendix D: LOS Worksheets for Driveways

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Oliver Gaskell*	Intersection	*A1*
Agency/Co.	*IBI Group*	Jurisdiction	*City of Yucaipa*
Date Performed	*12/18/2018*	Analysis Year	*2018*
Analysis Time Period	*Ex + Proj AM*		

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa* | North/South Street: *Driveway A1*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*822*	*75*		*900*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*822*	*75*	*0*	*900*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*5*			
C (m) (veh/h)					*645*			
v/c					*0.01*			
95% queue length					*0.02*			
Control Delay (s/veh)					*10.6*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*10.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A1*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa* | North/South Street: *Driveway A1*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*1430*	*61*		*887*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*1430*	*61*	*0*	*887*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*5*			
C (m) (veh/h)					*434*			
v/c					*0.01*			
95% queue length					*0.03*			
Control Delay (s/veh)					*13.4*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*13.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*37*	*6*			*7*	*26*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*37*	*6*	*0*	*0*	*7*	*26*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*24*	*0*	*34*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*24*	*0*	*34*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*37*						*58*	
C (m) (veh/h)	*1592*						*981*	
v/c	*0.02*						*0.06*	
95% queue length	*0.07*						*0.19*	
Control Delay (s/veh)	*7.3*						*8.9*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.9*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex+Proj PM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* North/South Street: *18th Street*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*64*	*4*			*16*	*98*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*64*	*4*	*0*	*0*	*16*	*98*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*26*	*0*	*35*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*26*	*0*	*35*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*64*						*61*	
C (m) (veh/h)	*1488*						*885*	
v/c	*0.04*						*0.07*	
95% queue length	*0.13*						*0.22*	
Control Delay (s/veh)	*7.5*						*9.4*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*9.4*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* North/South Street: *18th Street*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*9*	*42*			*39*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*9*	*42*	*0*	*0*	*39*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*8*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*8*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*9*						*9*	
C (m) (veh/h)	*1584*						*1021*	
v/c	*0.01*						*0.01*	
95% queue length	*0.02*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.6*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*68*			*42*	*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*68*	*0*	*0*	*42*	*9*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*9*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*9*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*10*	
C (m) (veh/h)	*1568*						*1005*	
v/c	*0.01*						*0.01*	
95% queue length	*0.04*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.6*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Oliver Gaskell*	Intersection	*A4*
Agency/Co.	*IBI Group*	Jurisdiction	*City of Yucaipa*
Date Performed	*12/18/2018*	Analysis Year	*2018*
Analysis Time Period	*Ex + Proj AM*		

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*112*	*11*	*5*	*171*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*112*	*11*	*5*	*171*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*11*	*0*	*6*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*11*	*0*	*6*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*5*		*17*				
C (m) (veh/h)		*1477*		*765*				
v/c		*0.00*		*0.02*				
95% queue length		*0.01*		*0.07*				
Control Delay (s/veh)		*7.4*		*9.8*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--	*9.8*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Oliver Gaskell*	Intersection	*A4*
Agency/Co.	*IBI Group*	Jurisdiction	*City of Yucaipa*
Date Performed	*12/18/2018*	Analysis Year	*2018*
Analysis Time Period	*Ex + Proj PM*		

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* North/South Street: *Avenue E*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*90*	*12*	*14*	*329*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*90*	*12*	*14*	*329*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*	*0*	*11*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*11*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*14*		*21*				
C (m) (veh/h)		*1503*		*720*				
v/c		*0.01*		*0.03*				
95% queue length		*0.03*		*0.09*				
Control Delay (s/veh)		*7.4*		*10.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*142*	*47*	*62*	*208*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*142*	*47*	*62*	*208*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*44*	*0*	*66*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*44*	*0*	*66*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*62*		*110*				
C (m) (veh/h)		*1397*		*706*				
v/c		*0.04*		*0.16*				
95% queue length		*0.14*		*0.55*				
Control Delay (s/veh)		*7.7*		*11.0*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.0*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*116*	*40*	*70*	*370*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*116*	*40*	*70*	*370*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*35*	*0*	*62*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*35*	*0*	*62*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*70*		*97*				
C (m) (veh/h)		*1436*		*658*				
v/c		*0.05*		*0.15*				
95% queue length		*0.15*		*0.51*				
Control Delay (s/veh)		*7.6*		*11.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*97*			*157*	*96*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*97*	*0*	*0*	*157*	*96*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*92*	*0*	*20*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*92*	*0*	*20*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*112*	
C (m) (veh/h)	*1324*						*718*	
v/c	*0.02*						*0.16*	
95% queue length	*0.05*						*0.55*	
Control Delay (s/veh)	*7.8*						*10.9*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*10.9*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*17*	*84*			*327*	*78*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*17*	*84*	*0*	*0*	*327*	*78*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*71*	*0*	*16*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*71*	*0*	*16*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*17*						*87*	
C (m) (veh/h)	*1165*						*589*	
v/c	*0.01*						*0.15*	
95% queue length	*0.04*						*0.52*	
Control Delay (s/veh)	*8.1*						*12.2*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*12.2*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A1*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa* | North/South Street: *Driveway A1*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*842*	*75*		*1195*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*842*	*75*	*0*	*1195*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*5*			
C (m) (veh/h)					*637*			
v/c					*0.01*			
95% queue length					*0.02*			
Control Delay (s/veh)					*10.7*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*10.7*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A1*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa* | North/South Street: *Driveway A1*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*1474*	*61*		*1150*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*1474*	*61*	*0*	*1150*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*4*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*4*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*4*			
C (m) (veh/h)					*422*			
v/c					*0.01*			
95% queue length					*0.03*			
Control Delay (s/veh)					*13.6*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*13.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*37*	*10*			*2*	*26*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*37*	*10*	*0*	*0*	*2*	*26*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*24*	*0*	*34*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*24*	*0*	*34*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*37*						*58*	
C (m) (veh/h)	*1599*						*984*	
v/c	*0.02*						*0.06*	
95% queue length	*0.07*						*0.19*	
Control Delay (s/veh)	*7.3*						*8.9*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.9*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*64*	*6*			*0*	*98*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*64*	*6*	*0*	*0*	*0*	*98*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*26*	*0*	*35*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*26*	*0*	*35*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*64*						*61*	
C (m) (veh/h)	*1508*						*902*	
v/c	*0.04*						*0.07*	
95% queue length	*0.13*						*0.22*	
Control Delay (s/veh)	*7.5*						*9.3*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*9.3*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*9*	*46*			*40*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*9*	*46*	*0*	*0*	*40*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*8*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*8*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*9*						*9*	
C (m) (veh/h)	*1583*						*1019*	
v/c	*0.01*						*0.01*	
95% queue length	*0.02*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.6*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*68*			*42*	*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*68*	*0*	*0*	*42*	*9*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*9*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*9*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*10*	
C (m) (veh/h)	*1568*						*1005*	
v/c	*0.01*						*0.01*	
95% queue length	*0.04*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.6*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A4*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*118*	*11*	*5*	*175*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*118*	*11*	*5*	*175*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*11*	*0*	*6*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*11*	*0*	*6*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*5*		*17*				
C (m) (veh/h)		*1469*		*756*				
v/c		*0.00*		*0.02*				
95% queue length		*0.01*		*0.07*				
Control Delay (s/veh)		*7.5*		*9.9*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--	*9.9*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A4*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*94*	*12*	*14*	*343*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*94*	*12*	*14*	*343*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*	*0*	*11*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*11*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*14*		*21*				
C (m) (veh/h)		*1498*		*709*				
v/c		*0.01*		*0.03*				
95% queue length		*0.03*		*0.09*				
Control Delay (s/veh)		*7.4*		*10.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*148*	*47*	*62*	*212*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*148*	*47*	*62*	*212*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*44*	*0*	*66*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*44*	*0*	*66*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*62*		*110*				
C (m) (veh/h)		*1390*		*699*				
v/c		*0.04*		*0.16*				
95% queue length		*0.14*		*0.56*				
Control Delay (s/veh)		*7.7*		*11.1*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.1*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*120*	*40*	*70*	*384*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*120*	*40*	*70*	*384*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*35*	*0*	*62*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*35*	*0*	*62*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*70*		*97*				
C (m) (veh/h)		*1432*		*647*				
v/c		*0.05*		*0.15*				
95% queue length		*0.15*		*0.53*				
Control Delay (s/veh)		*7.6*		*11.5*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.5*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*103*			*161*	*96*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*103*	*0*	*0*	*161*	*96*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*92*	*0*	*20*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*92*	*0*	*20*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*112*	
C (m) (veh/h)	*1320*						*709*	
v/c	*0.02*						*0.16*	
95% queue length	*0.05*						*0.56*	
Control Delay (s/veh)	*7.8*						*11.0*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*11.0*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*17*	*88*			*341*	*78*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*17*	*88*	*0*	*0*	*341*	*78*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*71*	*0*	*16*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*71*	*0*	*16*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*17*						*87*	
C (m) (veh/h)	*1151*						*576*	
v/c	*0.01*						*0.15*	
95% queue length	*0.04*						*0.53*	
Control Delay (s/veh)	*8.2*						*12.4*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*12.4*	
Approach LOS	--	--					*B*	

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Appendix E: Mitigated LOS Worksheets

HCM 2010 Signalized Intersection Summary
150: Yucaipa Blvd & Knollhaven Lane

12/20/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Future Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	11	543	236	197	684	3	288	17	178	1	18	8
Adj No. of Lanes	1	2	0	1	2	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	605	262	243	1366	6	326	52	541	384	259	115
Arrive On Green	0.01	0.27	0.27	0.14	0.40	0.40	0.10	0.39	0.39	0.22	0.22	0.22
Sat Flow, veh/h	1681	2279	988	1681	3424	15	3261	133	1387	1183	1159	515
Grp Volume(v), veh/h	11	399	380	197	335	352	288	0	195	1	0	26
Grp Sat Flow(s),veh/h/ln	1681	1676	1590	1681	1676	1762	1630	0	1520	1183	0	1674
Q Serve(g_s), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Cycle Q Clear(g_c), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Prop In Lane	1.00		0.62	1.00		0.01	1.00		0.91	1.00		0.31
Lane Grp Cap(c), veh/h	19	445	422	243	669	703	326	0	593	384	0	374
V/C Ratio(X)	0.59	0.90	0.90	0.81	0.50	0.50	0.88	0.00	0.33	0.00	0.00	0.07
Avail Cap(c_a), veh/h	224	447	424	364	669	703	326	0	593	384	0	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	21.2	21.3	24.9	13.5	13.5	26.7	0.0	12.8	18.1	0.0	18.4
Incr Delay (d2), s/veh	19.0	15.6	16.8	8.1	0.6	0.6	23.6	0.0	1.5	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.2	8.0	3.7	4.2	4.4	3.4	0.0	2.5	0.0	0.0	0.4
LnGrp Delay(d),s/veh	48.5	36.9	38.0	33.0	14.1	14.1	50.2	0.0	14.3	18.1	0.0	18.7
LnGrp LOS	D	D	D	C	B	B	D		B	B		B
Approach Vol, veh/h		790			884			483			27	
Approach Delay, s/veh		37.6			18.3			35.7			18.7	
Approach LOS		D			B			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.4	12.7	19.9	10.0	17.4	4.7	27.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	13.0	16.0	6.0	9.0	8.0	21.0
Max Q Clear Time (g_c+I1), s		7.4	8.8	15.8	7.2	2.7	2.4	11.0
Green Ext Time (p_c), s		0.8	0.2	0.1	0.0	0.0	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Future Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1228	343	198	683	3	258	15	161	10	26	23
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1304	364	242	2365	10	353	43	464	306	145	128
Arrive On Green	0.01	0.35	0.35	0.14	0.48	0.48	0.11	0.33	0.33	0.17	0.17	0.17
Sat Flow, veh/h	1681	3746	1046	1681	4951	22	3261	129	1390	1204	865	765
Grp Volume(v), veh/h	15	1053	518	198	443	243	258	0	176	10	0	49
Grp Sat Flow(s),veh/h/ln	1681	1606	1580	1681	1606	1761	1630	0	1519	1204	0	1630
Q Serve(g_s), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Prop In Lane	1.00		0.66	1.00		0.01	1.00		0.91	1.00		0.47
Lane Grp Cap(c), veh/h	24	1118	550	242	1534	841	353	0	507	306	0	273
V/C Ratio(X)	0.62	0.94	0.94	0.82	0.29	0.29	0.73	0.00	0.35	0.03	0.00	0.18
Avail Cap(c_a), veh/h	244	1119	550	390	1534	841	473	0	507	306	0	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	21.8	21.8	28.6	10.9	10.9	29.8	0.0	17.3	24.1	0.0	24.6
Incr Delay (d2), s/veh	22.7	15.0	24.8	7.0	0.1	0.2	3.8	0.0	1.9	0.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	12.0	13.3	4.1	2.5	2.8	2.6	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	56.4	36.8	46.6	35.6	11.0	11.1	33.6	0.0	19.2	24.3	0.0	26.1
LnGrp LOS	E	D	D	D	B	B	C		B	C		C
Approach Vol, veh/h		1586			884			434			59	
Approach Delay, s/veh		40.2			16.6			27.7			25.8	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.0	13.9	28.0	11.5	15.5	5.0	36.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		23.0	16.0	24.0	10.0	9.0	10.0	30.0
Max Q Clear Time (g_c+I1), s		8.0	9.9	23.9	7.3	3.8	2.6	7.8
Green Ext Time (p_c), s		0.9	0.3	0.1	0.2	0.1	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Future Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	154	748	213	53	793	83	272	46	55	171	28	164
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	967	275	70	930	97	440	252	301	530	77	450
Arrive On Green	0.15	0.50	0.50	0.04	0.30	0.30	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1681	2578	734	1681	3064	321	1186	733	877	1288	224	1310
Grp Volume(v), veh/h	154	486	475	53	434	442	272	0	101	171	0	192
Grp Sat Flow(s),veh/h/ln	1681	1676	1635	1681	1676	1708	1186	0	1610	1288	0	1534
Q Serve(g_s), s	4.4	11.8	11.8	1.6	12.2	12.2	11.2	0.0	2.2	5.4	0.0	4.7
Cycle Q Clear(g_c), s	4.4	11.8	11.8	1.6	12.2	12.2	15.9	0.0	2.2	7.6	0.0	4.7
Prop In Lane	1.00		0.45	1.00		0.19	1.00		0.54	1.00		0.85
Lane Grp Cap(c), veh/h	191	629	613	70	509	518	440	0	552	530	0	526
V/C Ratio(X)	0.81	0.77	0.77	0.76	0.85	0.85	0.62	0.00	0.18	0.32	0.00	0.36
Avail Cap(c_a), veh/h	202	629	613	134	536	547	440	0	552	530	0	526
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.64	0.64	0.64	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	10.8	10.8	23.7	16.4	16.4	18.3	0.0	11.5	14.2	0.0	12.3
Incr Delay (d2), s/veh	17.0	4.9	5.0	10.1	8.1	8.0	6.4	0.0	0.7	1.6	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.2	6.0	0.9	6.7	6.8	4.4	0.0	1.1	2.1	0.0	2.3
LnGrp Delay(d),s/veh	37.7	15.7	15.8	33.8	24.5	24.4	24.7	0.0	12.2	15.8	0.0	14.3
LnGrp LOS	D	B	B	C	C	C	C		B	B		B
Approach Vol, veh/h		1115			929			373			363	
Approach Delay, s/veh		18.8			25.0			21.3			15.0	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		21.2	6.1	22.8		21.2	9.7	19.2
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	4.0	18.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s		17.9	3.6	13.8		9.6	6.4	14.2
Green Ext Time (p_c), s		0.0	0.0	2.3		0.9	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Future Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	173	1404	339	109	772	57	305	42	91	125	30	189
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	1415	333	134	1534	113	293	142	309	374	60	379
Arrive On Green	0.24	1.00	1.00	0.08	0.48	0.48	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1681	2695	635	1681	3166	234	1157	497	1077	1252	210	1322
Grp Volume(v), veh/h	173	860	883	109	409	420	305	0	133	125	0	219
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1676	1723	1157	0	1575	1252	0	1531
Q Serve(g_s), s	10.8	0.0	57.4	7.0	18.3	18.3	21.6	0.0	7.2	9.2	0.0	13.1
Cycle Q Clear(g_c), s	10.8	0.0	57.4	7.0	18.3	18.3	31.5	0.0	7.2	13.6	0.0	13.1
Prop In Lane	1.00		0.38	1.00		0.14	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	201	880	868	134	812	835	293	0	451	374	0	439
V/C Ratio(X)	0.86	0.98	1.02	0.82	0.50	0.50	1.04	0.00	0.29	0.33	0.00	0.50
Avail Cap(c_a), veh/h	458	930	917	168	812	835	293	0	451	374	0	439
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	0.0	49.8	19.3	19.3	46.6	0.0	30.6	34.7	0.0	32.7
Incr Delay (d2), s/veh	5.7	15.9	26.0	19.1	0.4	0.4	63.8	0.0	1.7	2.4	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.9	6.3	4.0	8.5	8.7	14.1	0.0	3.3	3.4	0.0	6.0
LnGrp Delay(d),s/veh	46.6	15.9	26.0	68.9	19.8	19.7	110.4	0.0	32.2	37.1	0.0	36.7
LnGrp LOS	D	B	F	E	B	B	F		C	D		D
Approach Vol, veh/h		1916			938			438			344	
Approach Delay, s/veh		23.3			25.5			86.7			36.8	
Approach LOS		C			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		34.0	12.7	63.3		34.0	17.2	58.8
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		26.0	11.0	61.0		26.0	30.0	42.0
Max Q Clear Time (g_c+I1), s		33.5	9.0	59.4		15.6	12.8	20.3
Green Ext Time (p_c), s		0.0	0.0	1.4		1.3	0.4	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	517	217	181	659	4	265	16	164	1	17	7
Future Volume (veh/h)	10	517	217	181	659	4	265	16	164	1	17	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	11	562	236	197	716	4	288	17	178	1	18	8
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	783	320	205	1700	9	284	58	605	455	323	144
Arrive On Green	0.01	0.23	0.23	0.12	0.34	0.34	0.09	0.44	0.44	0.28	0.28	0.28
Sat Flow, veh/h	1681	3361	1373	1681	4944	28	3261	133	1387	1183	1159	515
Grp Volume(v), veh/h	11	536	262	197	465	255	288	0	195	1	0	26
Grp Sat Flow(s),veh/h/ln	1681	1606	1522	1681	1606	1760	1630	0	1520	1183	0	1674
Q Serve(g_s), s	0.4	8.8	9.1	6.7	6.4	6.4	5.0	0.0	4.8	0.0	0.0	0.7
Cycle Q Clear(g_c), s	0.4	8.8	9.1	6.7	6.4	6.4	5.0	0.0	4.8	0.0	0.0	0.7
Prop In Lane	1.00		0.90	1.00		0.02	1.00		0.91	1.00		0.31
Lane Grp Cap(c), veh/h	19	748	355	205	1104	605	284	0	662	455	0	467
V/C Ratio(X)	0.58	0.72	0.74	0.96	0.42	0.42	1.01	0.00	0.29	0.00	0.00	0.06
Avail Cap(c_a), veh/h	117	896	425	205	1104	605	284	0	662	455	0	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	20.3	20.4	25.0	14.4	14.4	26.2	0.0	10.5	14.9	0.0	15.2
Incr Delay (d2), s/veh	25.5	2.2	5.4	51.5	0.3	0.5	56.9	0.0	1.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.1	4.3	6.0	2.8	3.1	4.5	0.0	2.2	0.0	0.0	0.3
LnGrp Delay(d),s/veh	53.7	22.5	25.8	76.5	14.7	14.9	83.1	0.0	11.6	14.9	0.0	15.4
LnGrp LOS	D	C	C	E	B	B	F		B	B		B
Approach Vol, veh/h		809			917			483			27	
Approach Delay, s/veh		24.0			28.0			54.3			15.4	
Approach LOS		C			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		29.0	11.0	17.4	9.0	20.0	4.6	23.7
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		25.0	7.0	16.0	5.0	16.0	4.0	19.0
Max Q Clear Time (g_c+I1), s		6.8	8.7	11.1	7.0	2.7	2.4	8.4
Green Ext Time (p_c), s		1.1	0.0	2.2	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Future Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1277	343	198	710	3	258	15	161	11	26	24
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1261	338	224	2240	9	304	48	519	369	192	177
Arrive On Green	0.01	0.33	0.33	0.13	0.45	0.45	0.09	0.37	0.37	0.23	0.23	0.23
Sat Flow, veh/h	1681	3782	1015	1681	4952	21	3261	129	1390	1204	846	781
Grp Volume(v), veh/h	15	1084	536	198	460	253	258	0	176	11	0	50
Grp Sat Flow(s),veh/h/ln	1681	1606	1586	1681	1606	1761	1630	0	1519	1204	0	1627
Q Serve(g_s), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Prop In Lane	1.00		0.64	1.00		0.01	1.00		0.91	1.00		0.48
Lane Grp Cap(c), veh/h	24	1071	529	224	1453	797	304	0	567	369	0	369
V/C Ratio(X)	0.62	1.01	1.01	0.88	0.32	0.32	0.85	0.00	0.31	0.03	0.00	0.14
Avail Cap(c_a), veh/h	90	1071	529	224	1453	797	304	0	567	369	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	25.0	25.0	31.9	13.1	13.1	33.5	0.0	16.7	22.6	0.0	23.1
Incr Delay (d2), s/veh	2.4	11.6	15.4	31.2	0.1	0.2	19.5	0.0	1.4	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.7	13.1	6.0	3.0	3.3	3.4	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	39.1	36.6	40.4	63.2	13.3	13.4	53.0	0.0	18.1	22.8	0.0	23.9
LnGrp LOS	D	F	F	E	B	B	D		B	C		C
Approach Vol, veh/h		1635			911			434			61	
Approach Delay, s/veh		37.9			24.1			38.8			23.7	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		32.0	14.0	29.0	11.0	21.0	5.1	37.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0	10.0	25.0	7.0	17.0	4.0	31.0
Max Q Clear Time (g_c+I1), s		8.2	10.7	27.0	7.8	3.8	2.7	8.9
Green Ext Time (p_c), s		1.0	0.0	0.0	0.0	0.2	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Future Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	764	216	53	821	85	282	47	57	175	29	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	885	250	68	1277	398	495	290	352	590	89	523
Arrive On Green	0.12	0.34	0.34	0.04	0.27	0.27	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1681	2582	730	1681	4818	1500	1179	727	882	1285	223	1310
Grp Volume(v), veh/h	159	496	484	53	821	85	282	0	104	175	0	199
Grp Sat Flow(s),veh/h/ln	1681	1676	1636	1681	1606	1500	1179	0	1609	1285	0	1534
Q Serve(g_s), s	5.1	15.2	15.2	1.7	8.3	2.4	11.9	0.0	2.3	5.6	0.0	4.9
Cycle Q Clear(g_c), s	5.1	15.2	15.2	1.7	8.3	2.4	16.9	0.0	2.3	7.9	0.0	4.9
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.55	1.00		0.85
Lane Grp Cap(c), veh/h	198	574	560	68	1277	398	495	0	642	590	0	612
V/C Ratio(X)	0.80	0.86	0.86	0.78	0.64	0.21	0.57	0.00	0.16	0.30	0.00	0.33
Avail Cap(c_a), veh/h	244	610	595	122	1401	436	495	0	642	590	0	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	16.9	16.9	26.1	17.9	15.7	17.2	0.0	10.6	13.1	0.0	11.4
Incr Delay (d2), s/veh	12.1	9.9	10.1	14.4	0.7	0.2	4.7	0.0	0.5	1.3	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	8.5	8.3	1.1	3.7	1.0	4.5	0.0	1.1	2.2	0.0	2.3
LnGrp Delay(d),s/veh	35.7	26.8	27.0	40.5	18.6	16.0	21.9	0.0	11.2	14.4	0.0	12.8
LnGrp LOS	D	C	C	D	B	B	C		B	B		B
Approach Vol, veh/h		1139			959			386			374	
Approach Delay, s/veh		28.1			19.6			19.0			13.6	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.9	6.2	22.8		25.9	10.5	18.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	4.0	20.0		19.0	8.0	16.0
Max Q Clear Time (g_c+I1), s		18.9	3.7	17.2		9.9	7.1	10.3
Green Ext Time (p_c), s		0.0	0.0	1.6		1.2	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Future Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	178	1446	351	111	795	58	314	43	93	128	32	195
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	1320	311	118	2095	652	304	159	345	391	69	421
Arrive On Green	0.13	0.49	0.49	0.07	0.43	0.43	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2694	635	1681	4818	1500	1149	498	1077	1248	216	1316
Grp Volume(v), veh/h	178	884	913	111	795	58	314	0	136	128	0	227
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1606	1500	1149	0	1575	1248	0	1532
Q Serve(g_s), s	10.4	49.0	49.0	6.6	11.2	2.3	20.2	0.0	6.4	8.5	0.0	11.8
Cycle Q Clear(g_c), s	10.4	49.0	49.0	6.6	11.2	2.3	32.0	0.0	6.4	14.9	0.0	11.8
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	210	821	810	118	2095	652	304	0	504	391	0	490
V/C Ratio(X)	0.85	1.08	1.13	0.94	0.38	0.09	1.03	0.00	0.27	0.33	0.00	0.46
Avail Cap(c_a), veh/h	319	821	810	118	2095	652	304	0	504	391	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.8	25.5	25.5	46.3	19.1	16.6	42.3	0.0	25.3	30.9	0.0	27.1
Incr Delay (d2), s/veh	7.2	46.7	66.7	58.2	0.1	0.0	60.6	0.0	1.3	2.2	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	33.3	37.3	5.0	5.0	0.9	13.5	0.0	3.0	3.2	0.0	5.4
LnGrp Delay(d),s/veh	49.9	72.2	92.2	104.5	19.2	16.7	102.9	0.0	26.6	33.1	0.0	30.3
LnGrp LOS	D	F	F	F	B	B	F		C	C		C
Approach Vol, veh/h		1975			964			450			355	
Approach Delay, s/veh		79.4			28.9			79.8			31.3	
Approach LOS		E			C			E			C	

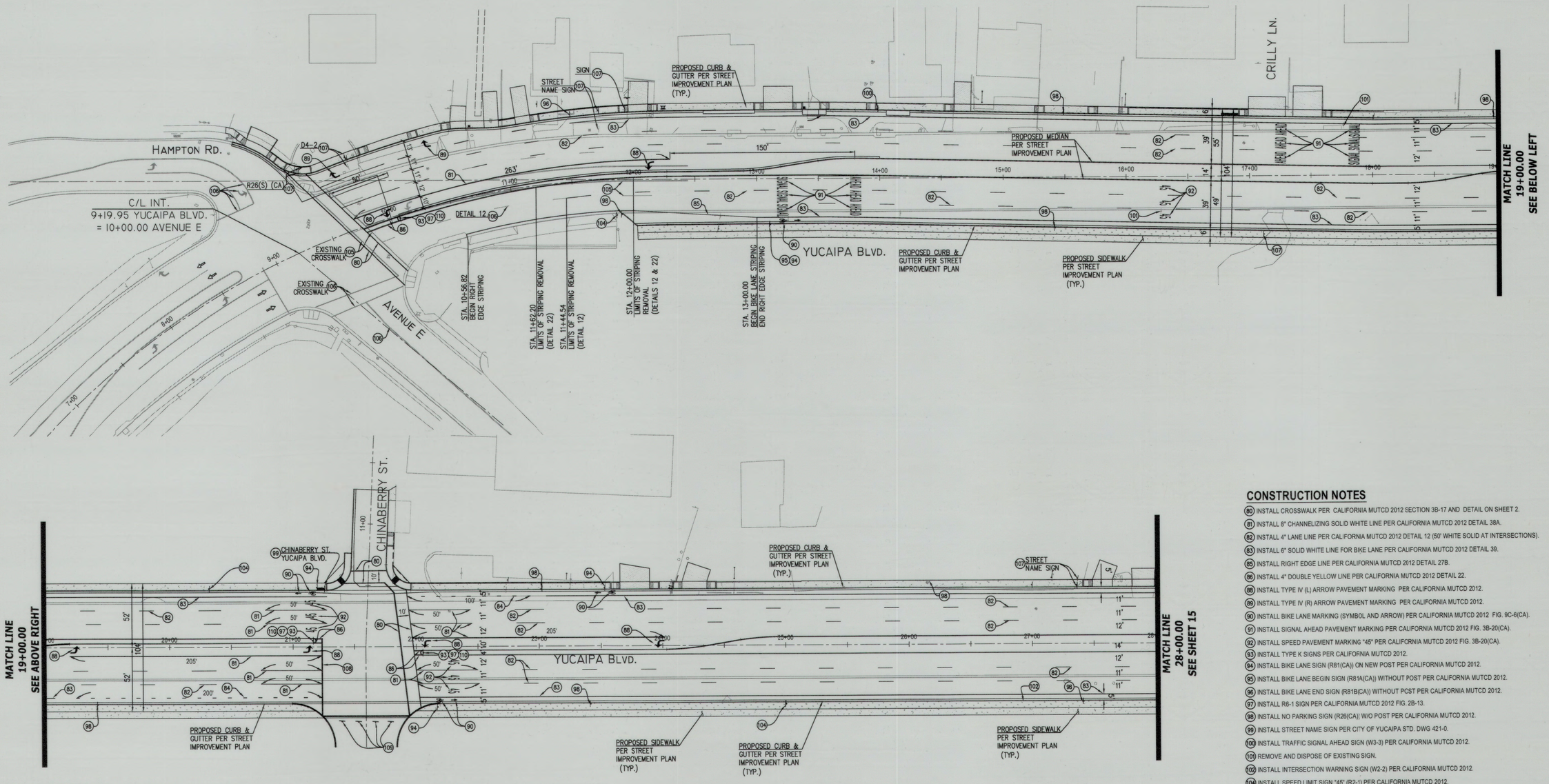
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	11.0	53.0		36.0	16.5	47.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	7.0	49.0		32.0	19.0	37.0
Max Q Clear Time (g_c+I1), s		34.0	8.6	51.0		16.9	12.4	13.2
Green Ext Time (p_c), s		0.0	0.0	0.0		1.6	0.2	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	61.9
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Appendix F: Yucaipa Boulevard Widening Project Plan



CONSTRUCTION NOTES

(80) INSTALL CROSSWALK PER CALIFORNIA MUTCD 2012 SECTION 3B-17 AND DETAIL ON SHEET 2.
(81) INSTALL 8" CHANNELIZING SOLID WHITE LINE PER CALIFORNIA MUTCD 2012 DETAIL 38A.
(82) INSTALL 4" LANE LINE PER CALIFORNIA MUTCD 2012 DETAIL 12 (50' WHITE SOLID AT INTERSECTIONS).
(83) INSTALL 6" SOLID WHITE LINE FOR BIKE LANE PER CALIFORNIA MUTCD 2012 DETAIL 39.
(85) INSTALL RIGHT EDGE LINE PER CALIFORNIA MUTCD 2012 DETAIL 27B.
(86) INSTALL 4" DOUBLE YELLOW LINE PER CALIFORNIA MUTCD 2012 DETAIL 22.
(88) INSTALL TYPE IV (L) ARROW PAVEMENT MARKING PER CALIFORNIA MUTCD 2012.
(89) INSTALL TYPE IV (R) ARROW PAVEMENT MARKING PER CALIFORNIA MUTCD 2012.
(90) INSTALL BIKE LANE MARKING (SYMBOL AND ARROW) PER CALIFORNIA MUTCD 2012 FIG. 9C-6(CA).
(91) INSTALL SIGNAL AHEAD PAVEMENT MARKING PER CALIFORNIA MUTCD 2012 FIG. 3B-20(CA).
(92) INSTALL SPEED PAVEMENT MARKING "45" PER CALIFORNIA MUTCD 2012 FIG. 3B-20(CA).
(93) INSTALL TYPE K SIGNS PER CALIFORNIA MUTCD 2012.
(94) INSTALL BIKE LANE SIGN (R81(CA)) ON NEW POST PER CALIFORNIA MUTCD 2012.
(95) INSTALL BIKE LANE BEGIN SIGN (R81A(CA)) WITHOUT POST PER CALIFORNIA MUTCD 2012.
(96) INSTALL BIKE LANE END SIGN (R81B(CA)) WITHOUT POST PER CALIFORNIA MUTCD 2012.
(97) INSTALL R6-1 SIGN PER CALIFORNIA MUTCD 2012 FIG. 2B-13.
(98) INSTALL NO PARKING SIGN (R26(CA)) W/O POST PER CALIFORNIA MUTCD 2012.
(99) INSTALL STREET NAME SIGN PER CITY OF YUCAIPA STD. DWG 421-0.
(100) INSTALL TRAFFIC SIGNAL AHEAD SIGN (W3-3) PER CALIFORNIA MUTCD 2012.
(101) REMOVE AND DISPOSE OF EXISTING SIGN.
(102) INSTALL INTERSECTION WARNING SIGN (W2-2) PER CALIFORNIA MUTCD 2012.
(104) INSTALL SPEED LIMIT SIGN "45" (R2-1) PER CALIFORNIA MUTCD 2012.
(105) REMOVE EXISTING STRIPING/ MARKING.
(106) PROTECT IN PLACE EXISTING MARKING AND STRIPING.
(107) RELOCATE EXISTING SIGN.
(108) INSTALL 12" WIDE SOLID WHITE LINE PER CALIFORNIA MUTCD 2012 SECTION 3B.16.
(109) INSTALL TYPE 4 OBJECT MARKER, OM4-1, PER CALIFORNIA MUTCD 2012 FIG. 2C-13
(110) INSTALL R4-7 SIGN PER CALIFORNIA MUTCD 2012 FIG. 2B-10.

TRAFFIC SIGNING AND STRIPING GENERAL NOTES:

1. TRAFFIC STRIPING, PAVEMENT LEGENDS AND RAISED PAVEMENT MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSION OF THE CALIFORNIA (MUTCD) MANUAL AND CALTRANS STANDARDS PLANS AND STANDARD SPECIFICATIONS SECTION 84 AND 85, MAY 2006.
2. REFLECTORIZE ALL TRAFFIC STRIPES, PAVEMENT LEGENDS AND PAVEMENT MARKINGS. PAVEMENT LEGENDS AND MARKINGS SHALL MATCH CITY STENCILS. ALL DETAILS REFER TO CALTRANS STANDARD PLANS A20-A THROUGH A-20D AND A-24A THROUGH A-24E.
3. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC PER CITY STANDARD SPECIFICATIONS. SKIP LINES SHALL BE APPLIED BY EXTRUSION METHOD ONLY.
4. ALL CONFLICTING LINES, MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED BY WET SANDBLASTING OR METHOD APPROVED BY THE CITY ENGINEER.
5. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY ENGINEER FOR "CAT TRACKING" PRIOR TO FINAL INSTALLATION.
6. ALL REMOVED SIGNS AND POST IN GOOD CONDITION SHALL BE SALVAGED AND DELIVERED TO THE CITY YARD.
7. ALL SIGNS SHALL BE NEW (OTHER THAN THOSE SHOWN TO BE RELOCATED). ALL NEW AND RELOCATED SIGNS SHALL BE MOUNTED ON NEW POSTS WITH NEW HARDWARE UNLESS NOTED OTHERWISE. SIGNS DESIGNED FOR INSTALLATION OF EXISTING STREET LIGHT POLES SHALL BE MOUNTED WITH NEW HARDWARE.
8. TRAFFIC SIGNS DIMENSIONS, COLORS AND LETTERING SHALL CONFORM TO THE LATEST CALIFORNIA MUTCD SPECIFICATIONS. SIGN CODES SHOWN HEREON ARE TO CONFORM TO CALIFORNIA MUTCD SPECIFICATIONS. TRAFFIC SIGN SIZE SHALL BE STANDARD UNLESS OTHERWISE SHOWN ON THE PLANS. ALL SIGNS ARE TO BE REFLECTIVE.
9. NEW SIGN POST SHALL BE 12 GAGE GALVANIZED STEEL, PERFORATED 4 SIDES, EASY ERECT BREAKAWAY BASE, "UNI-STRUT" OR APPROVED EQUAL. SIGNS SHALL BE MOUNTED ON STREET LIGHT POLES WHENEVER FEASIBLE.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIARIZED WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS.

NOTE:

- ALL COMMERCIAL AND BUSINESS SIGNS TO BE REMOVED OR RELOCATED PER STREET IMPROVEMENT PLANS.
- EXISTING STRIPING TO BE REMOVED UNLESS NOTED OTHERWISE ON PLANS.
- EXISTING SIGNS TO BE REMOVED AND DISPOSED UNLESS NOTED ON THE PLANS TO BE RELOCATED OR PROTECTED IN PLACE.

40' 0 40' 80' 120'
SCALE: 1" = 40'

PHASE I

PROJECT # : 10771

RECOMMENDED FOR APPROVAL BY: Margaret Monson 4/2/15 DATE: 4/2/15
APPROVED BY: DATE: 4/2/15
FERMIN PRECIADO, CITY ENGINEER
CITY OF YUCAIPA PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION

CITY OF YUCAIPA
YUCAIPA BOULEVARD
SIGNING & STRIPING
19+00.00 - 28+00.00
JOB No. 09001
Drawing No.
Sheet 14 of 20

DIGALERT — DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG — TOLL FREE 800-227-2600 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

APD CONSULTANTS, INC.
PLANNING , ENGINEERING , CONSTRUCTION MANAGEMENT
188 Technology Dr., Suite B, IRVINE, CA 92618
TEL: (949) 336-6336 FAX: (949) 336-6338 www.apdcon.com

Rabih Mahmoud, P.E. R.C.E. 60421 — 03/25/15 DATE

REGISTERED PROFESSIONAL ENGINEER — RABIH F. MAHMOUD — 60421 EXPIRES 6/30/16 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED FOR :
THE CITY OF YUCAIPA
34272 YUCAIPA BOULEVARD
YUCAIPA, CA 92399-9950
CONTACT PERSON: FERMIN PRECIADO
CITY ENGINEER
(909) 797-2489

DESIGNED BY: V.B.
DRAWN BY: C.R.
CHECKED BY: R.M.

Date	By	REVISIONS	App'd
4/2015	MM	2 REVISED PER PRIVATE CONSTRUCTION PLANS INCL. IN CONTRACT.	
4/2015	MM	1 REVISED PHASE I LIMITS.	

BENCH MARK
BEING A 2" BRASS DISK STAMPED "SAN BERNARDINO COUNTY SURVEYOR BENCH MARK NO. 1-24, 1969".
ELEVATION: 2112.379 FEET
LOCATED ON THE EAST SIDE OF AN INLET BOX, 1.5 FT. NORTH OF THE SOUTH EDGE, 28 FT. NORTH OF CENTERLINE OF SAND CANYON ROAD (YUCAIPA BLVD. EXTENDED), 300 FT. EAST OF 16TH STREET, ON SAND CANYON TURNOFF.

Scale: 0 1 2 3

Drawing Name: P:\2009\09001 Yucaipa Blvd\Eng\Mai\09001pa1-14sh09+38.53-28+00.00.dwg
Last Opened: Mar 25, 2015 - 9:17am by Robbem

Final Report

Yucaipa Pointe

Traffic Impact Analysis

Prepared for VantageOne Real Estate Investments
By IBI Group

March 6, 2019

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1. Introduction

VantageOne Real Estate Investments is proposing to build a commercial retail and service development known as Yucaipa Pointe. The project site is located in the City of Yucaipa, south of Yucaipa Boulevard, between Avenue E and 18th Street. Figure 1 shows the project location. The purpose of this report is to conduct a focused traffic analysis for the proposed project. This project is consistent with the land use plan contained in the City's 2015 General Plan. Given this condition, the City identified a focused traffic analysis as the most appropriate scope for this traffic study.

The traffic analysis has been prepared to assess the potential circulation impacts associated with the construction and operation of the new commercial retail and service development. The project proposes approximately 137,000 SF of shopping center, and would include restaurants, fast food establishments, shops, a movie theater, a health club and a car wash.

Two access locations to the shopping center are proposed along Yucaipa Boulevard: primary access to will be provided via a new traffic signal at Chinaberry Lane/Yucaipa Boulevard. A right-turn in/out driveway will be provided on Yucaipa Boulevard between Avenue E and Chinaberry Lane. Three secondary access driveways on the west boundary of the project area will be provided on Avenue E between Yucaipa Boulevard and Dunlap Boulevard and another two driveways on the east side of the project on 18th Street between Yucaipa Boulevard and Avenue E. The proposed site plan is illustrated in Figure 2.

1.1 Report Sections

This report consists of the following sections:

1. Introduction
2. Analysis and Methodology
3. Existing (Year 2018) Conditions
4. Future Traffic Volume Development
5. Future (Year 2020) No Project Conditions
6. Proposed Project
7. Project Impact Analysis (Existing and Future With Project Conditions)
8. Access and Circulation Analysis
9. Mitigation Measures
10. Conclusion

Section 1 provides a brief description of the project and its characteristics. Section 2 presents the methodology used to perform the traffic analysis. Section 3 describes the existing land use, roadway network, intersections, and traffic volume in the study area. Sections 4 and 5 present the traffic volume forecast due to future development and growth in the project area for the Future (Year 2020) No Project scenario. Section 6 includes a description of the project, the proposed trip generation and trip distribution assumptions. Section 7 summarizes any impacts associated with implementation of the project under Existing and Future Conditions. An access and internal circulation analysis is provided in Section 8, which evaluates the performance of the access driveways to the proposed site. Section 9 details any necessary mitigation due to potential impacts caused by the project and finally the traffic study conclusions are presented in Section 10.

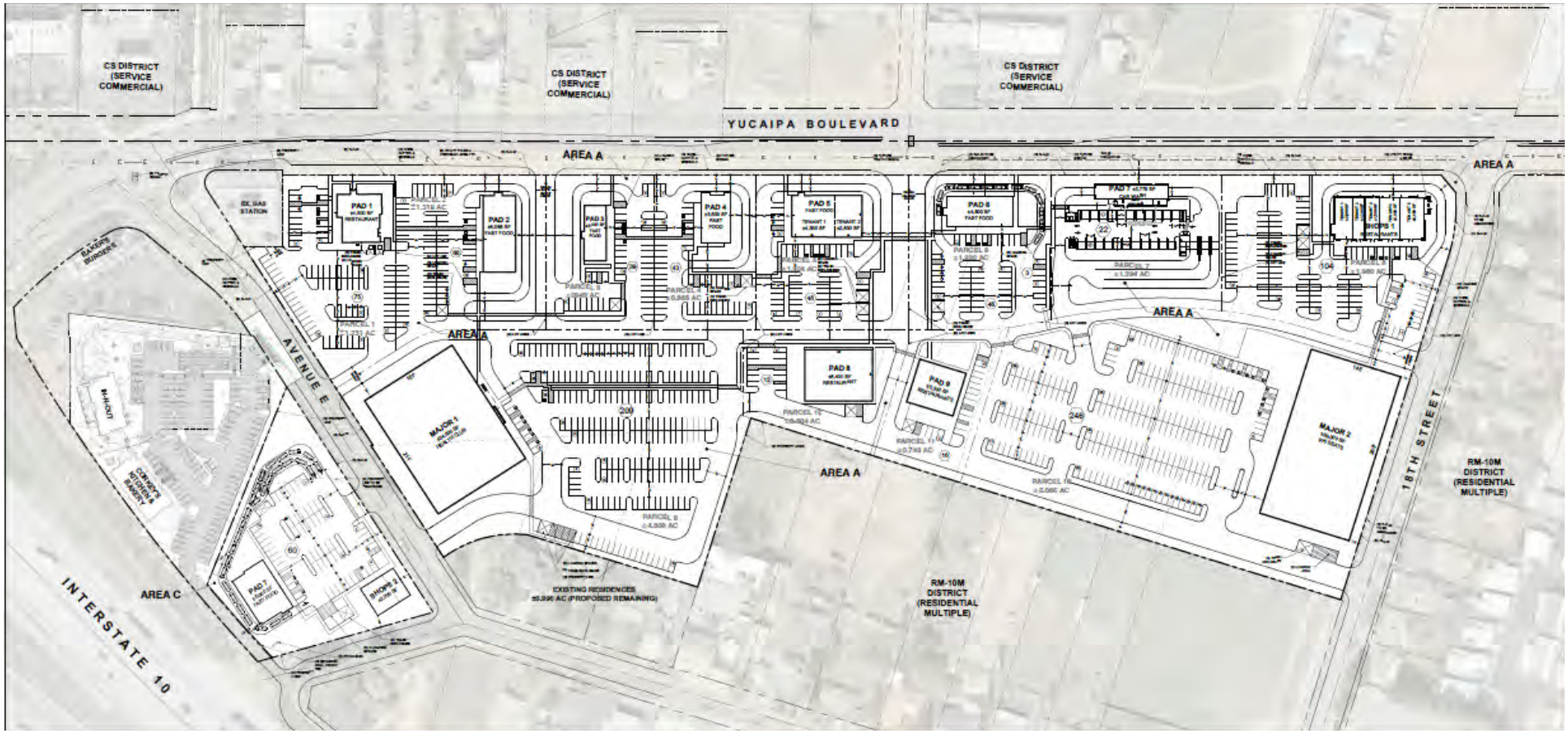
Figure 1 - Project Location



Legend

- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection

Figure 2 - Project Site Plan



2. Analysis and Methodology

The analysis methodology used to perform the traffic analysis is consistent with the City of Yucaipa General Plan (April 2016), Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002), and the San Bernardino County of Governments (SANBAG) Congestion Management Program (July 2016). The methodology used to assess the operation of signalized intersections in San Bernardino County is the 2010 Highway Capacity Manual (HCM) methodology. Analysis of signalized and unsignalized intersections was conducted using the Synchro (Version 10) traffic analysis software.

2.1 Analysis Scenarios and Time Period

The traffic analysis for the Yucaipa Pointe development will include the following scenarios:

- Existing Year (2018) – No project
- Future Year (2020) – No Project
- Existing Year (2018) – With Project
- Future Year (2020) – With Project

Future (Year 2020) was selected as it coincides with the anticipated opening year of the proposed project. An analysis of the AM and PM peak hour for each scenario is included in this report. The AM peak period is between 7:00AM and 9:00AM and the PM peak period is between 4:00PM and 6:00PM.

2.2 Analysis Study Area Locations

Study area intersections were selected based on their locations within the network. More specifically, the selected study intersections are located at key access points for the proposed project where the most traffic volumes would be expected. These intersections were selected to provide a focused analysis of the project's potential traffic impacts.

Study intersections for the Yucaipa Pointe development, selected in coordination with City of Yucaipa staff, include the following intersections:

1. Yucaipa Blvd and Interstate 10 (I-10) Eastbound On-Ramp
2. Yucaipa Blvd and I-10 Westbound On-Ramp
3. Yucaipa Blvd and Avenue E
4. Chinaberry Lane and Yucaipa Blvd
5. 18th Street and Yucaipa Blvd
6. Avenue E and Dunlap Blvd.

The following roadway segments were selected for analysis:

A. Yucaipa Blvd between Avenue E and WB I-10 Ramp
B. Yucaipa Blvd between Avenue E and 18th Street
C. Yucaipa Blvd between Avenue E and 17th Street
D. Avenue E between Yucaipa Blvd and Dunlap Blvd
E. Dunlap Blvd south of Avenue E
F. Avenue E between Dunlap Blvd and 18th Street
G. Avenue E between 18th Street and 17th Street

H. Yucaipa Blvd between 18th Street and Tennessee Street

I. 18th Street between Avenue E and Yucaipa Blvd

The following freeway mainline segments were selected for analysis:

J. I-10 Freeway south of Yucaipa Blvd to Live Oak Canyon Road

K. I-10 Freeway north of Yucaipa Blvd to Wabash Road

2.3 Signalized Intersections

The HCM methodology defines LOS as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The six qualitative categories of LOS and corresponding average delay that have been defined are presented below:

Table 1: Categories of LOS from HCM

LOS	Description	Delay (sec)
A	No approach phase is fully utilized by traffic, and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily, and nearly all drivers find freedom of operation.	0 -10
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are nearing full use. Many drivers begin to feel restricted within platoons of vehicles.	10 – 20
C	This level still represents stable operating conditions. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.	20 – 35
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.	35 – 55
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is attained no matter how great the demand.	55 - 80
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, speed can drop to zero.	80 or more

Source: Highway Capacity Manual (2010)

Consistent with SANBAG CMP guidelines, the following peak hour factors and lane saturation flow rates were utilized in the analysis to determine intersection LOS:

- Peak Hour Factor: 0.92
- Saturation Flow Rate

  - Exclusive through lanes – 1,800 vehicles per lane per hour (vplph)
  - Exclusive right turn lanes – 1,800 vehicles per lane per hour (vplph)
  - Exclusive left turn lanes – 1,700 vplph (1,600 per lane for dual left turn lanes)
- Signal Cycle Lengths – Minimum 60 seconds and maximum 130 seconds
- Credit for "de facto" right turn lanes (locations where a right turn lane is not striped, but enough width is provided such that vehicles are able to conduct right turns without disrupting through traffic in a shared through-right lane). A minimum of 19 feet from curb line to lane stripe is required.

2.4 Unsignalized Intersections

The two types of unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC). The delay range for unsignalized intersections is different from those of signalized intersections primarily due to driver expectation. The expectation is that signalized intersections are designed to carry higher volumes of traffic and therefore higher levels of delay are acceptable. The HCM methodology estimates the delay based on the worst approach at unsignalized intersections. Table 2 includes the LOS ranges for both intersection types.

Table 2: LOS for Unsignalized intersections

LOS	Description	Delay (sec)
A	Little or no delays	0 – 10
B	Short traffic delays	10 – 15
C	Average traffic delays	15 – 25
D	Long traffic delays	25 – 35
E	Very long traffic delays	35 – 50
F	Extreme traffic delays with intersection capacity exceeded	50 or more

Source: Highway Capacity Manual (2000), Chapter 17.

2.5 Caltrans Intersections

Per the Caltrans *Guide for the Preparation of Traffic Impact Studies*, intersections under the jurisdiction of Caltrans are also analyzed using the HCM methodology.

2.6 Standards of Significance

The City of Yucaipa General Plan establishes LOS C as the minimum acceptable level of service (LOS) on all intersections and road segments with the exception of the following two conditions:

- At roadway intersections where traffic movements are controlled by roundabouts, LOS D shall be acceptable
- On roadway segments where a roundabout controls at least one of the intersections at the ends of the segment, the lower half of LOS D shall be acceptable (V/C ratio of 0.849 or better).

All intersections and roadways that are forecast to operate with levels of service D, E or F are expected to be mitigated to the appropriate minimum standard or to conditions consistent with the no project condition. Some of the intersections fall under Caltrans jurisdiction, and the agency targets LOS at the transition between LOS "C" and LOS "D". For intersection analysis, this limit is the equivalent of having a delay of about 55 seconds per vehicle using the HCM 2010 methodology.

2.7 Roadway Segment Analysis

A LOS analysis was prepared on existing roadway segments within the study area using daily roadway capacities. The roadway segment capacities are approximate figures only, and are used at the General Plan level to assist in determining the roadway functional classification needed to meet traffic demand. Roadway segment analysis is typically performed for planning purposes and are affected by such factors as intersections (spacing, configuration, and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic), and pedestrian and bicycle traffic.

Table 3 presents the City of Yucaipa roadway segment capacities and LOS thresholds for each facility type.

Table 3: Daily Roadway Segment Capacities

Facility Type	Lane Geometry	A	B	C	D	E
Major Highway	6 lanes, divided	35,400	41,300	47,200	53,100	59,000
Major Highway	4 lanes, divided	22,800	26,600	30,400	34,200	38,000
Secondary Highway	4 lanes, undivided	18,000	21,000	24,000	27,000	30,000
Controlled/Limited Access Collector Street	2 lanes, undivided	9,600	11,000	12,800	14,400	16,000
Mountain Major	2 lanes, undivided	9,600	11,000	12,800	14,400	16,000
Local Street	2 lanes, undivided	9,600	11,000	12,800	14,400	16,000

Source: City of Yucaipa General Plan, Mountain Major capacities assumed to be the same as local street

2.8 Freeway Mainline Analysis

The mainline analysis was conducted using HCS 10 software consistent with Caltrans requirements. For freeway segments, the measure used to evaluate LOS is density. As stated in the HCM, the upper value shown for LOS E (55.0 passenger cars per mile per lane – pc/mi/in) is the maximum density at which sustained flows at capacity are expected to occur. Deterioration from acceptable LOS A through E to unacceptable LOS F is considered an impact. Furthermore, an increase of 100 trips or more to any segment already operating at LOS F would be considered impacted.

3. Existing (Year 2018) Conditions

This section presents an overview of the existing roadway system within the study area and the methodology used to determine existing traffic volumes.

3.1 Project Location and Study Area

The proposed project site is located on a vacant land parcel south of Yucaipa Boulevard, between Avenue E to the west and 18th Street to the east. The area is bordered to the south by existing single family homes.

3.2 Roadway Network

Key roadway facilities that border the study area are described below. The descriptions of lane configurations are based on designations per the City of Yucaipa's General Plan Circulation Element.

Yucaipa Boulevard: Yucaipa Boulevard is located north and west of the proposed project site and is currently a four lane divided highway designated as an east-west Major highway. Yucaipa Boulevard connects to the I-10 freeway ramps to the west of the project. Yucaipa Boulevard will be reconfigured to a 6 lane divided highway by the proposed 2020 opening date of the project.

Avenue E: Avenue E borders the west and south of the project site and is designated as a local street in this section. It is a two lane undivided roadway. Avenue E will provide two new access points to Area A of the proposed development on the west side of the street, and one access point to Area C on the east side of the street.

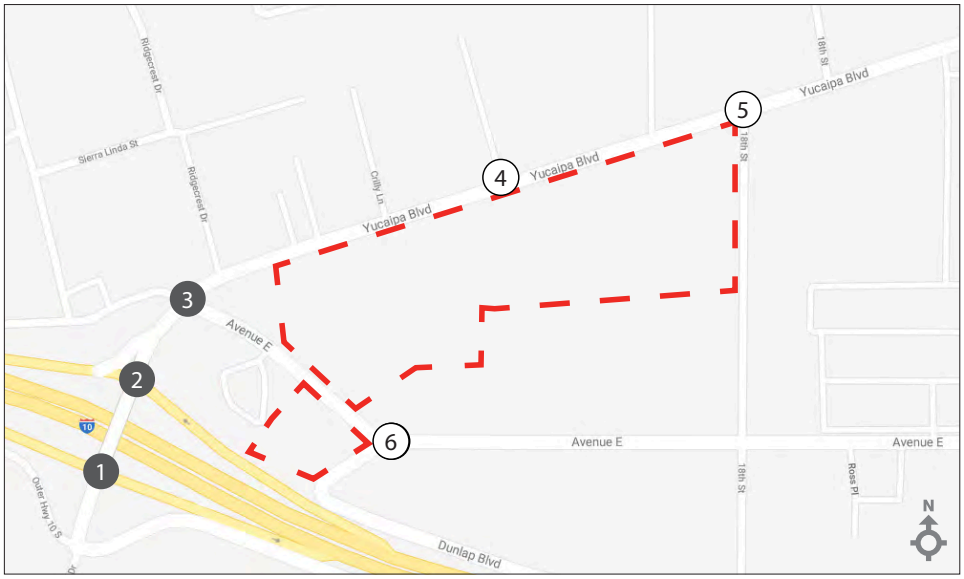
18th Street: 18th Street borders the east of the project site and is designated as a collector/residential collector. It is a two lane undivided roadway. 18th Street will provide two entrance points to Area A of the proposed development on the west side of the street. The east side of the street are single family homes.

Chinaberry Lane: Chinaberry Lane is an unpaved roadway running north-south that intersects with Yucaipa Boulevard. The proposed project will install a traffic signal at this location, improving all approaches at its intersection with Yucaipa Boulevard.

3.3 Existing Intersection Geometry and Traffic Volumes

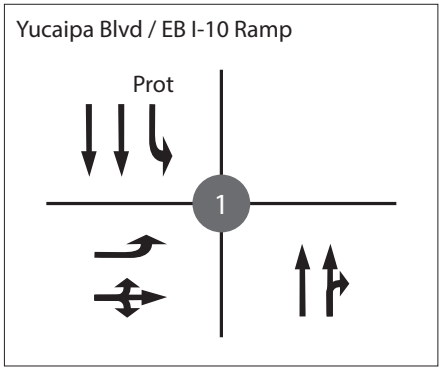
The six (6) study area intersections Existing (Year 2018) lane geometry and control is illustrated in Figure 3. Manual intersection turning movement counts were collected in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on Tuesday December 4th, 2018. Average Daily Traffic (ADT) counts were collected over a 24-hour period on the same day at each of the seven roadway segments. Freeway mainline volumes at the two locations were obtained from Caltrans' Traffic Data Branch (2017). Existing (Year 2018) AM and PM peak hour turning movement count volumes is presented in Figure 4. Traffic count data is included in Appendix A.

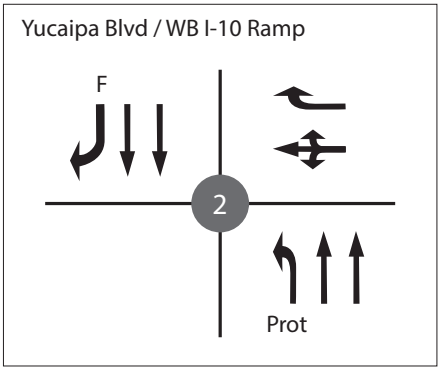
Figure 3 - Study Area Intersection Lane Geometry and Existing 2018 Control

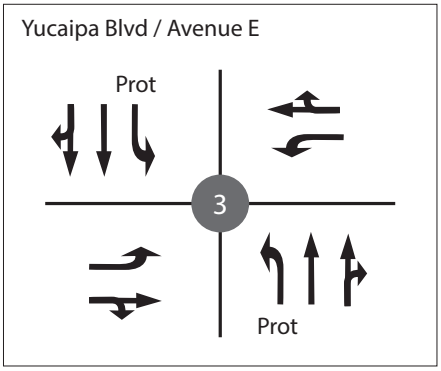


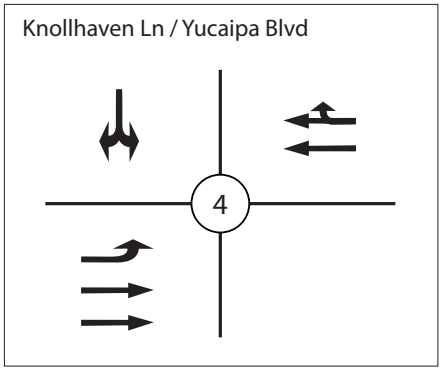
Legend

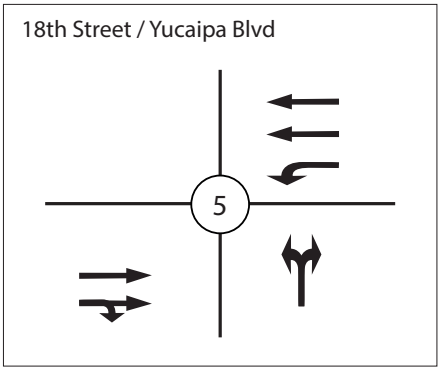
- Project Area
- Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Lane Geometry
- Prot Protected Left
- F Free Right Turn











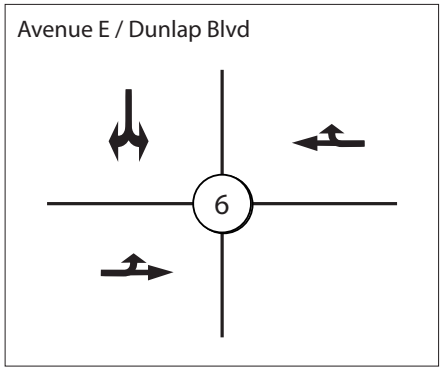
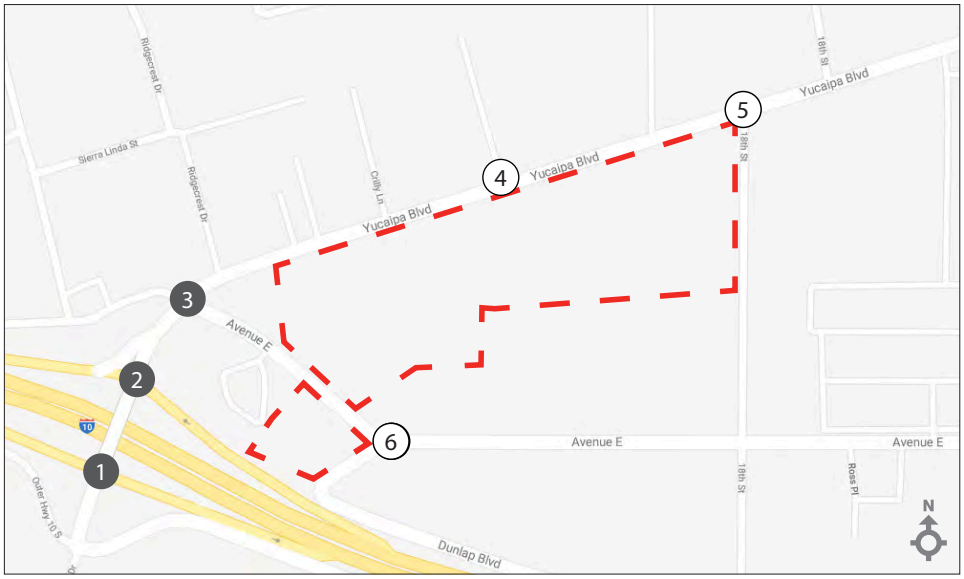
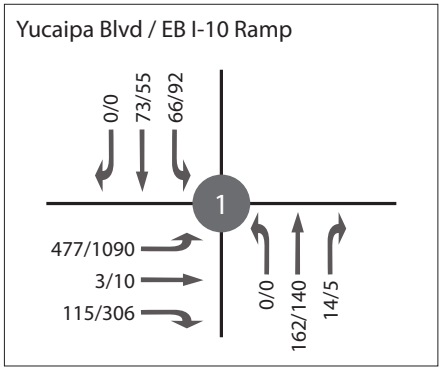


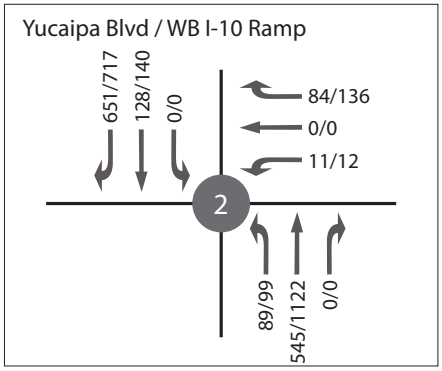
Figure 4 - Existing (Year 2018) AM and PM Peak Hour Traffic Volumes

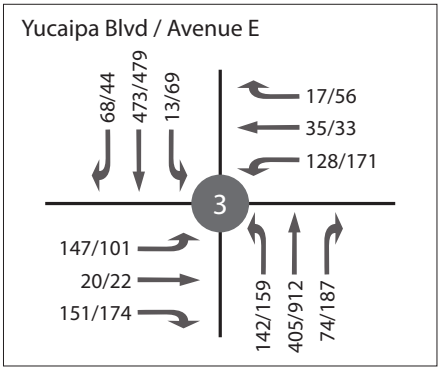


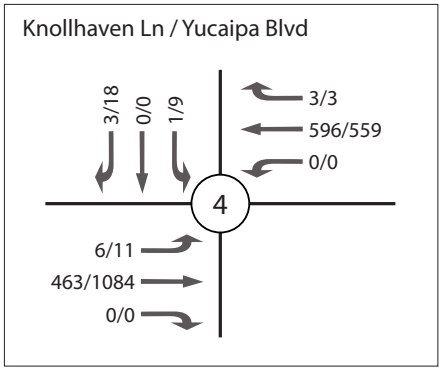
Legend

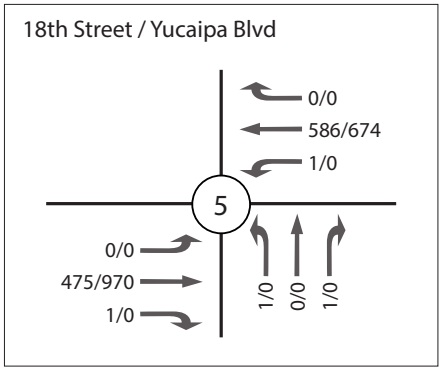
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- XX/YY AM/PM Volumes

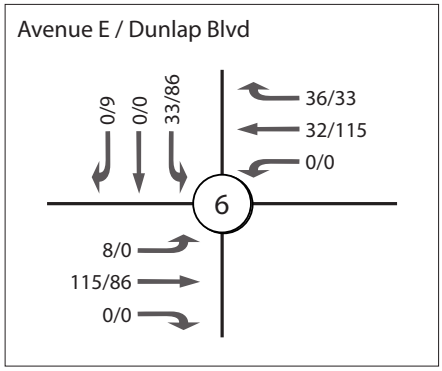












3.4 Existing Intersection LOS

A level of service analysis was conducted to evaluate existing intersection operations during the weekday AM and PM peak hours. Table 4 summarizes the existing levels of service at the study area intersections. Existing level of service calculation worksheets are included in Appendix B.

TABLE 4: Existing Intersection LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Yucaipa Blvd and I-10 EB [1]	Signal	12.4	B	18.0	B
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.9	B	14.0	B
3	Yucaipa Blvd and Avenue E	Signal	25.4	C	56.4	**E**
Unsignalized Intersections		**Control**	**AM Peak Hour**		**PM Peak Hour**	
			Delay	**LOS**	**Delay**	**LOS**
4	Chinaberry Lane and Yucaipa Blvd	TWSC	11.5	B	12.9	B
5	18th Street and Yucaipa Blvd	TWSC	11.7	B	0.0	A
6	Avenue E and Dunlap Blvd	TWSC	9.8	A	10.3	B

[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 4, all intersections operate at satisfactory LOS (LOS C or better), with the exception of the following location:

- Yucaipa Blvd and Avenue E – LOS E in the PM peak hour

3.5 Existing Roadway Segment LOS

Table 5 provides a summary of the Existing (Year 2018) Conditions roadway segment capacity analysis based on the capacity thresholds identified in Table 3. The City of Yucaipa designates LOS C as its threshold of significance and therefore figures from LOS D have been used as an upper threshold of significance for this study.

Table 5: Existing Roadway Segment Analysis

Segment				Lane Geo	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	4D	34,200	23,618	0.69
B	Yucaipa Blvd	Avenue E	Chinaberry Lane	4D	34,200	20,664	0.60
C	Yucaipa Blvd	18th Street	17th Street	4D	34,200	19,926	0.58
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	6,619	0.46
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,205	0.08
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	2,239	0.16
G	Avenue E	18th Street	17th Street	2U	14,400	2,267	0.16
H	Yucaipa Blvd	17th Street	Tennessee Street	4D	34,200	20,477	0.60
I	18th Street	Avenue E	Yucaipa Blvd	2U	14,400	33	0.00

As indicated in section 2.8, the roadway segment analysis is used as a planning tool to evaluate the adequacy of existing roadway segment capacities. A v/c ratio of greater than 1.01 to 1.25 suggest that additional review is required; however, if adjacent intersections provide the lanes needed to achieve

acceptable peak hour LOS, then segment capacity improvements between key intersections may not be needed. For roadway segments significantly exceeding capacity (v/c ratios > 1.25) then additional through lane roadway capacity and intersection improvements are more likely to be needed. All roadway segments are currently operating at an acceptable LOS under Existing (Year 2018) No Project Conditions.

3.6 Existing Freeway Mainline LOS

Table 6 summarizes the existing freeway mainline LOS at the study area mainline segments. The freeway mainline analysis worksheets are contained in Appendix C.

Table 6: Existing Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
J	I-10 South of Yucaipa Boulevard	123,000	18.2	C
K	I-10 North of Yucaipa Boulevard	151,000	22.8	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments are currently operating at acceptable level of service under Existing (Year 2018) No Project Conditions.

4. Future Traffic Volume Development

4.1 Future Traffic Volumes

The future background traffic is composed of existing traffic (based on the count data), background ambient traffic growth per year, and traffic from planned developments (i.e. cumulative projects). The analysis of cumulative conditions is required by the SANBAG Congestion Management Program. Traffic from all cumulative projects (anticipated to be completed by each analysis scenario) plus the annual ambient growth rate is added to baseline existing traffic volumes to forecast Future (Year 2020) Conditions.

4.1.1 Ambient Traffic Growth

All future scenario traffic volumes were developed by applying a linear 1.5 percent annual growth rate to the Existing (2018) traffic volumes. Use of an annual growth rate to account for area-wide growth is common to both current and previous traffic studies within the City and County and has been approved by the City for use on this project.

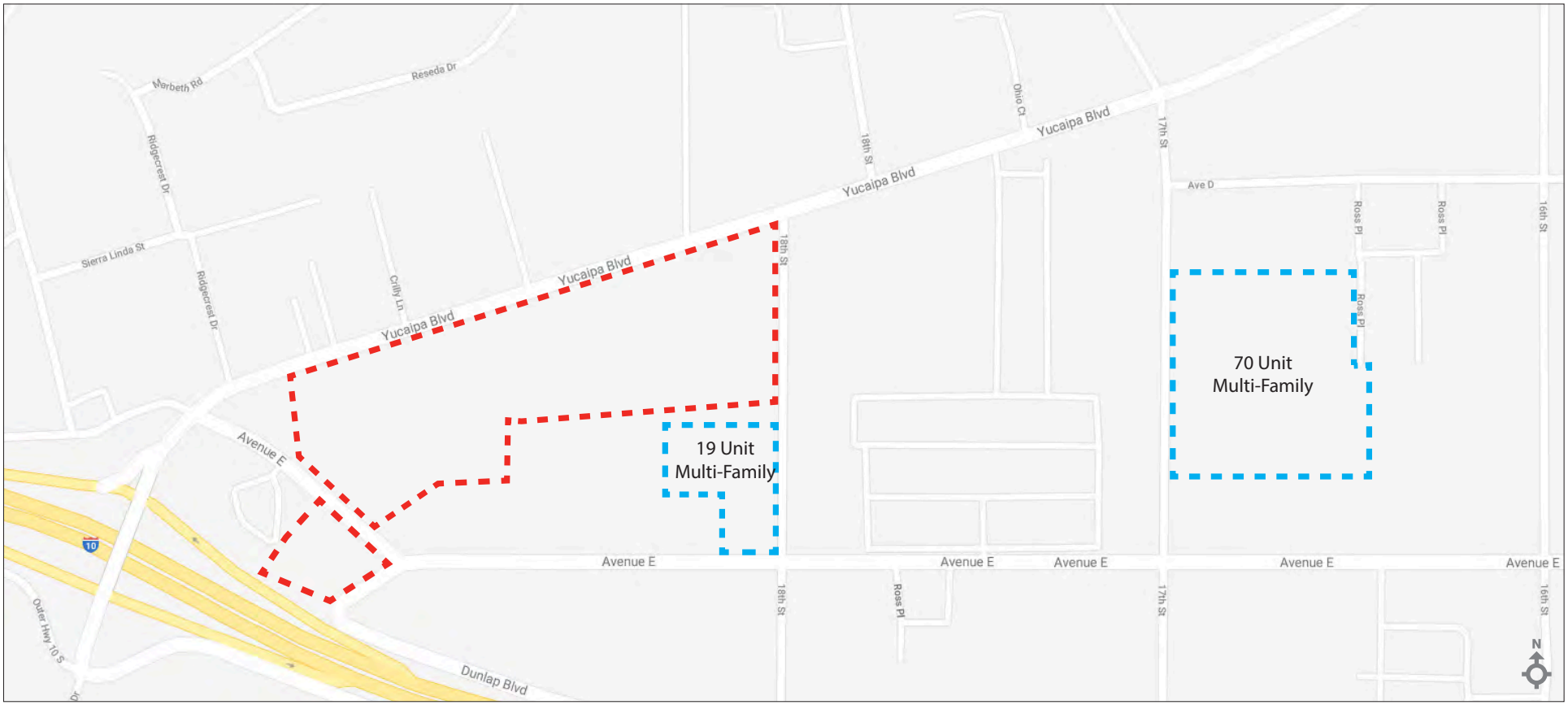
4.1.2 Cumulative Projects

California Environmental Quality Act (CEQA) requires that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list provided by the City comprised of two (2) projects was developed for the purposes of this analysis. Below is a brief description of the cumulative projects included as part of the Future (Year 2020) analysis:

- Lakritz Apartment Homes (APN 0300-191-32): 19-unit apartment home complex
- Tract 18174 (APN 0301-061-03, 0301-072-13, and 0301-072-17): 70-unit condominium project

The location of each related project is shown in Figure 5.

Figure 5 - Cumulative Project Locations



Legend

Project Area

5. Future (Year 2020) No Project

The proposed project is scheduled to be operational by the Year 2020. This section develops the future baseline 2020 conditions in the study area. The future condition network is based on lane improvements and upgrades detailed by the City of Yucaipa and through project design features. Phase I of the Yucaipa Boulevard Widening Project to six lanes between 18th Street and I-10 will be completed by summer 2019 and is therefore reflected in the projected LOS. The existing unsignalized intersection of Chinaberry Lane and Yucaipa Boulevard will be converted to a signalized intersection as a project design feature. Figure 6 illustrates the Future (Year 2020) intersection geometry and traffic control.

5.1 Future (Year 2020) Traffic Control and Traffic Volumes

The Future (Year 2020) background traffic is composed of existing traffic (based on count data collected in 2018), background ambient traffic growth per year (identified as 1.5 percent per year for a total of 3 percent over 2 years), and traffic from the cumulative projects listed in Section 4.1.2. The AM and PM peak hour study intersection volumes for the Future (Year 2020) is shown in Figure 7.

5.2 Future (Year 2020) Level of Service (LOS)

A summary of the intersection level of service analysis results for the Future (Year 2020) No Project Condition is included in Table 7.

Table 7: Future (Year 2020) No Project – Intersection LOS

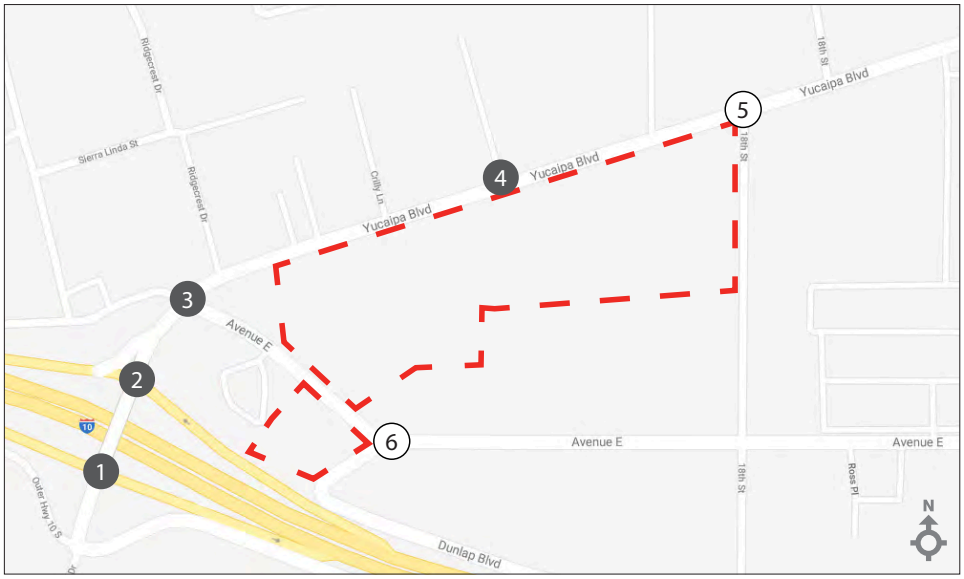
Signalized Intersections		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Yucaipa Blvd and I-10 EB [1]	Signal	13.0	B	19.1	B
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.8	B	14.0	B
3	Yucaipa Blvd and Avenue E	Signal	24.2	C	65.8	**E**
Unsignalized Intersections		**Control**	**AM Peak Hour**		**PM Peak Hour**	
			Delay	**LOS**	**Delay**	**LOS**
4	Chinaberry Lane and Yucaipa Blvd	TWSC	12.5	B	15.2	C
5	18th Street and Yucaipa Blvd	TWSC	12.7	B	18.9	C
6	Avenue E and Dunlap Blvd	Roundabout	4.2	A	4.6	A

[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 7, all intersections are forecast to operate at satisfactory LOS (LOS C or better), with the exception of the following location:

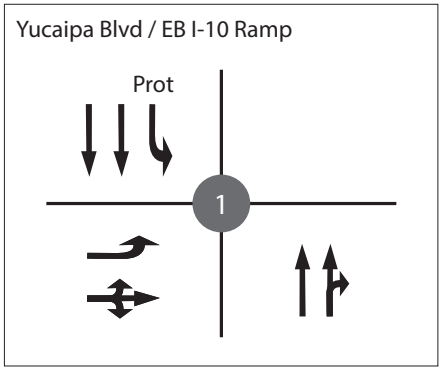
- Yucaipa Blvd and Avenue E – LOS E in the PM peak hour

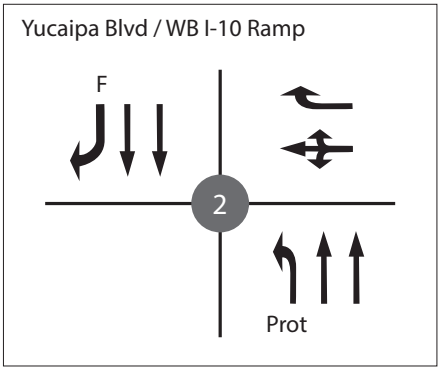
Figure 6 - Study Area Intersection Lane Geometry and Future 2020 Control

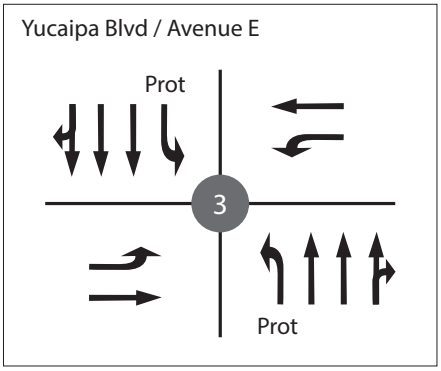


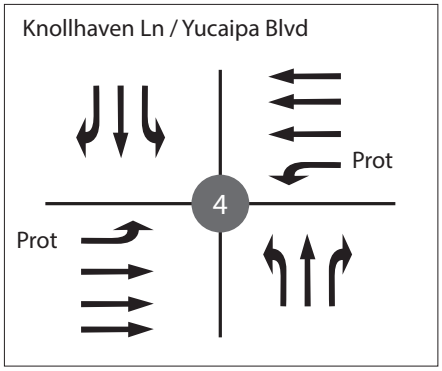
Legend

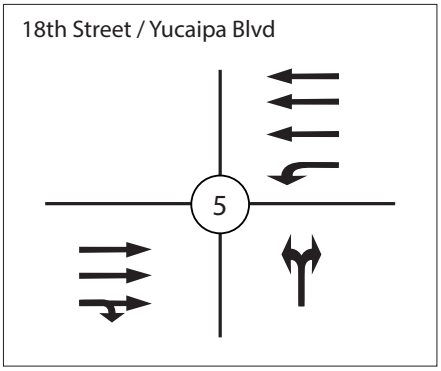
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Lane Geometry
- Prot Protected Left
- F Free Right Turn











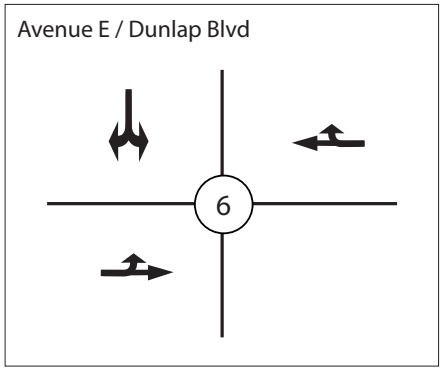
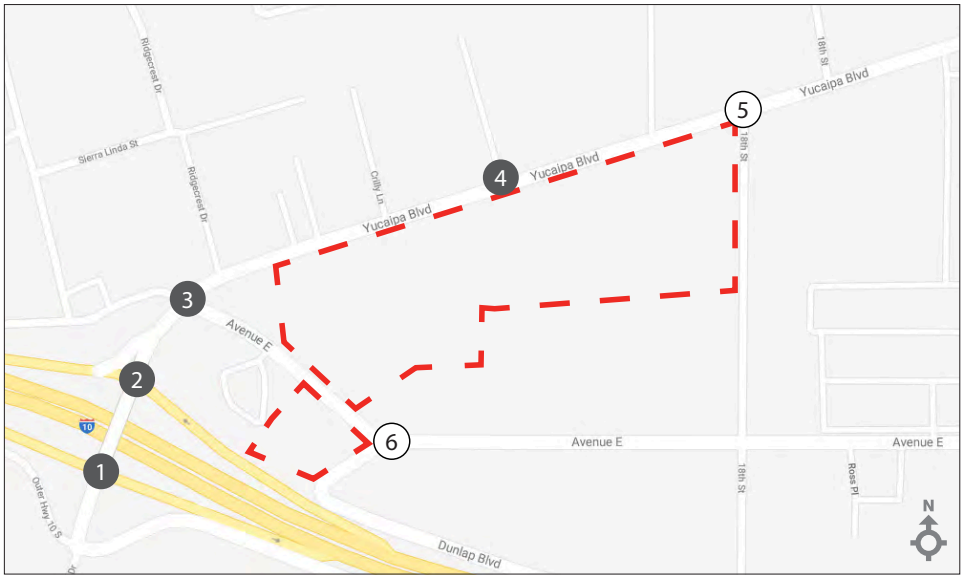
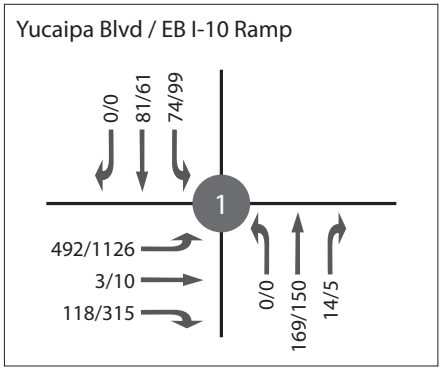


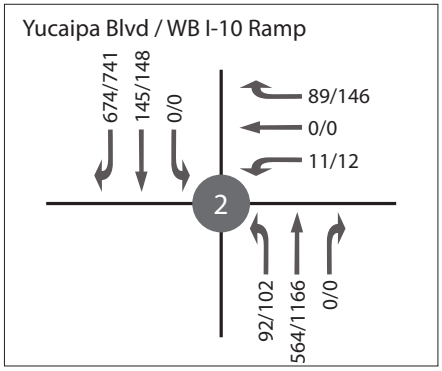
Figure 7 - Future (Year 2020) No Project AM and PM Peak Hour Traffic Volumes

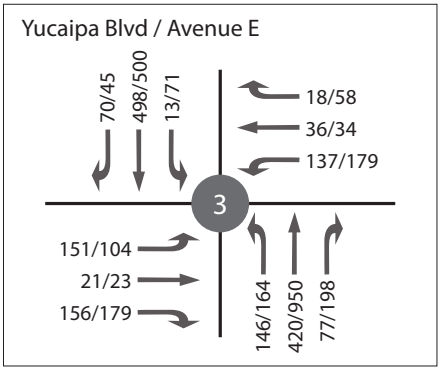


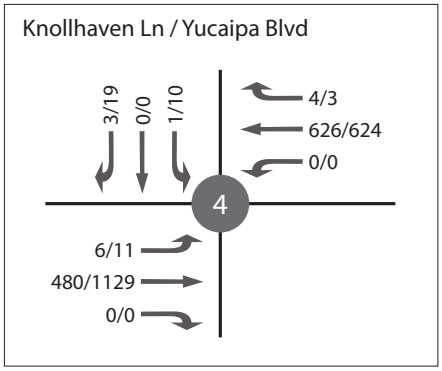
Legend

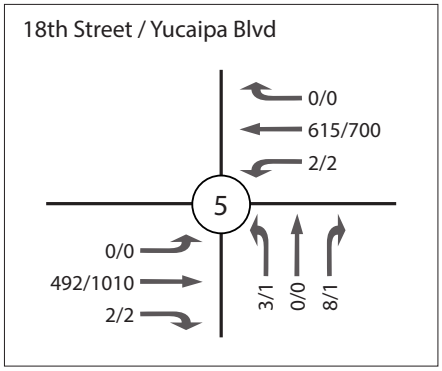
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- XX/YY AM/PM Volumes

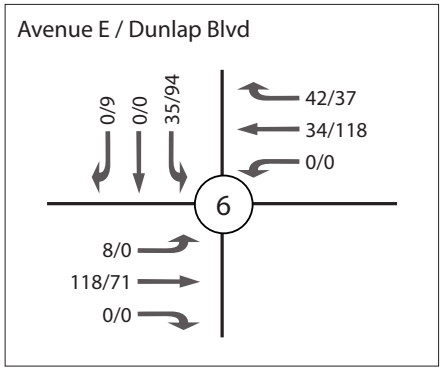












5.3 Future (Year 2020) Roadway Segment LOS

Table 8 provides a summary of the Future (Year 2018) Conditions roadway segment capacity analysis based on the capacity thresholds identified in Table 3.

Table 8: Future (Year 2020) No Project Roadway Segment Analysis

Segment				Lanes	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	5D	43,650	24,327	0.56
B	Yucaipa Blvd	Avenue E	Chinaberry Lane	6D	53,100	21,284	0.40
C	Yucaipa Blvd	18th Street	17th Street	6D	53,100	20,524	0.39
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	6,818	0.47
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,241	0.09
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	2,306	0.16
G	Avenue E	18th Street	17th Street	2U	14,400	2,335	0.16
H	Yucaipa Blvd	17th Street	Tennessee Street	6D	53,100	21,091	0.40
I	18th Street	Avenue E	Yucaipa Blvd	2U	14,400	34	0.00

All roadway segments are forecast to operate at an acceptable LOS under Future (Year 2020) No Project Conditions.

5.4 Future (Year 2020) Freeway Mainline LOS

Table 9 summarizes the existing freeway mainline LOS at the study area mainline segments. The freeway mainline analysis worksheets are contained in Appendix C.

Table 9: Future (Year 2020) Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
J	I-10 South of Yucaipa Boulevard	126,690	18.8	C
K	I-10 North of Yucaipa Boulevard	155,530	23.7	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments are anticipated to operate at acceptable level of service under Future (Year 2020) No Project Conditions.

6. Proposed Project

6.1 Project Description

VantageOne Real Estate Investments is proposing to build a commercial retail and service development known as Yucaipa Pointe, located south of Yucaipa Boulevard, between Avenue E and 18th Street. The project proposes approximately 137,000 SF shopping center to house restaurants, fast food establishments, shops, a movie theater, a health club and a car wash. The following presents the project components:

- Health Club
- Theater
- Restaurants
- Fast-Food Restaurants
- Car Wash
- Retail

Two access locations to the shopping center are proposed along Yucaipa Boulevard: primary access to will be provided via a new traffic signal at Chinaberry Lane/Yucaipa Boulevard. A right-turn in/out driveway will be provided on Yucaipa Boulevard between Avenue E and Chinaberry Lane. Three secondary access driveways on the west boundary of the project area will be provided on Avenue E between Yucaipa Boulevard and Dunlap Boulevard. Two of these intersections are on the North Side of Avenue E and serve Area A, the third entrance is on the south side of Avenue E and serves Area C. There are two driveways on the east side of the project on 18th Street between Yucaipa Boulevard and Avenue E.

6.2 Trip Generation

Trip generation for the proposed project was calculated using rates from the latest Institute of Transportation Engineers Trip Generation Manual (10th Edition) for Land Use Codes 492 (Health Club), 444 (Movie Theater), 932 (High-Turnover Sit Down Restaurant), 930 (Fast Casual Restaurant), 934 (Fast-Food with Drive Through Window), 948 (Automated Car Wash), and 826 (Specialty Retail). Table 10 below presents the resultant AM and PM peak hour trip generation for the proposed project.

6.3 Trip Distribution and Assignment

According to the site plan, the proposed project will utilize two entrances on Yucaipa Boulevard between Avenue E and 18th Street, three driveways on Avenue E between Yucaipa Boulevard and Dunlap Boulevard, and two driveways on 18th Street between Yucaipa Boulevard and Avenue E. Locally, trips were assigned to and from the project site based on the location of these access points. Regional trip distribution has been estimated based on the anticipated trade area, which defines the capture area for the project. The trip distribution percentages are presented in Figure 8, with the resulting AM and PM peak hour trip assignment depicted in Figure 9.

Table 10: Project Trip Generation

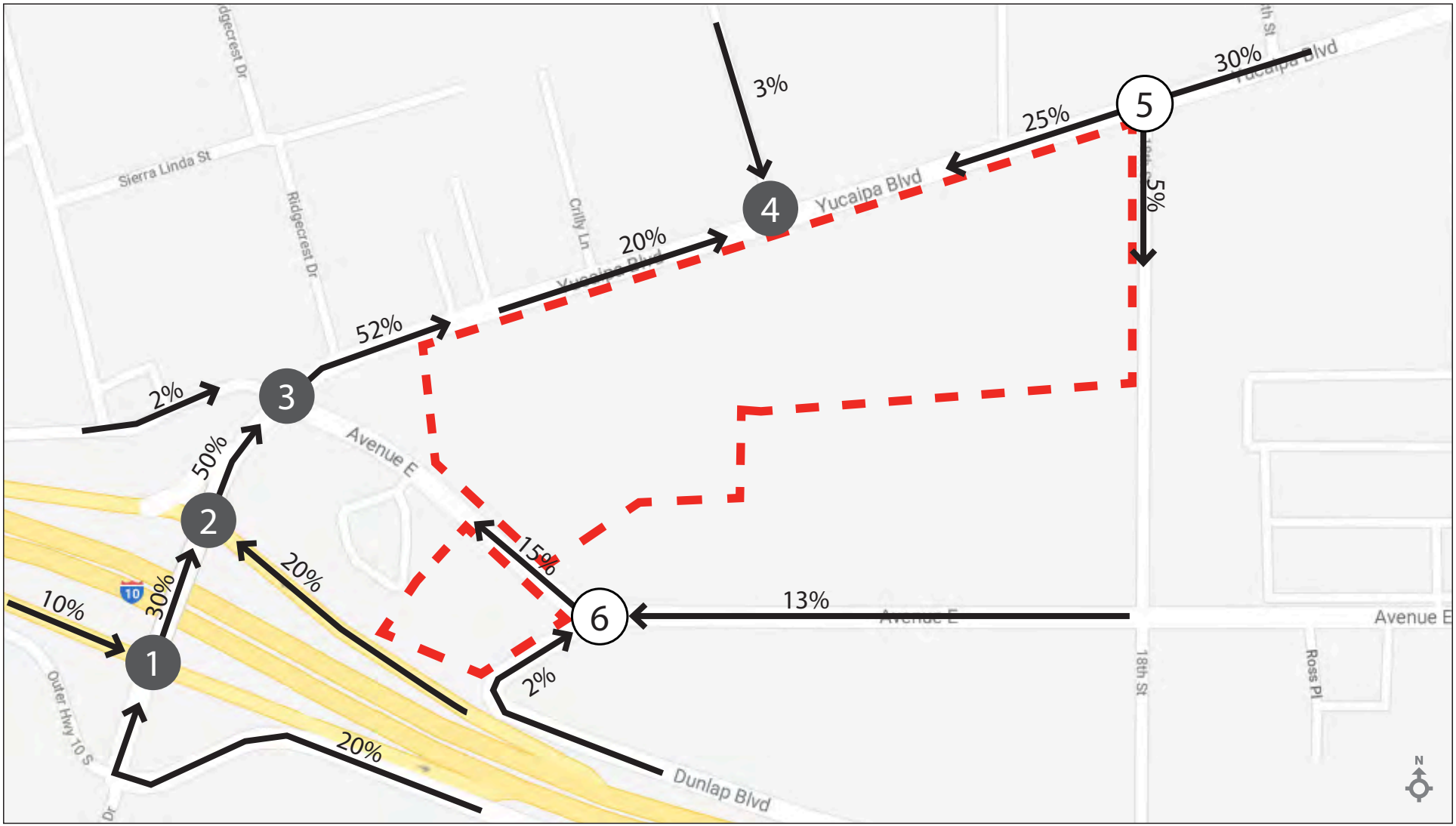
			A.M. Peak Hour			P.M. Peak Hour		
	Unit	**ADT[2]**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Trip Rates[1] (Land Use Code)								
Health Club (492)	TSF	32.93	0.67	0.64	1.31	1.97	1.48	3.45
Movie Theater (444)	TSF	78.09	0.11	0.11	0.22	5.80	0.37	6.17
High-Turnover (Sit-Down) Restaurant (932)	TSF	112.18	5.47	4.47	9.94	6.06	3.71	9.77
Fast Casual Restaurant (930)	TSF	315.17	1.39	0.68	2.07	7.77	6.36	14.13
Fast-Food Restaurant with Drive-Through Window (934)	TSF	496.12	23.16	22.26	45.42	16.98	15.67	32.65
Automated Car Wash (948)	TSF	30.40	-	-	-	7.10	7.10	14.20
Specialty Retail (826)	TSF	44.32	-	-	-	1.19	1.52	2.71
Project Trip Generation	**Size**							
Area A								
Major 1 - Health Club	34.000	1,120	23	22	45	67	50	117
Major 2 - Movie Theater with Matinee	39.000	3,046	4	4	9	226	14	241
Pad 1 - High-Turnover (Sit-Down) Restaurant	5.800	651	32	26	58	35	22	57
Pad 2 - Fast-Food Restaurant with Drive-Through Window	6.065	3,009	140	135	275	103	95	198
Pad 3 - Fast-Food Restaurant with Drive-Through Window	3.000	1,488	69	67	136	51	47	98
Pad 4 - Fast-Food Restaurant with Drive-Through Window	3.500	1,736	81	78	159	59	55	114
Pad 5 - Fast-Food Restaurant with Drive-Through Window	4.300	2,133	100	96	195	73	67	140
Pad 5 - Fast Casual Restaurant	2.800	882	4	2	6	22	18	40
Pad 6 - Fast-Food Restaurant with Drive-Through Window	4.800	2,381	111	107	218	81	75	157
Pad 7 - Automated Car Wash	3.779	115	0	0	0	27	27	54
Shops 1 - Fast Casual Restaurant	7.100	2,238	10	5	15	55	45	100
Shops 1 - Fast-Food Restaurant with Drive-Through Window	2.000	992	46	45	91	34	31	65
Pad 8 - High-Turnover (Sit-Down) Restaurant	8.400	942	46	38	83	51	31	82
Pad 9 - High-Turnover (Sit-Down) Restaurant	5.000	561	27	22	50	30	19	49
Area C								
Pad 7 - Fast-Food Restaurant with Drive-Through Window	5.000	2,481	116	111	227	85	78	163
Shops 2 - Fast Casual Restaurant	1.000	315	1	1	2	8	6	14
Shops 2 - Specialty Retail	2.000	89	0	0	0	2	3	5
Total Project Trip Generation		***24,179***	***811***	***757***	***1,568***	***1,010***	***685***	***1,695***

Notes: TSF - thousand square feet

[1]Trip rates referenced from the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition

As shown in Table 10, the proposed project is anticipated to generate approximately 24,179 daily trips, 1,568 AM peak hour trips (811 inbound and 757 outbound), and 1,695 PM peak hour trips (1,010 inbound and 685 outbound).

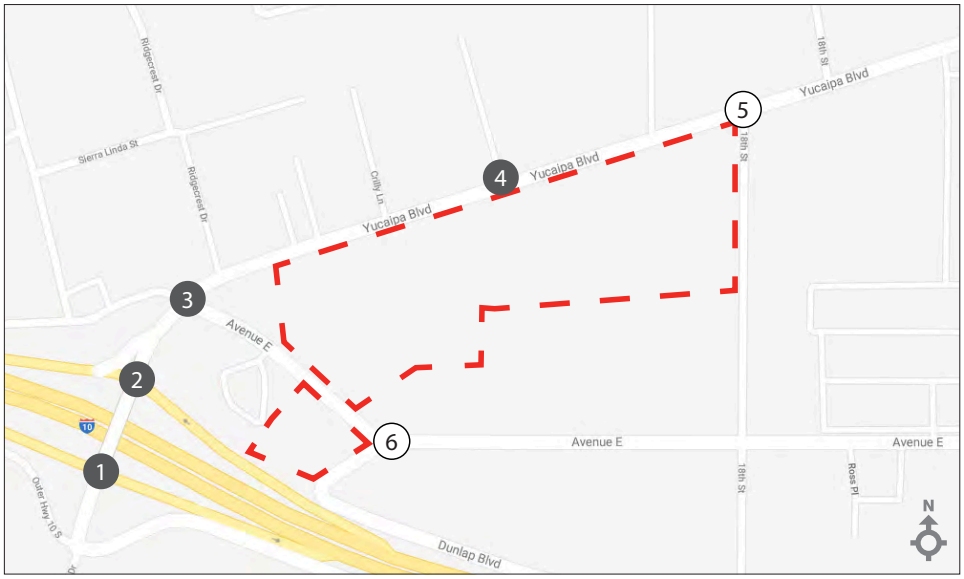
Figure 8 - Project Trip Distribution



Legend

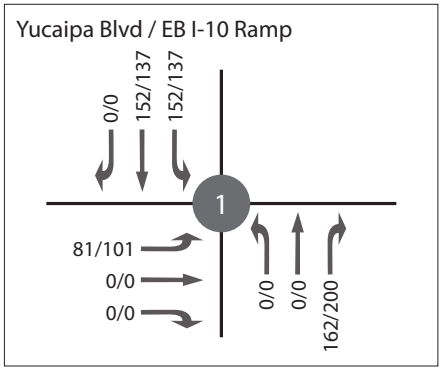
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Trip Distribution Percentage

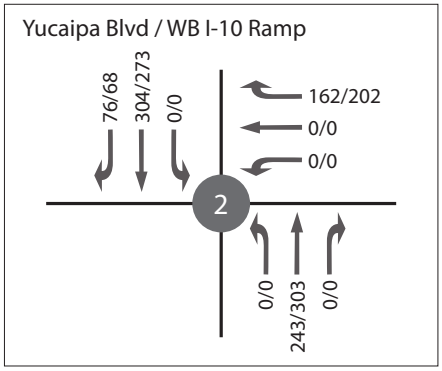
Figure 9 - Project Trip Assignment AM and PM Peak Hour Traffic Volumes

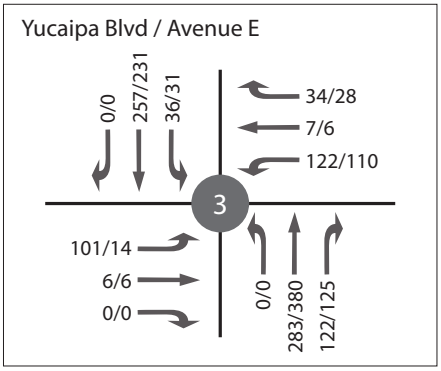


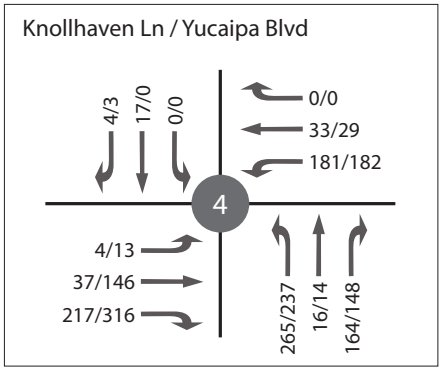
Legend

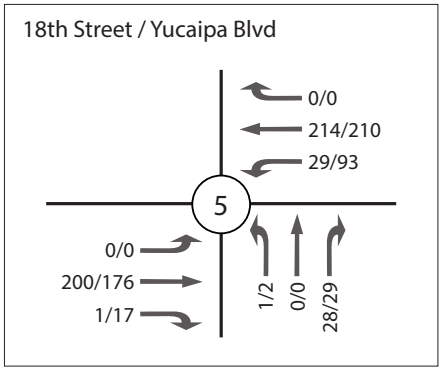
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- Lane Geometry

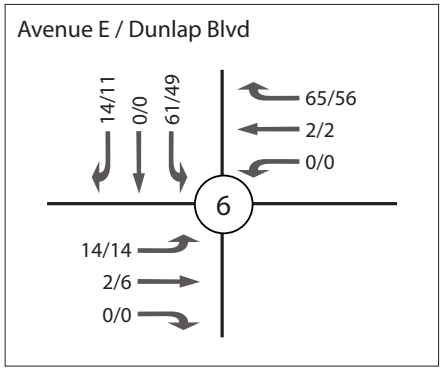












7. Project Impact Analysis

This section evaluates the potential impacts of the proposed project on the study area intersections.

7.1 Existing (Year 2018) With Project Impact Analysis

In an effort to satisfy the CEQA Guideline section 15125(a), an analysis of existing traffic volumes plus traffic generated by the proposed project has been included.

7.1.1 Existing (Year 2018) With Project Intersection LOS

A level of service analysis was conducted to evaluate addition of project traffic to the Existing (Year 2018) intersection operating conditions during the weekday AM and PM peak hours. In order to determine any direct project impacts, traffic from the project was added to existing traffic volumes. All study area intersection lane configurations are assumed to remain unchanged from Existing Conditions, with the exception of Chinaberry Lane and Yucaipa Boulevard, assumed to be a traffic signal, and Avenue E and Dunlap Blvd which has been modelled in three separate alternatives: Roundabout, Two-Way Stop Control, and All-Way Stop Control. Figure 10 illustrates the AM and PM peak hour volumes at the area intersections under Existing (2018) With Project conditions. Table 11 summarizes the Existing (2018) With Project level of service at the study area intersections. Level of service calculation worksheets are included in Appendix B.

Table 11: Existing (Year 2018) With Project AM/PM Peak Hour – Intersection LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour		Impact? (Y/N)
			Delay	LOS	Delay	LOS	
1	Yucaipa Blvd and I-10 EB [1]	Signal	19.1	B	48.1	D	N
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.7	B	13.8	B	N
3	Yucaipa Blvd and Avenue E	Signal	41.3	**D**	159.0	**F**	Y
4	Chinaberry Lane and Yucaipa Blvd	Signal	29.1	C	31.0	C	N
Unsignalized Intersections		**Control**	**AM Peak Hour**		**PM Peak Hour**		**Impact? (Y/N)**
			Delay	**LOS**	**Delay**	**LOS**	
5	18th Street and Yucaipa Blvd	TWSC	11.5	B	15.7	C	N
6	Avenue E and Dunlap Blvd	Roundabout	4.6	A	5.1	A	N
6A	Avenue E and Dunlap Blvd	TWSC	10.8	B	11.6	B	N
6B	Avenue E and Dunlap Blvd	AWSC	8.2	A	8.8	A	N

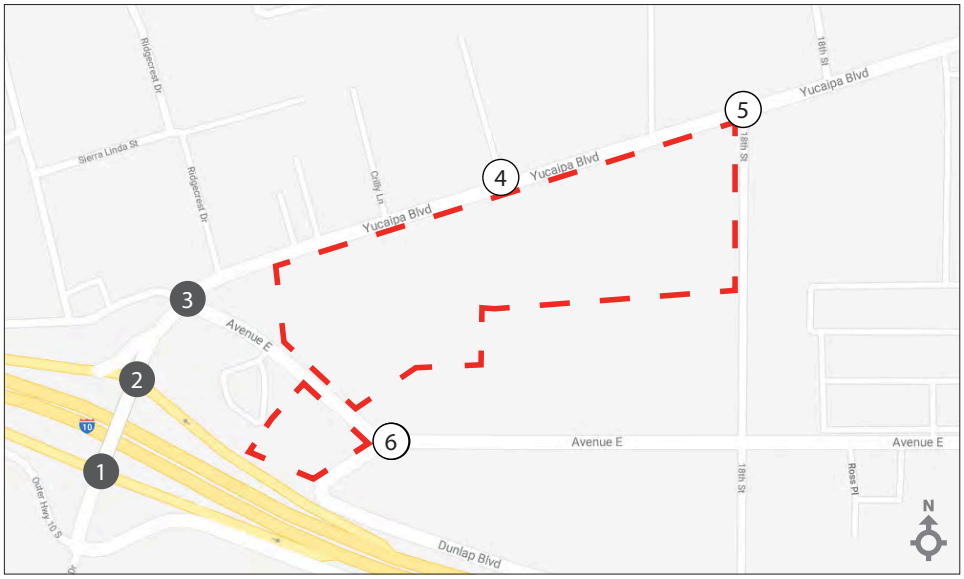
[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 11, all intersections operate at satisfactory LOS (LOS C or better), with the exception of the following location, which is considered an Existing (Year 2018) With Project impact:

- Yucaipa Blvd and Avenue E – LOS D in the AM peak hour and LOS F in the PM peak hour

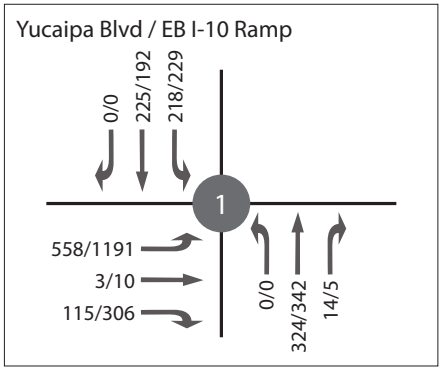
At Avenue E and Dunlap Boulevard, the intersection is forecast to operate satisfactorily under any of the three potential traffic controls. The Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) does not have specific warrant criteria for roundabouts. Implementation of any of the three traffic controls at this location would result in acceptable LOS. However, with safety and geometric considerations, implementation of either a roundabout or an all-way stop control are recommended.

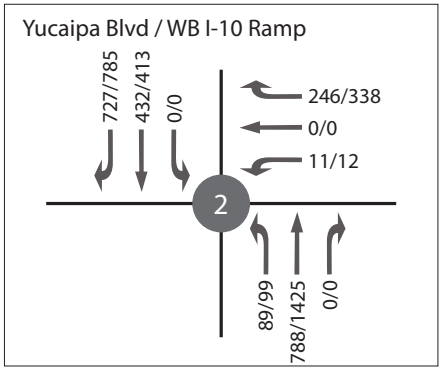
Figure 10 - Existing (Year 2018) With Project AM and PM Peak Hour Traffic Volumes

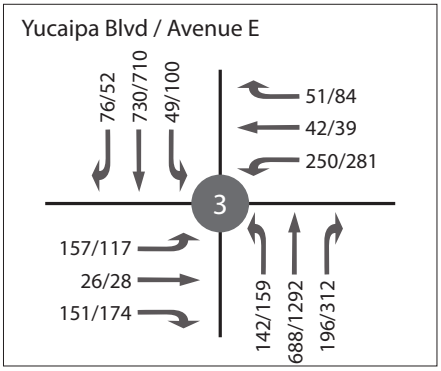


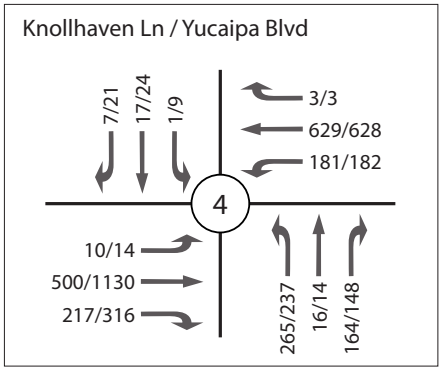
Legend

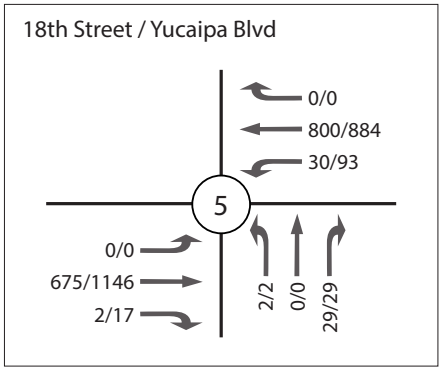
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- XX/YY AM/PM Volumes

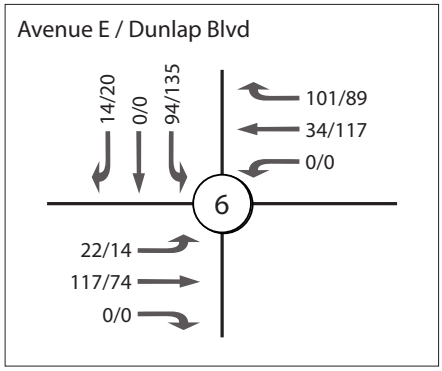












7.1.2 Existing (Year 2018) With Project Roadway Segment LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to the Existing (Year 2018) volumes on study area roadway segments. Table 12 summarizes the level of service for roadway segments with addition of project traffic.

Table 12: Existing (Year 2018) With Project Roadway Segment Analysis

Segment				Lane Geo	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	4D	34,200	35,736	1.04
B	Yucaipa Blvd	Avenue E	Chinaberry Lane	4D	34,200	29,980	0.88
C	Yucaipa Blvd	18th Street	17th Street	4D	34,200	27,198	0.80
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	10,972	0.76
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,689	0.12
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	3,935	0.27
G	Avenue E	18th Street	17th Street	2U	14,400	5,417	0.38
H	Yucaipa Blvd	17th Street	Tennessee Street	4D	34,200	27,747	0.81
I	18th Street	Avenue E	Yucaipa Blvd	2U	14,400	1,930	0.13

All roadway segments are currently operating at an acceptable LOS under Existing (Year 2018) With Project Conditions, with the exception of:

- Segment A: Yucaipa Blvd between WB I-10 Ramps and Avenue E.

7.1.3 Existing (Year 2018) With Project Freeway Mainline LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to the Existing (Year 2018) volumes on the study area freeway mainline segments. Table 13 summarizes the level of service for freeway segments with addition of project traffic.

Table 13: Existing (Year 2018) With Project Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
J	I-10 South of Yucaipa Boulevard	125,424	18.6	C
K	I-10 North of Yucaipa Boulevard	155,848	23.7	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments would operate at an acceptable level of service under Existing (Year 2018) With Project Conditions.

7.2 Future (Year 2020) With Project Impact Analysis

7.2.1 Future (Year 2020) With Project Intersection LOS

A level of service analysis was conducted to evaluate addition of project traffic to the Future (Year 2020) intersection operating conditions during the weekday AM and PM peak hours. In order to determine any cumulative project impacts, traffic from the project was added to future no project traffic volumes. All study area intersection lane configurations are shown in Figure 6. Avenue E and Dunlap Blvd has been modelled with three separate alternatives: Roundabout, Two Way Stop Control, and All Way Stop Control. Figure 11 illustrates the AM and PM peak hour volumes at the area intersections under Future (Year 2020) With Project conditions. Table 14 summarizes the Future (Year 2020) With Project level of service at the study area intersections. Level of service calculation worksheets are included in Appendix B.

Table 14: Future (Year 2020) With Project AM/PM Peak Hour – Intersection LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour		Impact? (Y/N)
			Delay	LOS	Delay	LOS	
1	Yucaipa Blvd and I-10 EB [1]	Signal	19.3	B	54.8	D	N
2	Yucaipa Blvd and I-10 WB [1]	Signal	14.7	B	14.0	B	N
3	Yucaipa Blvd and Avenue E	Signal	38.9	**D**	168.5	**F**	Y
4	Chinaberry Lane and Yucaipa Blvd	Signal	22.1	C	33.6	C	N
Unsignalized Intersections		**Control**	**AM Peak Hour**		**PM Peak Hour**		**Impact? (Y/N)**
			Delay	**LOS**	**Delay**	**LOS**	
5	18th Street and Yucaipa Blvd	TWSC	13.5	B	21.6	C	N
6	Avenue E and Dunlap Blvd	Roundabout	4.7	A	5.2	A	N
6A	Avenue E and Dunlap Blvd	TWSC	10.9	B	11.8	B	N
6B	Avenue E and Dunlap Blvd	AWSC	8.3	A	8.9	A	N

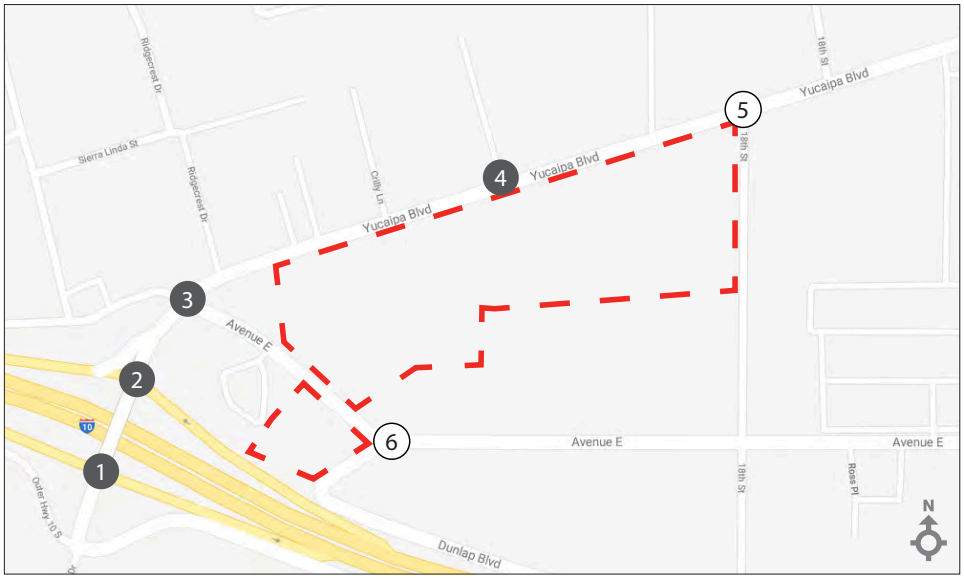
[1] Caltrans Intersection; Bold and shaded = unacceptable LOS

As shown in Table 14, all intersections operate at satisfactory LOS (LOS C or better), with the exception of the following location, which is considered a Future (Year 2020) With Project impact:

- Yucaipa Blvd and Avenue E – LOS D in the AM peak hour and LOS F in the PM peak hour

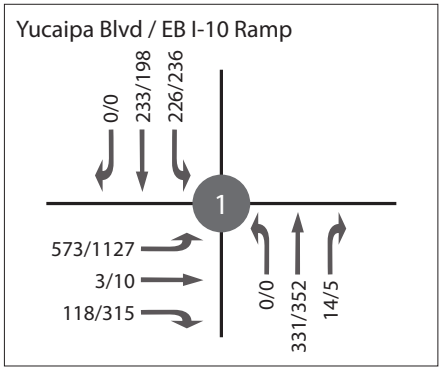
At Avenue E and Dunlap Boulevard, the intersection is forecast to operate satisfactorily under any of the three potential traffic controls. The Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) does not have specific warrant criteria for roundabouts. Implementation of any of the three traffic controls at this location would result in acceptable LOS. However, with safety and geometric considerations, implementation of either a roundabout or an all-way stop control are recommended.

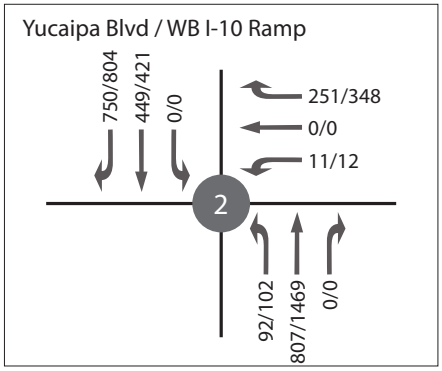
Figure 11 - Future (Year 2020) With Project AM and PM Peak Hour Traffic Volumes

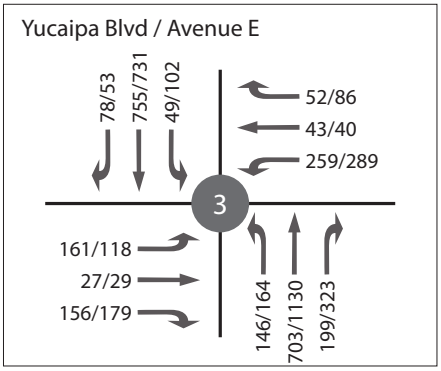


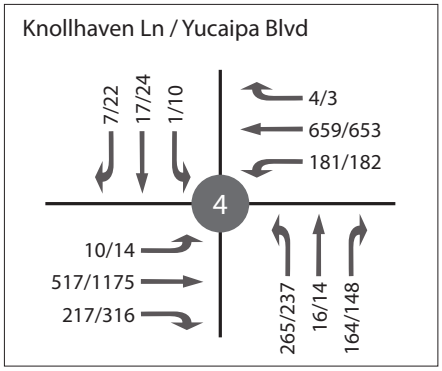
Legend

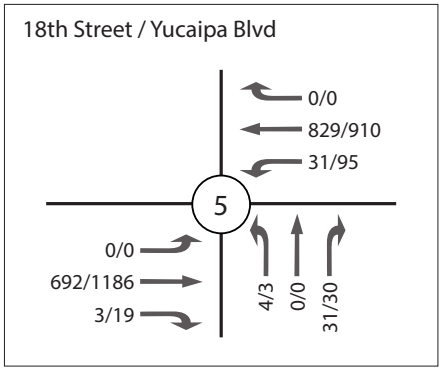
- Project Area
- # Study Intersection
- Signalized Intersection
- Unsignalized Intersection
- XX/YY AM/PM Volumes

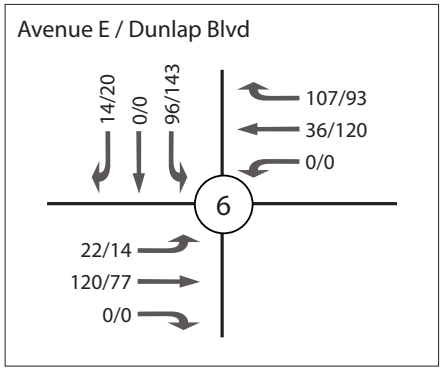












7.2.2 Future (Year 2020) With Project Roadway Segment LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to the Future (Year 2020) volumes on study area roadway segments. Table 15 summarizes the level of service for roadway segments with addition of project traffic.

Table 15: Future (Year 2020) With Project Roadway Segment Analysis

Segment				Lane Geo	Estimated Daily Capacity	2018	V/C Ratio
A	Yucaipa Blvd	WB I-10 Ramp	Avenue E	5D	43,650	36,445	0.83
B	Yucaipa Blvd	Avenue E	Chinaberry Lane	6D	53,100	30,600	0.58
C	Yucaipa Blvd	18th Street	17th Street	6D	53,100	27,796	0.52
D	Avenue E	Yucaipa Blvd	Dunlap Blvd	2U	14,400	11,171	0.78
E	Dunlap Blvd	S of Avenue E	-	2U	14,400	1,725	0.12
F	Avenue E	Dunlap Blvd	18th Street	2U	14,400	4,002	0.28
G	Avenue E	18th Street	17th Street	2U	14,400	5,485	0.38
H	Yucaipa Blvd	17th Street	Tennessee Street	6D	53,100	28,361	0.53
I	18th Street	Avenue E	Yucaipa Blvd	2U	14,400	1,931	0.13

All roadway segments are currently operating at an acceptable LOS under Future (Year 2020) With Project Conditions.

7.2.3 Future (Year 2020) With Project Freeway Mainline LOS

A level of service analysis was conducted to evaluate addition of daily project traffic to Future (Year 2020) volumes on the study area freeway mainline segments. Table 16 summarizes the level of service for freeway segments with addition of project traffic. Mainline analysis worksheets are provided in Appendix C.

Table 16: Future (Year 2020) With Project Freeway Mainline Analysis

Mainline Segment ID	Mainline Segment	AADT[1]	Density[2]	LOS
J	I-10 South of Yucaipa Boulevard	129,114	19.2	C
K	I-10 North of Yucaipa Boulevard	160,378	24.6	C

[1] Volumes referenced from Caltrans' Traffic Data Branch (2017)
[2] Density reported as pc/mi/ln

Both freeway segments are forecast to operate at an acceptable level of service under Future (Year 2020) With Project Conditions.

8. Site Access and Circulation Analysis

This section evaluates the potential impacts of the proposed project on the driveways in and out of the site. The access locations are as follows:

- A1: Right-in/Right-out Only Driveway on Yucaipa Blvd between Avenue E and Chinaberry Lane
- A2: Full Access Driveway on 18th south of Yucaipa Blvd
- A3: Full Access Driveway on 18th Street between A2 and Avenue E
- A4: Full Access Driveway on Avenue E north of Dunlap Blvd
- A5: Full Access Driveway on Avenue E south of Yucaipa Blvd
- A6: Full Access Driveway on Avenue E between A4 and A5

Figure 12 illustrates the location of each of the proposed access locations.

8.1 Project Driveway LOS

A level of service analysis was provided at each of the six (6) proposed project driveways. This does not include the full access driveway at Chinaberry Lane and Yucaipa Blvd which is analyzed in the previous scenarios. Exit approaches were assumed to have one lane, unless specified otherwise. No dedicated left-turn lanes were assumed into any of the project driveways, aside from the full access driveway at Chinaberry Lane.

HCS 10 software was used to evaluate LOS. Table 17 below summarizes the results of the Future (Year 2020) With Project driveway level of service. The LOS worksheets for the driveways are provided in Appendix D.

Table 17: Project Driveway LOS Analysis

Intersection		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
A1	Access Driveway and Yucaipa Blvd	TWSC	10.7	B	13.6	B
A2	Access Driveway and 18th Street	TWSC	8.9	A	9.3	A
A3	Access Driveway and 18th Street	TWSC	8.6	A	8.6	A
A4	Access Driveway and Avenue E	TWSC	9.9	A	10.2	B
A5	Access Driveway and Avenue E	TWSC	11.1	B	11.5	B
A6	Access Driveway and Avenue E	TWSC	11.0	B	12.4	B

As shown in Table 18, all intersections operate at satisfactory LOS (LOS C or better).

8.2 Project Driveway Queuing Analysis

In order to fully assess driveway performances, queue lengths for movements at the project ingress and egress locations were considered. HCS 10 software was used to evaluate 95th percentile queues. The purpose of the queuing analysis was to determine the appropriate storage length at each of the driveways. Table 17 below summarizes the results of the Future (Year 2020) With Project driveway level of service. The LOS worksheets for the driveways are provided in Appendix D.

Table 17: Project Driveway Queuing

ID	Peak Hour	Movement	Queue Length (ft.)	Lane Capacity (ft.)	Capacity Exceeded?
A1	AM	NB - R	0.5	65	N
	PM	NB - R	0.8	65	N
A2	AM	NB - L	1.8	330	N
	PM	NB - L	3.3	330	N
	AM	EB - LTR	4.8	300	N
	PM	EB - LTR	5.5	300	N
A3	AM	NB - L	0.5	300	N
	PM	NB - L	1.0	300	N
	AM	EB - LTR	0.8	210	N
	PM	EB - LTR	0.8	210	N
A4	AM	SB - L	0.3	270	N
	PM	SB - L	0.8	270	N
	AM	EB - LTR	1.8	180	N
	PM	EB - LTR	2.3	180	N
A5	AM	SB - L	3.5	390	N
	PM	SB - L	3.8	390	N
	AM	WB - LTR	14.0	75	N
	PM	WB - LTR	13.3	75	N
A6	AM	NB - L	1.3	60	N
	PM	NB - L	1.0	60	N
	AM	EB - LTR	14.0	30	N
	PM	EB - LTR	13.3	30	N
A7[1]	AM	WB - L	235	200	Y
	PM	WB - L	237	200	Y
	AM	NB - L	132	200	N
	PM	NB - L	119	200	N
	AM	NB - TR	44	120	N
	PM	NB - TR	42	120	N

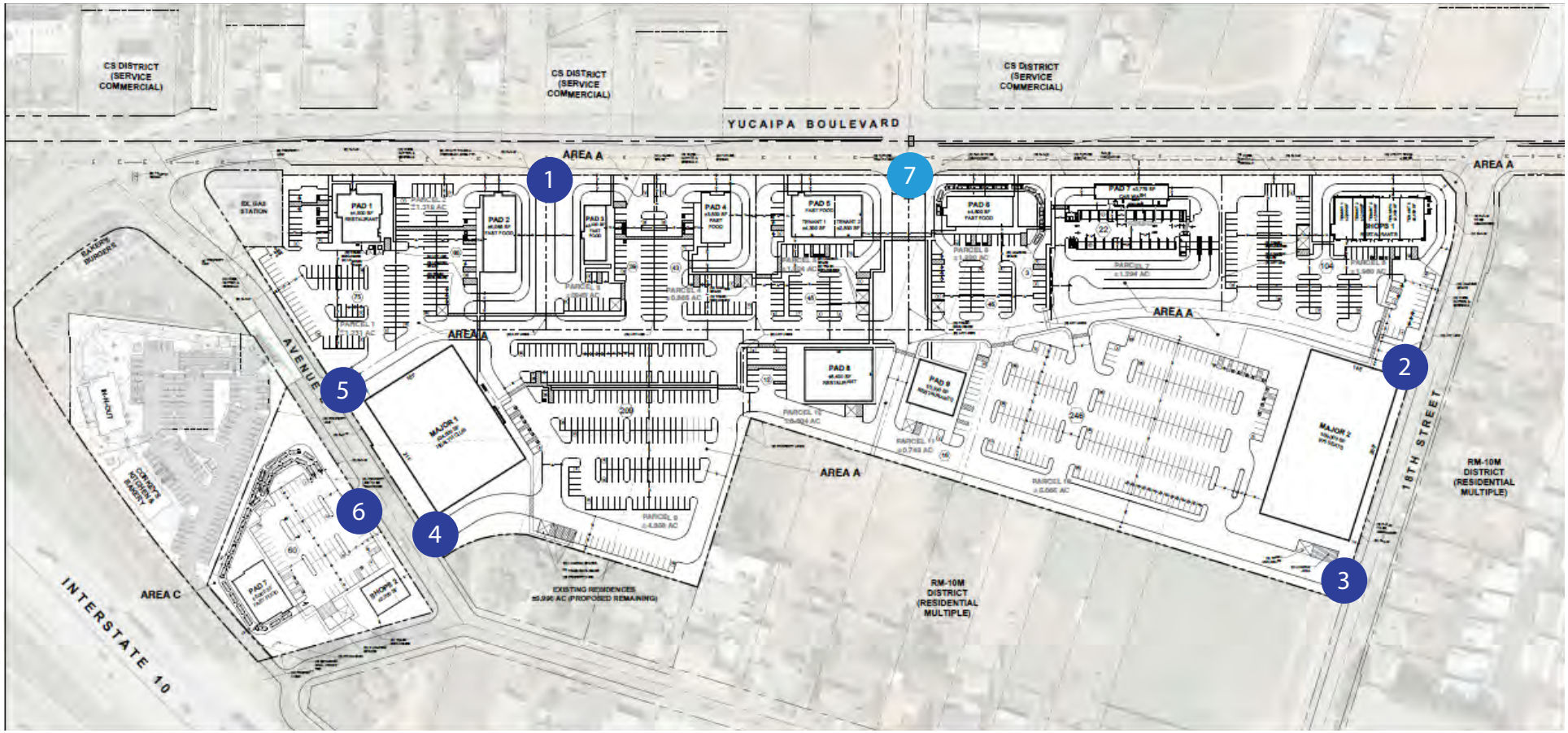
[1]A7 is the full access driveway at Chinaberry Lane and Yucaipa Blvd.

Based on the queuing analysis, the anticipated queue lengths developed by vehicles entering and exiting the driveways would not exceed their respective lane queuing capacity with the exception of:

- WB Left Turn from Yucaipa Blvd into the proposed development at the primary full access driveway (A7)

For the driveways that do not exceed capacity spillover onto to the street network or within the site is not anticipated. Evaluation of the WB Left Turn has shown that the proposed left turn pocket of 200 feet provided by the site plan is not adequate. **It is recommended that the left turn pocket be extended to a minimum of 250 feet to mitigate the queuing effect.** The median on Yucaipa Blvd will need to be re-designed to reflect a left turn pocket of 250 feet as the current plans show a proposed left turn pocket of 200 feet.

Figure 12 - Project Access Points



Legend

- # Project Entrance
- # Full Access Driveway

9. Mitigation Measures

The purpose of this section is to provide recommended improvements for the impacted intersections. Improvements for any impacted locations were determined by utilizing the minimum requirements to achieve acceptable LOS. As such, the most cost-effective and simple improvements were considered first, such as restriping of lane configurations, traffic control modifications, and optimization of signal timing. Large-scale improvements, such as installation of a new traffic signal or any lane additions (which may or may not require additional right-of-way), were recommended where necessary to achieve acceptable LOS. Where applicable, mitigation measures identified in the previous studies were utilized.

9.1 Existing (Year 2018) With Project Intersection Impacts

As shown in Table 11, one of the six study area intersections would be impacted with implementation of the proposed project under Existing (Year 2018) Conditions. The project would cause the delay at intersections already operating at unacceptable levels to increase or cause intersections operating at acceptable to become unacceptable. The following mitigation measures are recommend to either achieve acceptable LOS or to achieve at least the pre-project LOS.

TRA-1: Yucaipa Blvd/Avenue E: Optimization of existing signal timing to provide a longer overall cycle length with additional green time allocated to the westbound left and northbound left turn movements would mitigate the impact at this location.

The LOS with the recommended mitigation measures is presented in Table 18 below. Mitigated LOS worksheets are provided in Appendix E.

Table 18: Existing (Year 2018) With Project Mitigated LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
3	Yucaipa Blvd and Avenue E	Signal	41.3	D	159.0	F
	With Mitigation TRA-1		*20.7*	*C*	*32.8*	*C*

9.2 Existing (Year 2018) With Project Roadway Impacts

As shown on Table 12, the project would cause the roadway segment of Yucaipa Blvd between WB I-10 Ramps and Avenue E (Segment A) to go from acceptable to unacceptable. As indicated in Section 2.7, the roadway segment analysis is used as a planning tool to evaluate the adequacy of existing roadway segment capacities. A v/c ratio of greater than 1.01 to 1.25 suggests that additional review is required; however, if adjacent intersections provide the lanes needed to achieve acceptable peak hour LOS, then segment capacity improvements between key intersections may not be needed. The adjacent intersections were found to operate acceptably with mitigations, as such no mitigations are required for the roadway segments under Existing with Project conditions**.**

9.3 Existing (Year 2018) With Project Freeway Impacts

As shown on Table 13, all freeway mainline segments are forecast to operate at acceptable LOS E or better. No mitigations are required for freeway segments under Existing (Year 2018) with Project conditions.

9.4 Future (Year 2020) With Project Intersection Impacts

As shown in Table 14, one of the six study area intersections would be impacted with implementation of the proposed project under Future (Year 2020) conditions. The project would cause the delay at intersections already operating at unacceptable levels to increase or cause intersections operating at acceptable to become unacceptable. The following mitigation measures are recommend to either achieve acceptable LOS or to achieve at least the pre-project LOS.

TRA-1: Yucaipa Blvd/Avenue E: Optimization of existing signal timing to provide a longer overall cycle length with additional green time allocated to the westbound left and northbound left turn movements would mitigate the impact at this location.

The LOS with the recommended mitigation measures is presented in Table 19 below. Mitigated LOS worksheets are provided in Appendix E.

Table 19: Future (Year 2020) With Project Mitigated LOS

Signalized Intersections		Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
3	Yucaipa Blvd and Avenue E	Signal	38.9	D	168.5	F
	With Mitigation TRA-1		*22.1*	*C*	*61.9*	*E*

Although the PM peak hour operates at unacceptable LOS E, mitigation measure TRA-1 reduces the delay to better than the pre-project conditions. As such, no impact remains after implementation of the mitigation measure.

9.5 Future (Year 2020) With Project Roadway Impacts

As shown on Table 15, none of the roadway segments were impacted by implementation of the proposed project.

9.6 Future (Year 2020) With Project Freeway Impacts

As shown on Table 16, all freeway mainline segments are forecast to operate at acceptable LOS E or better. No mitigations are required for freeway segments under Future (Year 2020) with Project conditions.

10. Conclusion

Based on the results of the level of service analysis, the proposed project can be implemented without significantly impacting any of the study area intersections, roadway segments, or freeway segments with the recommended improvements and mitigation measures.

Appendix A: Traffic Counts

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Yucaipa
N/S: Yucaipa Boulevard/Hilltop Drive
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	12	0	29	0	0	0	0	0	34	2	36	109	0	13	122	187
07:15 AM	21	13	0	34	0	0	0	0	0	29	4	33	114	1	25	140	207
07:30 AM	21	13	0	34	0	0	0	0	0	36	2	38	116	0	26	142	214
07:45 AM	18	16	0	34	0	0	0	0	0	32	4	36	119	0	35	154	224
Total	77	54	0	131	0	0	0	0	0	131	12	143	458	1	99	558	832
08:00 AM	20	10	0	30	0	0	0	0	0	55	0	55	113	1	28	142	227
08:15 AM	15	26	0	41	0	0	0	0	0	37	4	41	123	1	29	153	235
08:30 AM	13	21	0	34	0	0	0	0	0	38	6	44	122	1	23	146	224
08:45 AM	17	16	0	33	0	0	0	0	0	36	5	41	121	0	28	149	223
Total	65	73	0	138	0	0	0	0	0	166	15	181	479	3	108	590	909
Grand Total	142	127	0	269	0	0	0	0	0	297	27	324	937	4	207	1148	1741
Apprch %	52.8	47.2	0		0	0	0		0	91.7	8.3		81.6	0.3	18		
Total %	8.2	7.3	0	15.5	0	0	0	0	0	17.1	1.6	18.6	53.8	0.2	11.9	65.9	

	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	18	16	0	34	0	0	0	0	0	32	4	36	119	0	**35**	**154**	224
08:00 AM	**20**	10	0	30	0	0	0	0	0	**55**	0	**55**	113	**1**	28	142	227
08:15 AM	15	**26**	0	**41**	0	0	0	0	0	37	4	41	**123**	1	29	153	**235**
08:30 AM	13	21	0	34	0	0	0	0	0	38	**6**	44	122	1	23	146	224
Total Volume	66	73	0	139	0	0	0	0	0	162	14	176	477	3	115	595	910
% App. Total	47.5	52.5	0		0	0	0		0	92	8		80.2	0.5	19.3		
PHF	.825	.702	.000	.848	.000	.000	.000	.000	.000	.736	.583	.800	.970	.750	.821	.966	.968

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City of Yucaipa
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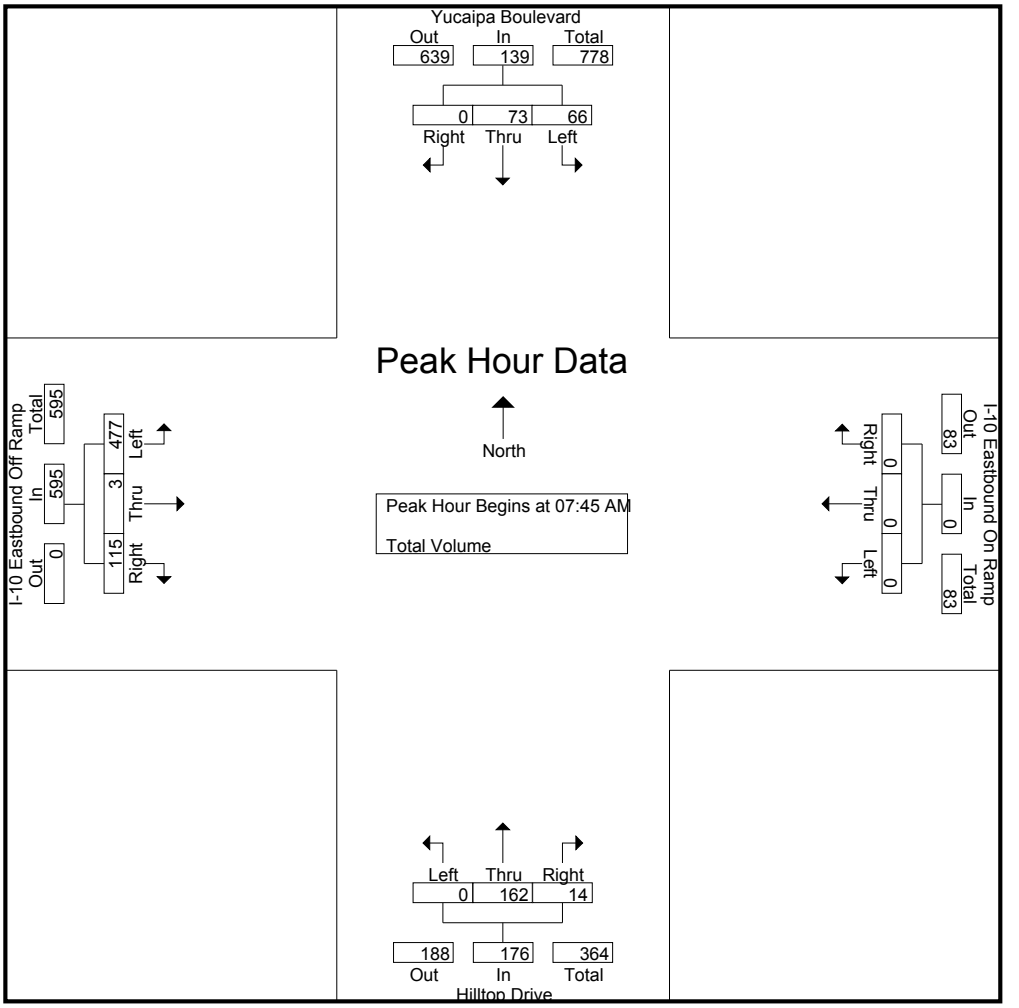
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				08:00 AM				07:45 AM			
+0 mins.	**21**	13	0	34	0	0	0	0	0	**55**	0	**55**	119	0	**35**	**154**
+15 mins.	18	16	0	34	0	0	0	0	0	37	4	41	113	**1**	28	142
+30 mins.	20	10	0	30	0	0	0	0	0	38	**6**	44	**123**	1	29	153
+45 mins.	15	**26**	0	**41**	0	0	0	0	0	36	5	41	122	1	23	146
Total Volume	74	65	0	139	0	0	0	0	0	166	15	181	477	3	115	595
% App. Total	53.2	46.8	0		0	0	0		0	91.7	8.3		80.2	0.5	19.3	
PHF	.881	.625	.000	.848	.000	.000	.000	.000	.000	.755	.625	.823	.970	.750	.821	.966

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City of Yucaipa
N/S: Yucaipa Boulevard/Hilltop Drive
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	26	16	0	42	0	0	0	0	0	32	2	34	245	1	78	324	400
04:15 PM	23	23	0	46	0	0	0	0	0	31	1	32	252	1	55	308	386
04:30 PM	28	10	0	38	0	0	0	0	0	45	1	46	245	1	55	301	385
04:45 PM	26	14	0	40	0	0	0	0	0	47	2	49	240	3	77	320	409
Total	103	63	0	166	0	0	0	0	0	155	6	161	982	6	265	1253	1580
05:00 PM	24	11	0	35	0	0	0	0	0	34	0	34	283	2	77	362	431
05:15 PM	23	14	0	37	0	0	0	0	0	32	2	34	300	5	86	391	462
05:30 PM	19	16	0	35	0	0	0	0	0	27	1	28	267	0	66	333	396
05:45 PM	28	14	0	42	0	0	0	0	0	26	1	27	267	0	70	337	406
Total	94	55	0	149	0	0	0	0	0	119	4	123	1117	7	299	1423	1695
Grand Total	197	118	0	315	0	0	0	0	0	274	10	284	2099	13	564	2676	3275
Apprch %	62.5	37.5	0		0	0	0		0	96.5	3.5		78.4	0.5	21.1		
Total %	6	3.6	0	9.6	0	0	0	0	0	8.4	0.3	8.7	64.1	0.4	17.2	81.7	

	Yucaipa Boulevard Southbound				I-10 Eastbound On Ramp Westbound				Hilltop Drive Northbound				I-10 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**26**	14	0	**40**	0	0	0	0	0	**47**	**2**	**49**	240	3	77	320	409
05:00 PM	24	11	0	35	0	0	0	0	0	34	0	34	283	2	77	362	431
05:15 PM	23	14	0	37	0	0	0	0	0	32	2	34	**300**	**5**	**86**	**391**	**462**
05:30 PM	19	**16**	0	35	0	0	0	0	0	27	1	28	267	0	66	333	396
Total Volume	92	55	0	147	0	0	0	0	0	140	5	145	1090	10	306	1406	1698
% App. Total	62.6	37.4	0		0	0	0		0	96.6	3.4		77.5	0.7	21.8		
PHF	.885	.859	.000	.919	.000	.000	.000	.000	.000	.745	.625	.740	.908	.500	.890	.899	.919

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City of Yucaipa
N/S: Yucaipa Boulevard/Hilltop Drive
E/W: I-10 Eastbound Ramps
Weather: Clear

File Name : 01_YUC_Yucaipa Blvd_Hilltop_10E PM
Site Code : 20218899
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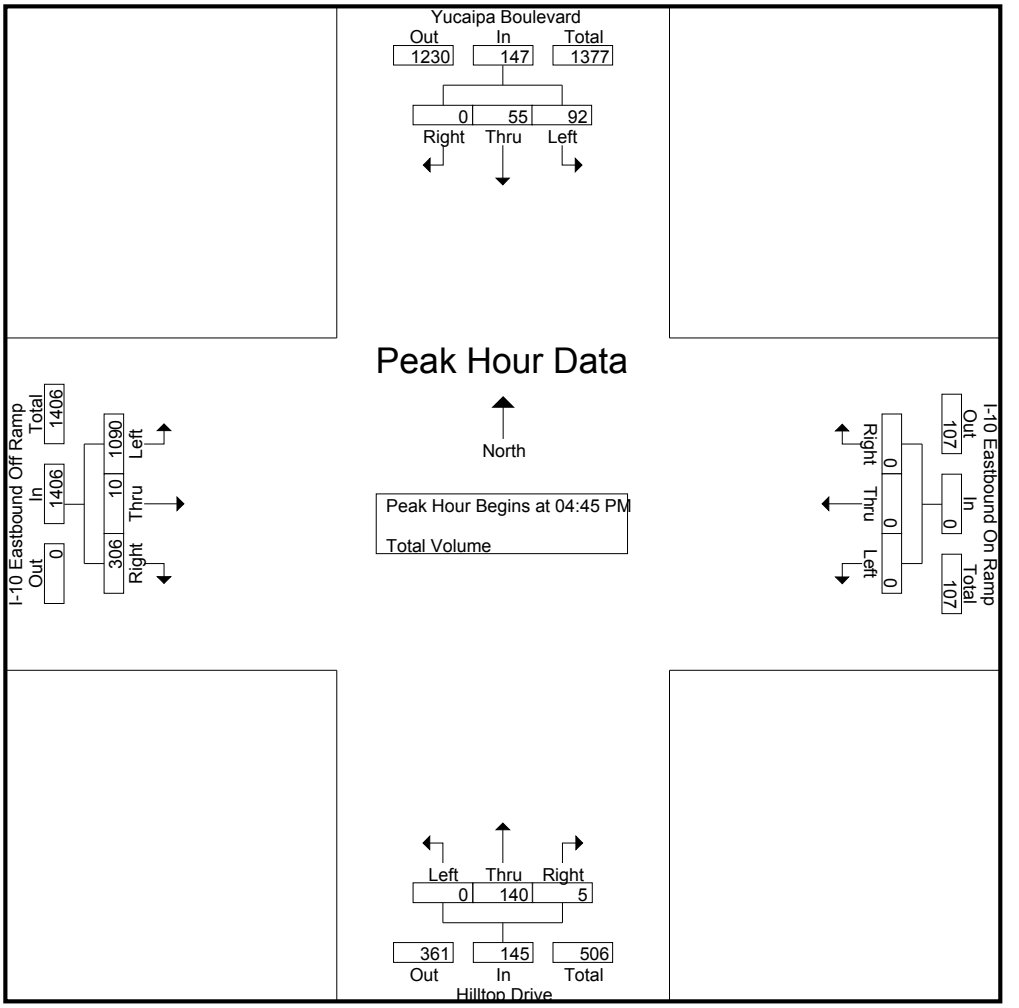

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				05:00 PM			
+0 mins.	26	16	0	42	0	0	0	0	0	45	1	46	283	2	77	362
+15 mins.	23	**23**	0	**46**	0	0	0	0	0	**47**	**2**	**49**	**300**	**5**	**86**	**391**
+30 mins.	**28**	10	0	38	0	0	0	0	0	34	0	34	267	0	66	333
+45 mins.	26	14	0	40	0	0	0	0	0	32	2	34	267	0	70	337
Total Volume	103	63	0	166	0	0	0	0	0	158	5	163	1117	7	299	1423
% App. Total	62	38	0		0	0	0		0	96.9	3.1		78.5	0.5	21	
PHF	.920	.685	.000	.902	.000	.000	.000	.000	.000	.840	.625	.832	.931	.350	.869	.910

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	29	161	190	1	1	21	23	27	115	0	142	0	0	0	0	355
07:15 AM	0	30	156	186	2	0	7	9	17	128	0	145	0	0	0	0	340
07:30 AM	0	31	160	191	4	0	19	23	20	129	0	149	0	0	0	0	363
07:45 AM	0	31	164	195	3	0	20	23	17	139	0	156	0	0	0	0	374
Total	0	121	641	762	10	1	67	78	81	511	0	592	0	0	0	0	1432
08:00 AM	0	26	161	187	2	0	21	23	32	137	0	169	0	0	0	0	379
08:15 AM	0	40	166	206	2	0	24	26	20	140	0	160	0	0	0	0	392
08:30 AM	0	28	139	167	7	0	26	33	23	137	0	160	0	0	0	0	360
08:45 AM	0	28	147	175	3	2	35	40	18	141	0	159	0	0	0	0	374
Total	0	122	613	735	14	2	106	122	93	555	0	648	0	0	0	0	1505
Grand Total	0	243	1254	1497	24	3	173	200	174	1066	0	1240	0	0	0	0	2937
Apprch %	0	16.2	83.8		12	1.5	86.5		14	86	0		0	0	0		
Total %	0	8.3	42.7	51	0.8	0.1	5.9	6.8	5.9	36.3	0	42.2	0	0	0	0	

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	31	160	191	**4**	0	19	23	20	129	0	149	0	0	0	0	363
07:45 AM	0	31	164	195	3	0	20	23	17	139	0	156	0	0	0	0	374
08:00 AM	0	26	161	187	2	0	21	23	**32**	137	0	**169**	0	0	0	0	379
08:15 AM	0	**40**	**166**	**206**	2	0	**24**	**26**	20	**140**	0	160	0	0	0	0	**392**
Total Volume	0	128	651	779	11	0	84	95	89	545	0	634	0	0	0	0	1508
% App. Total	0	16.4	83.6		11.6	0	88.4		14	86	0		0	0	0		
PHF	.000	.800	.980	.945	.688	.000	.875	.913	.695	.973	.000	.938	.000	.000	.000	.000	.962

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W AM
Site Code : 20218899
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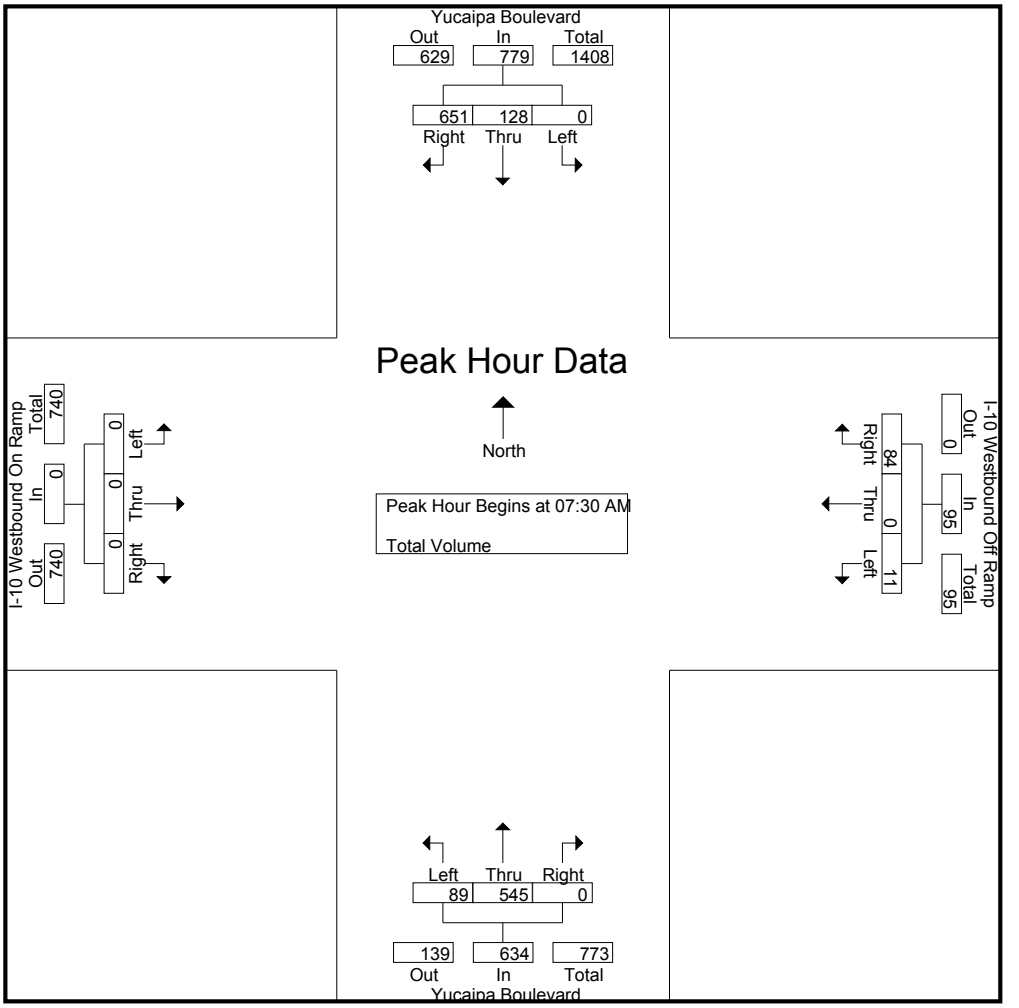

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				08:00 AM				07:00 AM			
+0 mins.	0	31	160	191	2	0	21	23	**32**	137	0	**169**	0	0	0	0
+15 mins.	0	31	164	195	2	0	24	26	20	140	0	160	0	0	0	0
+30 mins.	0	26	161	187	**7**	0	26	33	23	137	0	160	0	0	0	0
+45 mins.	0	**40**	**166**	**206**	3	**2**	**35**	**40**	18	**141**	0	159	0	0	0	0
Total Volume	0	128	651	779	14	2	106	122	93	555	0	648	0	0	0	0
% App. Total	0	16.4	83.6		11.5	1.6	86.9		14.4	85.6	0		0	0	0	
PHF	.000	.800	.980	.945	.500	.250	.757	.763	.727	.984	.000	.959	.000	.000	.000	.000

Counts Unlimited
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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	36	163	199	4	0	23	27	26	255	0	281	0	0	0	0	507
04:15 PM	0	38	150	188	4	0	20	24	25	266	0	291	0	0	0	0	503
04:30 PM	0	35	176	211	3	0	35	38	36	257	0	293	0	0	0	0	542
04:45 PM	0	40	182	222	2	0	37	39	27	261	0	288	0	0	0	0	549
Total	0	149	671	820	13	0	115	128	114	1039	0	1153	0	0	0	0	2101
05:00 PM	0	30	188	218	3	0	38	41	16	283	0	299	0	0	0	0	558
05:15 PM	0	35	171	206	4	0	26	30	20	321	0	341	0	0	0	0	577
05:30 PM	0	33	163	196	2	1	25	28	16	283	0	299	0	0	0	0	523
05:45 PM	0	40	134	174	2	0	29	31	14	272	0	286	0	0	0	0	491
Total	0	138	656	794	11	1	118	130	66	1159	0	1225	0	0	0	0	2149
Grand Total	0	287	1327	1614	24	1	233	258	180	2198	0	2378	0	0	0	0	4250
Apprch %	0	17.8	82.2		9.3	0.4	90.3		7.6	92.4	0		0	0	0		
Total %	0	6.8	31.2	38	0.6	0	5.5	6.1	4.2	51.7	0	56	0	0	0	0	

	Yucaipa Boulevard Southbound				I-10 Westbound Off Ramp Westbound				Yucaipa Boulevard Northbound				I-10 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	35	176	211	3	0	35	38	**36**	257	0	293	0	0	0	0	542
04:45 PM	0	**40**	182	**222**	2	0	37	39	27	261	0	288	0	0	0	0	549
05:00 PM	0	30	**188**	218	3	0	**38**	**41**	16	283	0	299	0	0	0	0	558
05:15 PM	0	35	171	206	**4**	0	26	30	20	**321**	0	**341**	0	0	0	0	**577**
Total Volume	0	140	717	857	12	0	136	148	99	1122	0	1221	0	0	0	0	2226
% App. Total	0	16.3	83.7		8.1	0	91.9		8.1	91.9	0		0	0	0		
PHF	.000	.875	.953	.965	.750	.000	.895	.902	.688	.874	.000	.895	.000	.000	.000	.000	.964

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: I-10 Westbound Ramps
Weather: Clear

File Name : 02_YUC_Yucaipa Blvd_10W PM
Site Code : 20218899
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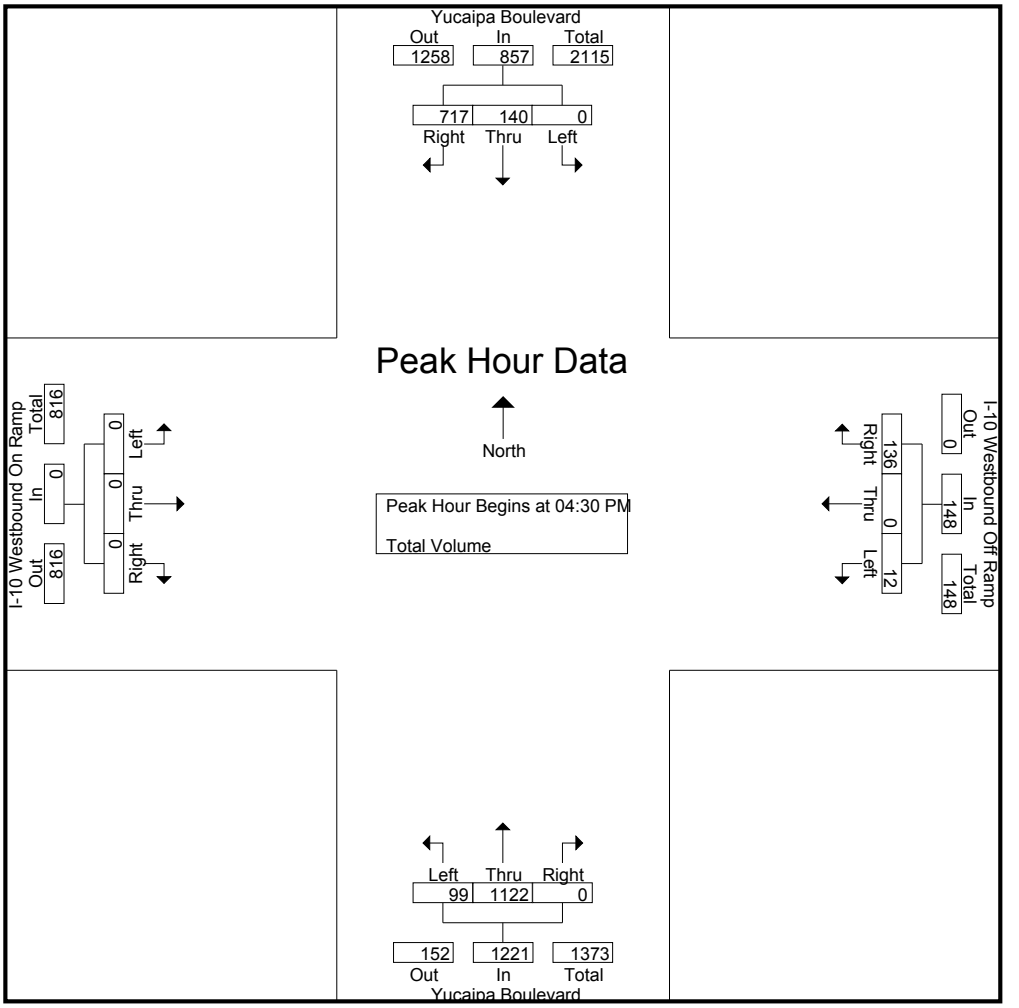

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:45 PM				04:00 PM			
+0 mins.	0	35	176	211	3	0	35	38	**27**	261	0	288	0	0	0	0
+15 mins.	0	**40**	182	**222**	2	0	37	39	16	283	0	299	0	0	0	0
+30 mins.	0	30	**188**	218	3	0	**38**	**41**	20	**321**	0	**341**	0	0	0	0
+45 mins.	0	35	171	206	**4**	0	26	30	16	283	0	299	0	0	0	0
Total Volume	0	140	717	857	12	0	136	148	79	1148	0	1227	0	0	0	0
% App. Total	0	16.3	83.7		8.1	0	91.9		6.4	93.6	0		0	0	0	
PHF	.000	.875	.953	.965	.750	.000	.895	.902	.731	.894	.000	.900	.000	.000	.000	.000

Counts Unlimited
PO Box 1178
Corona, CA 92878
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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: Hampton Road/Avenue E
Weather: Clear

File Name : 03_YUC_Yucaipa Blvd_Hampton_Ave E AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	111	8	121	33	17	6	56	31	86	14	131	36	3	33	72	380
07:15 AM	2	110	10	122	30	3	4	37	22	90	20	132	35	2	35	72	363
07:30 AM	3	119	11	133	31	14	3	48	35	88	20	143	36	6	35	77	401
07:45 AM	4	124	24	152	33	4	5	42	26	109	19	154	37	4	32	73	421
Total	11	464	53	528	127	38	18	183	114	373	73	560	144	15	135	294	1565
08:00 AM	4	109	17	130	27	10	2	39	44	95	22	161	35	6	42	83	413
08:15 AM	2	121	16	139	37	7	7	51	37	113	13	163	39	4	42	85	438
08:30 AM	6	103	15	124	27	5	5	37	39	110	19	168	28	4	33	65	394
08:45 AM	4	103	20	127	33	5	4	42	33	115	30	178	29	4	37	70	417
Total	16	436	68	520	124	27	18	169	153	433	84	670	131	18	154	303	1662
Grand Total	27	900	121	1048	251	65	36	352	267	806	157	1230	275	33	289	597	3227
Apprch %	2.6	85.9	11.5		71.3	18.5	10.2		21.7	65.5	12.8		46.1	5.5	48.4		
Total %	0.8	27.9	3.7	32.5	7.8	2	1.1	10.9	8.3	25	4.9	38.1	8.5	1	9	18.5	

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	119	11	133	31	**14**	3	48	35	88	20	143	36	**6**	35	77	401
07:45 AM	**4**	**124**	**24**	**152**	33	4	5	42	26	109	19	154	37	4	32	73	421
08:00 AM	4	109	17	130	27	10	2	39	**44**	95	**22**	161	35	6	**42**	83	413
08:15 AM	2	121	16	139	**37**	7	**7**	**51**	37	**113**	13	**163**	**39**	4	42	**85**	**438**
Total Volume	13	473	68	554	128	35	17	180	142	405	74	621	147	20	151	318	1673
% App. Total	2.3	85.4	12.3		71.1	19.4	9.4		22.9	65.2	11.9		46.2	6.3	47.5		
PHF	.813	.954	.708	.911	.865	.625	.607	.882	.807	.896	.841	.952	.942	.833	.899	.935	.955

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City of Yucaipa
N/S: Yucaipa Boulevard
E/W: Hampton Road/Avenue E
Weather: Clear

File Name : 03_YUC_Yucaipa Blvd_Hampton_Ave E AM
Site Code : 20218899
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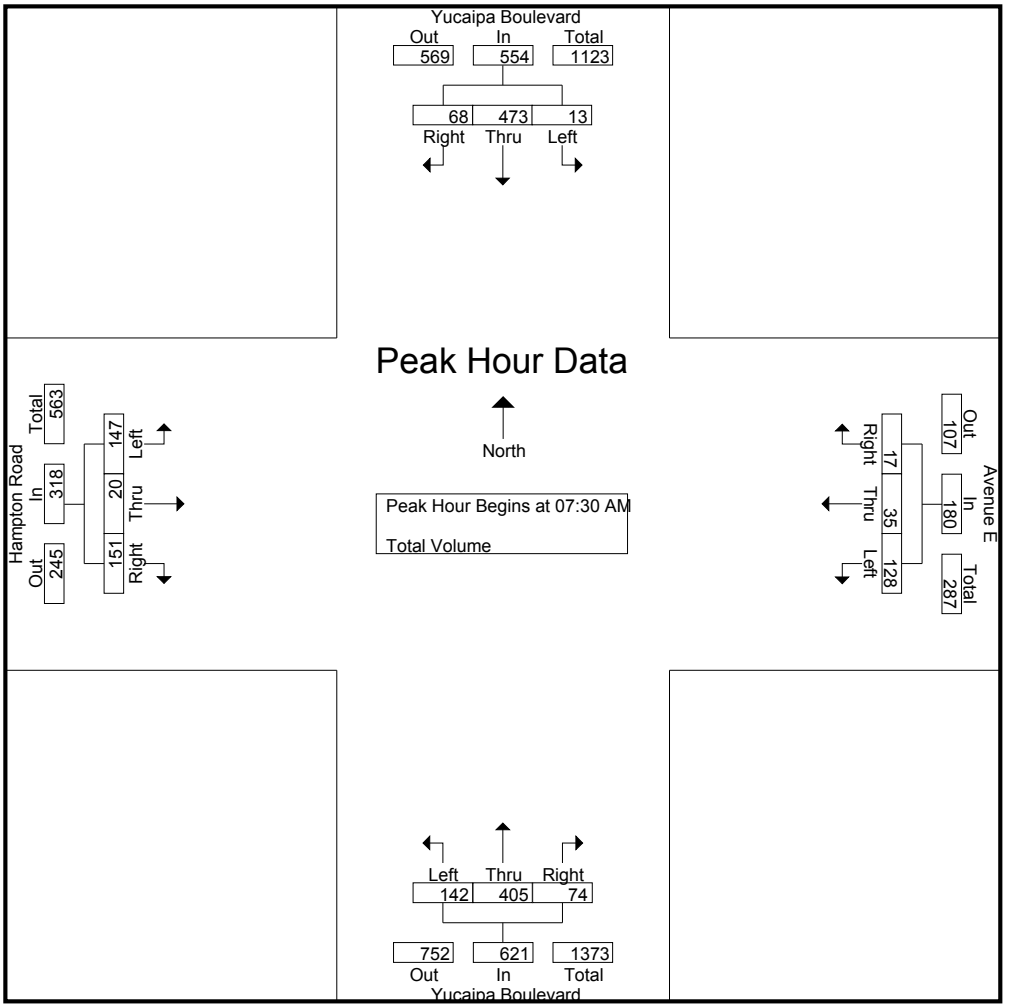

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				08:00 AM				07:30 AM			
+0 mins.	3	119	11	133	**33**	**17**	**6**	**56**	**44**	95	22	161	36	**6**	35	77
+15 mins.	**4**	**124**	**24**	**152**	30	3	4	37	37	113	13	163	37	4	32	73
+30 mins.	4	109	17	130	31	14	3	48	39	110	19	168	35	6	**42**	83
+45 mins.	2	121	16	139	33	4	5	42	33	**115**	**30**	**178**	**39**	4	42	**85**
Total Volume	13	473	68	554	127	38	18	183	153	433	84	670	147	20	151	318
% App. Total	2.3	85.4	12.3		69.4	20.8	9.8		22.8	64.6	12.5		46.2	6.3	47.5	
PHF	.813	.954	.708	.911	.962	.559	.750	.817	.869	.941	.700	.941	.942	.833	.899	.935

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City of Yucaipa
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Groups Printed- Total Volume

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	10	113	14	137	37	11	14	62	45	189	39	273	32	7	43	82	554
04:15 PM	9	98	10	117	30	8	15	53	39	205	38	282	38	12	55	105	557
04:30 PM	19	134	14	167	43	9	7	59	39	206	47	292	23	4	30	57	575
04:45 PM	15	122	10	147	45	11	15	71	40	193	58	291	37	5	45	87	596
Total	53	467	48	568	155	39	51	245	163	793	182	1138	130	28	173	331	2282
05:00 PM	11	117	15	143	47	8	18	73	45	226	44	315	29	5	44	78	609
05:15 PM	22	114	7	143	36	7	8	51	36	260	44	340	19	9	48	76	610
05:30 PM	21	126	12	159	43	7	15	65	38	233	41	312	16	3	37	56	592
05:45 PM	13	108	12	133	30	10	15	55	39	223	40	302	11	2	29	42	532
Total	67	465	46	578	156	32	56	244	158	942	169	1269	75	19	158	252	2343
Grand Total	120	932	94	1146	311	71	107	489	321	1735	351	2407	205	47	331	583	4625
Apprch %	10.5	81.3	8.2		63.6	14.5	21.9		13.3	72.1	14.6		35.2	8.1	56.8		
Total %	2.6	20.2	2	24.8	6.7	1.5	2.3	10.6	6.9	37.5	7.6	52	4.4	1	7.2	12.6	

	Yucaipa Boulevard Southbound				Avenue E Westbound				Yucaipa Boulevard Northbound				Hampton Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	15	122	10	147	45	**11**	15	71	40	193	**58**	291	**37**	5	45	**87**	596
05:00 PM	11	117	**15**	143	**47**	8	**18**	**73**	**45**	226	44	315	29	5	44	78	609
05:15 PM	**22**	114	7	143	36	7	8	51	36	**260**	44	**340**	19	**9**	**48**	76	**610**
05:30 PM	21	**126**	12	**159**	43	7	15	65	38	233	41	312	16	3	37	56	592
Total Volume	69	479	44	592	171	33	56	260	159	912	187	1258	101	22	174	297	2407
% App. Total	11.7	80.9	7.4		65.8	12.7	21.5		12.6	72.5	14.9		34	7.4	58.6		
PHF	.784	.950	.733	.931	.910	.750	.778	.890	.883	.877	.806	.925	.682	.611	.906	.853	.986

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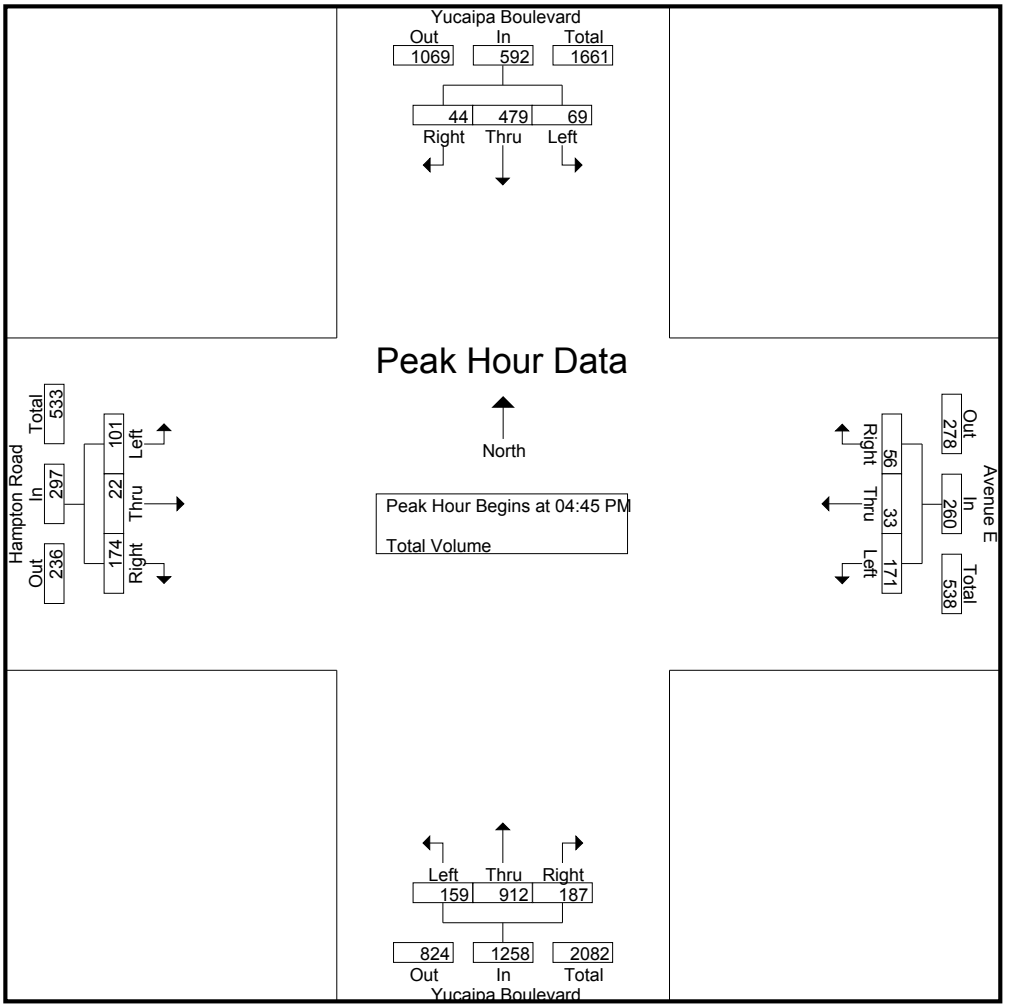

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				05:00 PM				04:00 PM			
+0 mins.	19	**134**	14	**167**	45	**11**	15	71	**45**	226	**44**	315	32	7	43	82
+15 mins.	15	122	10	147	**47**	8	**18**	**73**	36	**260**	44	**340**	**38**	**12**	**55**	**105**
+30 mins.	11	117	**15**	143	36	7	8	51	38	233	41	312	23	4	30	57
+45 mins.	**22**	114	7	143	43	7	15	65	39	223	40	302	37	5	45	87
Total Volume	67	487	46	600	171	33	56	260	158	942	169	1269	130	28	173	331
% App. Total	11.2	81.2	7.7		65.8	12.7	21.5		12.5	74.2	13.3		39.3	8.5	52.3	
PHF	.761	.909	.767	.898	.910	.750	.778	.890	.878	.906	.960	.933	.855	.583	.786	.788

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City of Yucaipa
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E/W: Yucaipa Boulevard
Weather: Clear

File Name : 04_YUC_Knollhaven_Yucaipa Blvd AM
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Groups Printed- Total Volume

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	1	1	148	0	148	0	99	99	248
07:15 AM	0	0	0	131	0	131	1	110	111	242
07:30 AM	1	1	2	140	1	141	2	109	111	254
07:45 AM	0	0	0	156	2	158	1	127	128	286
Total	1	2	3	575	3	578	4	445	449	1030
08:00 AM	0	2	2	145	0	145	0	105	105	252
08:15 AM	0	0	0	155	0	155	3	122	125	280
08:30 AM	1	1	2	115	0	115	1	136	137	254
08:45 AM	1	2	3	136	0	136	0	140	140	279
Total	2	5	7	551	0	551	4	503	507	1065
Grand Total	3	7	10	1126	3	1129	8	948	956	2095
Apprch %	30	70		99.7	0.3		0.8	99.2		
Total %	0.1	0.3	0.5	53.7	0.1	53.9	0.4	45.3	45.6	

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**1**	1	**2**	140	1	141	2	109	111	254
07:45 AM	0	0	0	**156**	**2**	**158**	1	**127**	**128**	**286**
08:00 AM	0	**2**	2	145	0	145	0	105	105	252
08:15 AM	0	0	0	155	0	155	**3**	122	125	280
Total Volume	1	3	4	596	3	599	6	463	469	1072
% App. Total	25	75		99.5	0.5		1.3	98.7		
PHF	.250	.375	.500	.955	.375	.948	.500	.911	.916	.937

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File Name : 04_YUC_Knollhaven_Yucaipa Blvd AM
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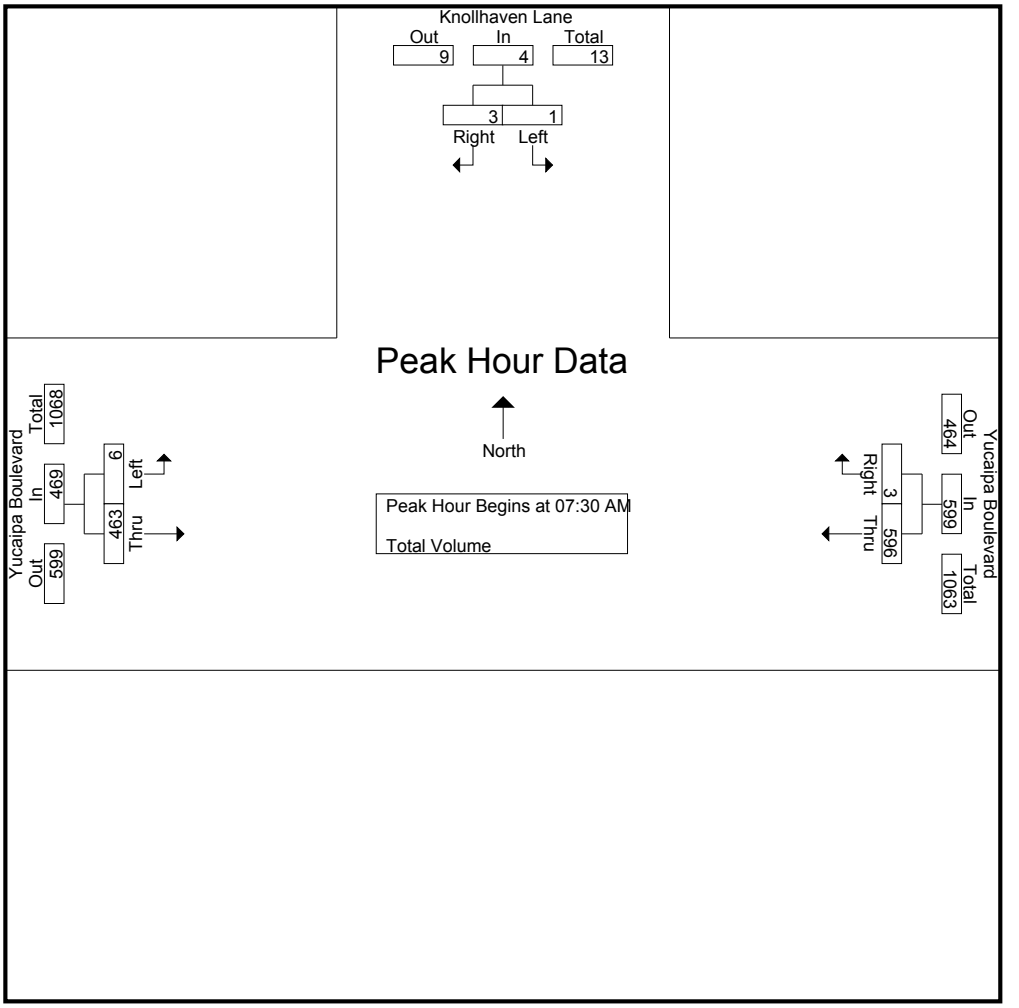

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:30 AM			08:00 AM		
+0 mins.	0	**2**	2	140	1	141	0	105	105
+15 mins.	0	0	0	**156**	**2**	**158**	**3**	122	125
+30 mins.	**1**	1	2	145	0	145	1	136	137
+45 mins.	1	2	**3**	155	0	155	0	**140**	**140**
Total Volume	2	5	7	596	3	599	4	503	507
% App. Total	28.6	71.4		99.5	0.5		0.8	99.2	
PHF	.500	.625	.583	.955	.375	.948	.333	.898	.905

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File Name : 04_YUC_Knollhaven_Yucaipa Blvd PM
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Groups Printed- Total Volume

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	3	2	5	146	0	146	2	193	195	346
04:15 PM	1	1	2	131	0	131	2	239	241	374
04:30 PM	1	1	2	191	0	191	7	236	243	436
04:45 PM	0	4	4	164	0	164	5	212	217	385
Total	5	8	13	632	0	632	16	880	896	1541
05:00 PM	3	5	8	159	1	160	3	266	269	437
05:15 PM	0	7	7	142	0	142	4	281	285	434
05:30 PM	2	4	6	164	1	165	2	280	282	453
05:45 PM	4	2	6	134	1	135	2	257	259	400
Total	9	18	27	599	3	602	11	1084	1095	1724
Grand Total	14	26	40	1231	3	1234	27	1964	1991	3265
Apprch %	35	65		99.8	0.2		1.4	98.6		
Total %	0.4	0.8	1.2	37.7	0.1	37.8	0.8	60.2	61	

	Knollhaven Lane Southbound			Yucaipa Boulevard Westbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	3	5	**8**	159	**1**	160	3	266	269	437
05:15 PM	0	**7**	7	142	0	142	**4**	**281**	**285**	434
05:30 PM	2	4	6	**164**	1	**165**	2	280	282	**453**
05:45 PM	**4**	2	6	134	1	135	2	257	259	400
Total Volume	9	18	27	599	3	602	11	1084	1095	1724
% App. Total	33.3	66.7		99.5	0.5		1	99		
PHF	.563	.643	.844	.913	.750	.912	.688	.964	.961	.951

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City of Yucaipa
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Weather: Clear

File Name : 04_YUC_Knollhaven_Yucaipa Blvd PM
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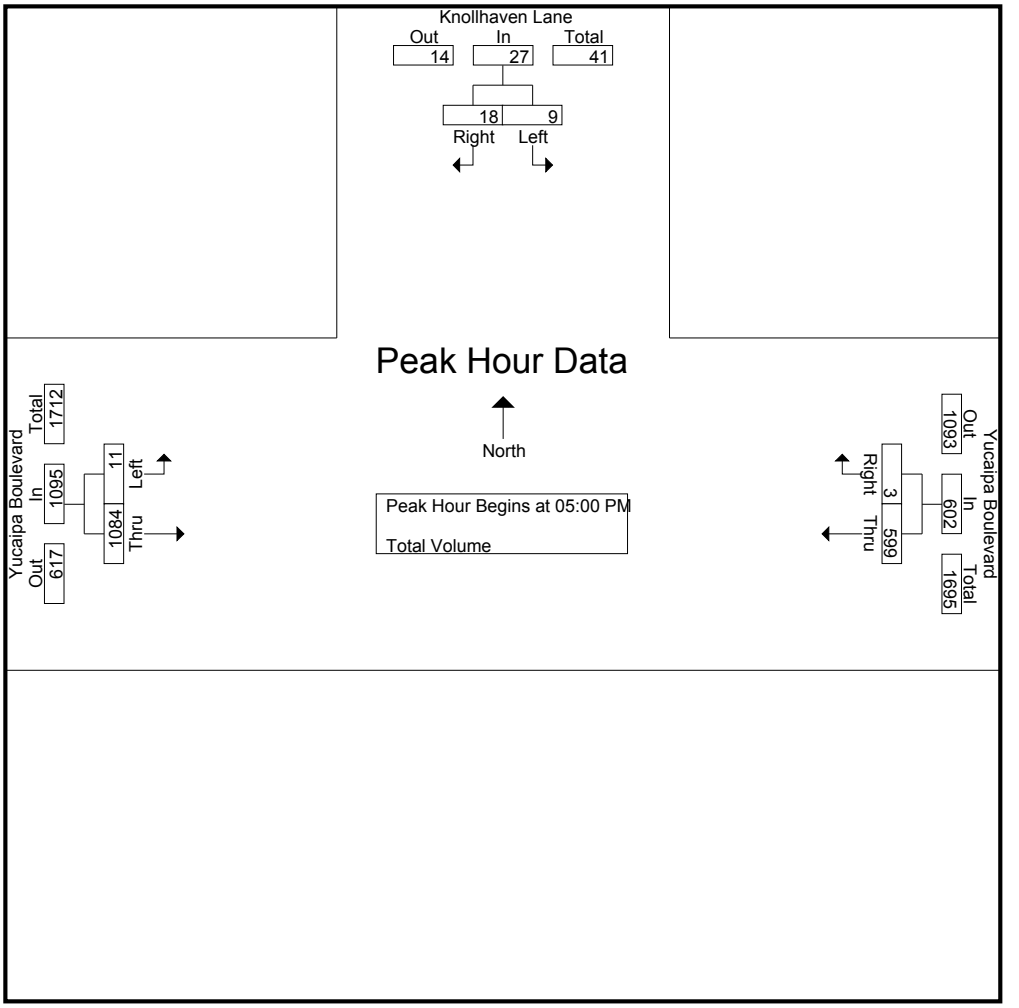

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:30 PM			05:00 PM		
+0 mins.	3	5	**8**	**191**	0	**191**	3	266	269
+15 mins.	0	**7**	7	164	0	164	**4**	**281**	**285**
+30 mins.	2	4	6	159	**1**	160	2	280	282
+45 mins.	**4**	2	6	142	0	142	2	257	259
Total Volume	9	18	27	656	1	657	11	1084	1095
% App. Total	33.3	66.7		99.8	0.2		1	99	
PHF	.563	.643	.844	.859	.250	.860	.688	.964	.961

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City of Yucaipa
N/S: 18th Street
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 05_YUC_18th_Yucaipa Blvd AM
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Groups Printed- Total Volume

	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	134	134	3	2	5	100	0	100	239
07:15 AM	0	135	135	0	0	0	113	0	113	248
07:30 AM	0	140	140	0	1	1	106	0	106	247
07:45 AM	0	166	166	0	0	0	121	1	122	288
Total	0	575	575	3	3	6	440	1	441	1022
08:00 AM	0	153	153	1	0	1	103	0	103	257
08:15 AM	0	140	140	0	0	0	126	0	126	266
08:30 AM	1	127	128	0	1	1	125	0	125	254
08:45 AM	0	141	141	1	0	1	141	0	141	283
Total	1	561	562	2	1	3	495	0	495	1060
Grand Total	1	1136	1137	5	4	9	935	1	936	2082
Apprch %	0.1	99.9		55.6	44.4		99.9	0.1		
Total %	0	54.6	54.6	0.2	0.2	0.4	44.9	0	45	

	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	**166**	**166**	0	0	0	121	**1**	122	**288**
08:00 AM	0	153	153	**1**	0	**1**	103	0	103	257
08:15 AM	0	140	140	0	0	0	**126**	0	**126**	266
08:30 AM	**1**	127	128	0	**1**	1	125	0	125	254
Total Volume	1	586	587	1	1	2	475	1	476	1065
% App. Total	0.2	99.8		50	50		99.8	0.2		
PHF	.250	.883	.884	.250	.250	.500	.942	.250	.944	.924

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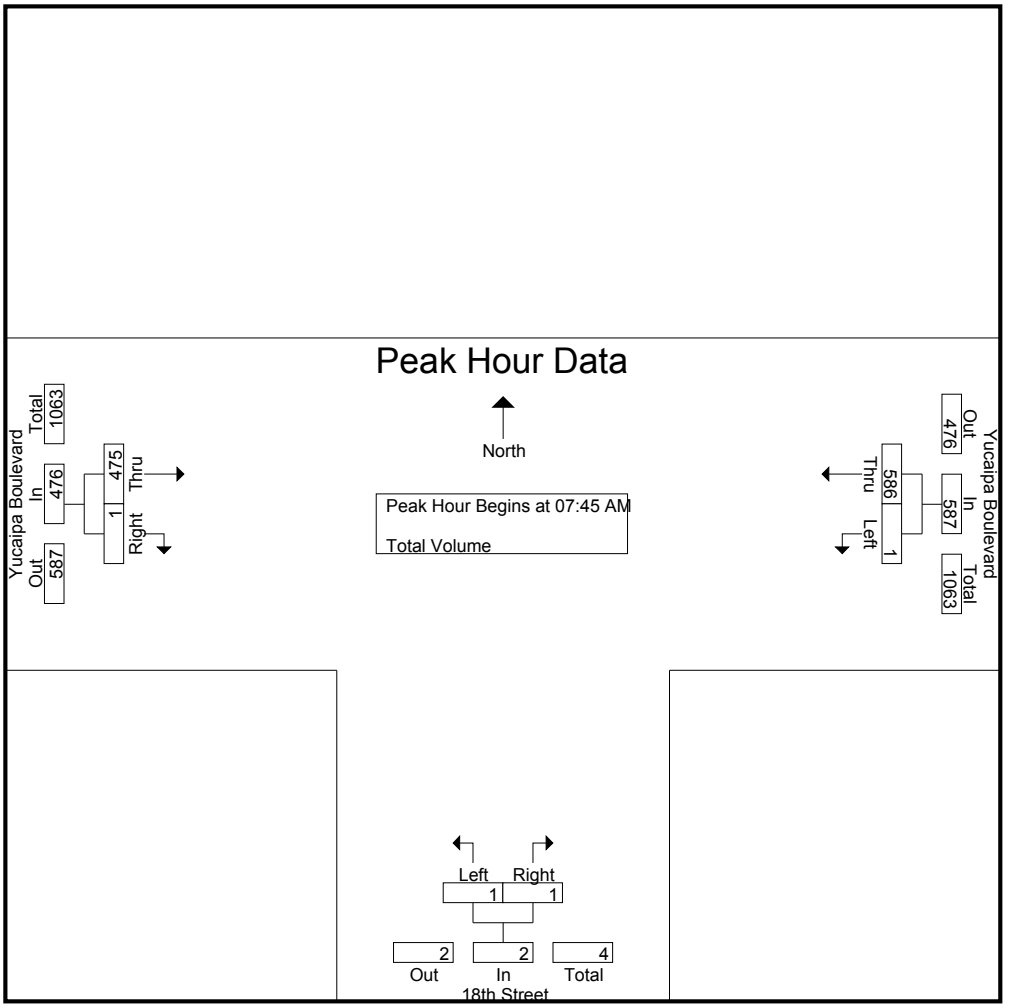

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			08:00 AM		
+0 mins.	0	140	140	**3**	**2**	**5**	103	0	103
+15 mins.	0	**166**	**166**	0	0	0	126	0	126
+30 mins.	0	153	153	0	1	1	125	0	125
+45 mins.	0	140	140	0	0	0	**141**	0	**141**
Total Volume	0	599	599	3	3	6	495	0	495
% App. Total	0	100		50	50		100	0	
PHF	.000	.902	.902	.250	.375	.300	.878	.000	.878

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Groups Printed- Total Volume

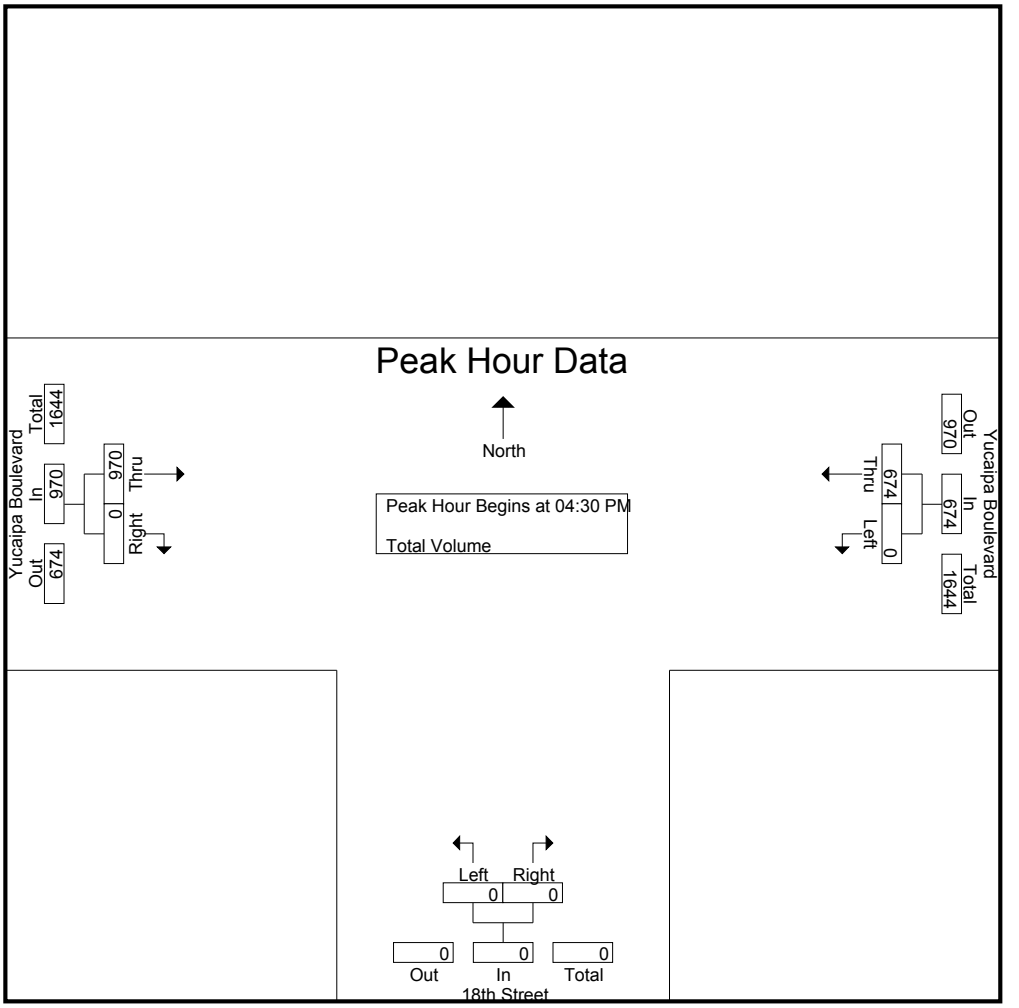
	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	144	144	1	0	1	208	0	208	353
04:15 PM	0	147	147	0	0	0	230	0	230	377
04:30 PM	0	185	185	0	0	0	229	0	229	414
04:45 PM	0	161	161	0	0	0	206	0	206	367
Total	0	637	637	1	0	1	873	0	873	1511
05:00 PM	0	167	167	0	0	0	281	0	281	448
05:15 PM	0	161	161	0	0	0	254	0	254	415
05:30 PM	0	146	146	0	0	0	249	0	249	395
05:45 PM	0	130	130	0	0	0	242	0	242	372
Total	0	604	604	0	0	0	1026	0	1026	1630
Grand Total	0	1241	1241	1	0	1	1899	0	1899	3141
Apprch %	0	100		100	0		100	0		
Total %	0	39.5	39.5	0	0	0	60.5	0	60.5	

	Yucaipa Boulevard Westbound			18th Street Northbound			Yucaipa Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	**185**	**185**	0	0	0	229	0	229	414
04:45 PM	0	161	161	0	0	0	206	0	206	367
05:00 PM	0	167	167	0	0	0	**281**	0	**281**	**448**
05:15 PM	0	161	161	0	0	0	254	0	254	415
Total Volume	0	674	674	0	0	0	970	0	970	1644
% App. Total	0	100		0	0		100	0		
PHF	.000	.911	.911	.000	.000	.000	.863	.000	.863	.917

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Yucaipa
N/S: 18th Street
E/W: Yucaipa Boulevard
Weather: Clear

File Name : 05_YUC_18th_Yucaipa Blvd PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			05:00 PM		
+0 mins.	0	**185**	**185**	**1**	0	**1**	**281**	0	**281**
+15 mins.	0	161	161	0	0	0	254	0	254
+30 mins.	0	167	167	0	0	0	249	0	249
+45 mins.	0	161	161	0	0	0	242	0	242
Total Volume	0	674	674	1	0	1	1026	0	1026
% App. Total	0	100		100	0		100	0	
PHF	.000	.911	.911	.250	.000	.250	.913	.000	.913

Counts Unlimited
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City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	4	7	11	0	28	28	18	0	18	57
07:15 AM	8	8	16	1	25	26	3	0	3	45
07:30 AM	7	10	17	2	32	34	6	0	6	57
07:45 AM	8	13	21	2	27	29	7	0	7	57
Total	27	38	65	5	112	117	34	0	34	216
08:00 AM	9	9	18	0	25	25	10	0	10	53
08:15 AM	8	4	12	4	31	35	10	0	10	57
08:30 AM	6	4	10	1	14	15	11	0	11	36
08:45 AM	16	8	24	0	17	17	9	0	9	50
Total	39	25	64	5	87	92	40	0	40	196
Grand Total	66	63	129	10	199	209	74	0	74	412
Apprch %	51.2	48.8		4.8	95.2		100	0		
Total %	16	15.3	31.3	2.4	48.3	50.7	18	0	18	

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	7	10	17	2	**32**	34	6	0	6	**57**
07:45 AM	8	**13**	**21**	2	27	29	7	0	7	57
08:00 AM	**9**	9	18	0	25	25	**10**	0	**10**	53
08:15 AM	8	4	12	**4**	31	**35**	10	0	10	57
Total Volume	32	36	68	8	115	123	33	0	33	224
% App. Total	47.1	52.9		6.5	93.5		100	0		
PHF	.889	.692	.810	.500	.898	.879	.825	.000	.825	.982

Counts Unlimited
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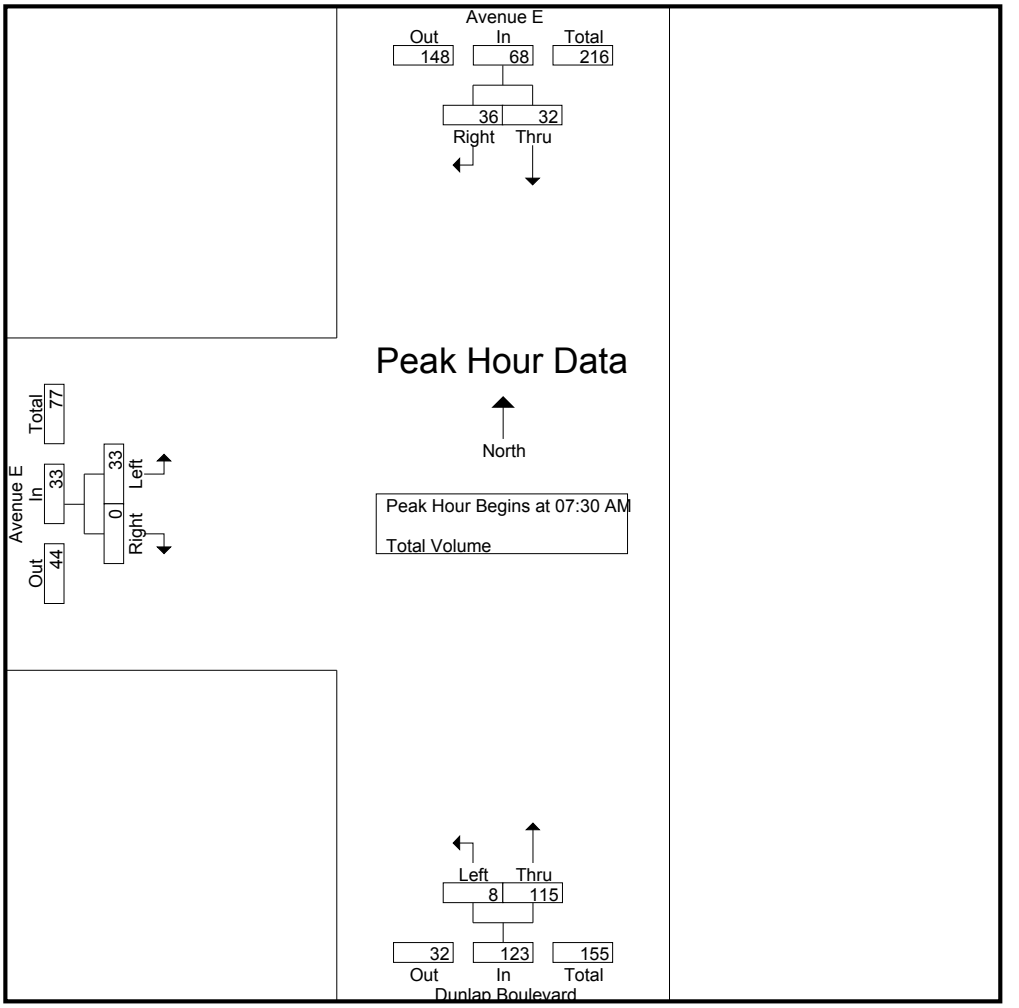
(951) 268-6268

City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap AM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			08:00 AM		
+0 mins.	8	8	16	2	**32**	34	10	0	10
+15 mins.	7	10	17	2	27	29	10	0	10
+30 mins.	8	**13**	**21**	0	25	25	**11**	0	**11**
+45 mins.	**9**	9	18	**4**	31	**35**	9	0	9
Total Volume	32	40	72	8	115	123	40	0	40
% App. Total	44.4	55.6		6.5	93.5		100	0	
PHF	.889	.769	.857	.500	.898	.879	.909	.000	.909

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City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 1

Groups Printed- Total Volume

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	27	4	31	1	22	23	21	2	23	77
04:15 PM	32	8	40	0	16	16	14	2	16	72
04:30 PM	33	8	41	0	12	12	35	0	35	88
04:45 PM	21	10	31	0	17	17	17	3	20	68
Total	113	30	143	1	67	68	87	7	94	305
05:00 PM	29	7	36	0	23	23	20	4	24	83
05:15 PM	25	10	35	0	5	5	13	2	15	55
05:30 PM	21	7	28	0	11	11	15	1	16	55
05:45 PM	23	9	32	0	14	14	3	0	3	49
Total	98	33	131	0	53	53	51	7	58	242
Grand Total	211	63	274	1	120	121	138	14	152	547
Apprch %	77	23		0.8	99.2		90.8	9.2		
Total %	38.6	11.5	50.1	0.2	21.9	22.1	25.2	2.6	27.8	

	Avenue E Southbound			Dunlap Boulevard Northbound			Avenue E Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	32	8	40	0	16	16	14	2	16	72
04:30 PM	**33**	8	**41**	0	12	12	**35**	0	**35**	**88**
04:45 PM	21	**10**	31	0	17	17	17	3	20	68
05:00 PM	29	7	36	0	**23**	**23**	20	**4**	24	83
Total Volume	115	33	148	0	68	68	86	9	95	311
% App. Total	77.7	22.3		0	100		90.5	9.5		
PHF	.871	.825	.902	.000	.739	.739	.614	.563	.679	.884

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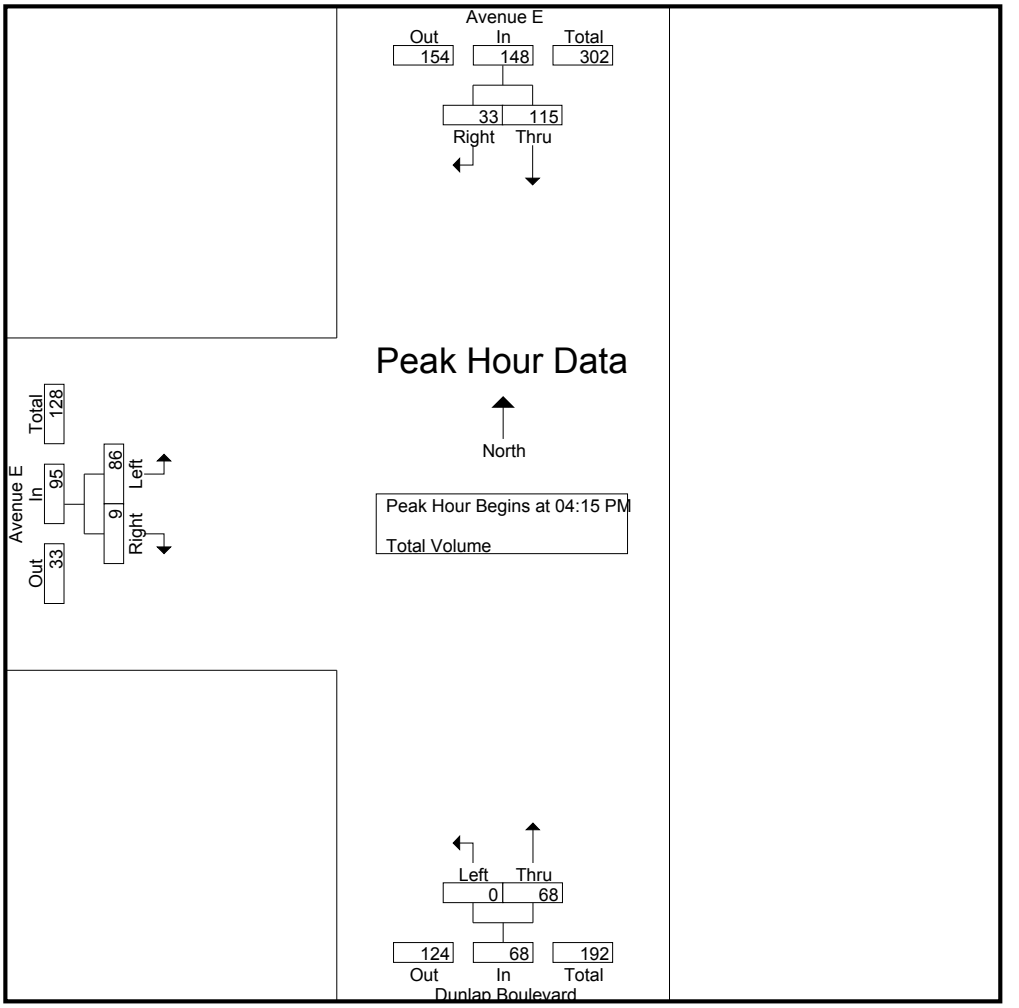
City of Yucaipa
N/S: Avenue E/Dunlap Boulevard
E/W: Avenue E
Weather: Clear

File Name : 06_YUC_Ave E_Dunlap PM
Site Code : 20218899
Start Date : 12/4/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			04:15 PM		
+0 mins.	32	8	40	**1**	**22**	**23**	14	2	16
+15 mins.	**33**	8	**41**	0	16	16	**35**	0	**35**
+30 mins.	21	**10**	31	0	12	12	17	3	20
+45 mins.	29	7	36	0	17	17	20	**4**	24
Total Volume	115	33	148	1	67	68	86	9	95
% App. Total	77.7	22.3		1.5	98.5		90.5	9.5	
PHF	.871	.825	.902	.250	.761	.739	.614	.563	.679

Counts Unlimited, Inc.

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City of Yucaipa
Yucaipa Boulevard
B/ Interstate 10 Westbound - Avenue E
24 Hour Directional Volume Count

YUC001
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		23	169			18	181				
12:15		19	181			12	185				
12:30		17	212			16	177				
12:45		7	187	66	749	15	161	61	704	127	1453
01:00		6	204			11	169				
01:15		3	166			6	194				
01:30		3	200			12	168				
01:45		3	215	15	785	10	148	39	679	54	1464
02:00		2	206			11	175				
02:15		7	216			9	166				
02:30		4	246			11	166				
02:45		3	241	16	909	8	**178**	39	685	55	1594
03:00		5	216			15	**212**				
03:15		10	237			20	**208**				
03:30		9	234			33	**206**				
03:45		7	225	31	912	36	177	104	803	135	1715
04:00		13	273			38	163				
04:15		14	282			42	153				
04:30		16	292			65	197				
04:45		49	291	92	1138	58	182	203	695	295	1833
05:00		43	**315**			59	178				
05:15		33	**330**			85	168				
05:30		47	**322**			104	186				
05:45		76	**302**	199	1269	113	157	361	689	560	1958
06:00		68	259			147	122				
06:15		95	306			153	131				
06:30		113	254			181	146				
06:45		118	228	394	1047	165	125	646	524	1040	1571
07:00		131	191			137	116				
07:15		132	186			155	116				
07:30		143	179			165	108				
07:45		154	169	560	725	169	115	626	455	1186	1180
08:00		161	152			148	125				
08:15		163	146			170	76				
08:30		168	139			153	79				
08:45		178	129	670	566	153	73	624	353	1294	919
09:00		147	116			165	99				
09:15		129	106			166	82				
09:30		145	98			139	54				
09:45		173	79	594	399	155	56	625	291	1219	690
10:00		142	64			173	39				
10:15		153	74			164	43				
10:30		162	49			146	38				
10:45		177	39	634	226	149	25	632	145	1266	371
11:00		**179**	24			**178**	37				
11:15		**167**	31			**177**	19				
11:30		**175**	20			**202**	28				
11:45		**179**	29	700	104	**167**	27	724	111	1424	215
Total		3971	8829	3971	8829	4684	6134	4684	6134	8655	14963
Combined Total		12800		12800		10818		10818		23618	
AM Peak	-	11:00	-	-	-	11:00	-	-	-	-	-
Vol.	-	700	-	-	-	724	-	-	-	-	-
P.H.F.		0.978				0.896					
PM Peak	-	-	05:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	1269	-	-	-	804	-	-	-	-
P.H.F.			0.961				0.948				
Percentage		31.0%	69.0%			43.3%	56.7%				
ADT/AADT		ADT 23,618		AADT 23,618							

Counts Unlimited, Inc.

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Phone: 951-268-6268
email: counts@countsunlimited.com

City of Yucaipa
Yucaipa Boulevard
B/ Avenue E - 18th Street
24 Hour Directional Volume Count

YUC002
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		15	146			11	149				
12:15		14	154			3	161				
12:30		14	202			11	157				
12:45		7	177	50	679	11	137	36	604	86	1283
01:00		9	180			8	127				
01:15		2	158			4	153				
01:30		2	168			4	150				
01:45		2	186	15	692	7	115	23	545	38	1237
02:00		3	193			5	155				
02:15		3	196			6	138				
02:30		1	246			11	137				
02:45		6	225	13	860	9	142	31	572	44	1432
03:00		2	196			13	**183**				
03:15		4	212			20	**166**				
03:30		4	208			33	**149**				
03:45		12	197	22	813	43	**148**	109	646	131	1459
04:00		13	255			39	137				
04:15		21	258			47	117				
04:30		31	236			65	167				
04:45		47	**255**	112	1004	59	147	210	568	322	1572
05:00		48	**273**			55	143				
05:15		45	**287**			86	143				
05:30		50	**264**			93	159				
05:45		67	249	210	1073	93	133	327	578	537	1651
06:00		63	225			138	111				
06:15		100	256			149	121				
06:30		131	225			166	126				
06:45		107	193	401	899	141	92	594	450	995	1349
07:00		138	158			101	97				
07:15		129	146			122	100				
07:30		127	148			133	91				
07:45		151	132	545	584	152	86	508	374	1053	958
08:00		132	136			130	113				
08:15		169	131			139	76				
08:30		143	120			124	66				
08:45		148	104	592	491	127	55	520	310	1112	801
09:00		131	98			147	89				
09:15		126	80			135	70				
09:30		144	85			137	43				
09:45		**174**	65	575	328	155	37	574	239	1149	567
10:00		**167**	55			157	31				
10:15		**147**	65			155	33				
10:30		**158**	43			115	23				
10:45		152	36	624	199	130	18	557	105	1181	304
11:00		163	17			**148**	25				
11:15		151	21			**150**	17				
11:30		164	17			**179**	23				
11:45		151	17	629	72	**142**	18	619	83	1248	155
Total		3788	7694	3788	7694	4108	5074	4108	5074	7896	12768
Combined Total		11482		11482		9182		9182		20664	
AM Peak	-	09:45	-	-	-	11:00	-	-	-	-	-
Vol.	-	646	-	-	-	619	-	-	-	-	-
P.H.F.		0.928				0.865					
PM Peak	-	-	04:45	-	-	-	03:00	-	-	-	-
Vol.	-	-	1079	-	-	-	646	-	-	-	-
P.H.F.			0.940				0.883				
Percentage		33.0%	67.0%			44.7%	55.3%				
ADT/AADT		ADT 20,664		AADT 20,664							

Counts Unlimited, Inc.

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City of Yucaipa
Yucaipa Boulevard
B/ 18th Street - 17th Street
24 Hour Directional Volume Count

YUC003
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		15	135			9	164				
12:15		18	137			15	166				
12:30		15	165			11	154				
12:45		4	152	52	589	10	158	45	642	97	1231
01:00		6	157			8	136				
01:15		3	128			6	160				
01:30		2	151			3	139				
01:45		4	164	15	600	6	133	23	568	38	1168
02:00		0	152			6	168				
02:15		3	198			5	162				
02:30		0	211			12	163				
02:45		1	192	4	753	12	**168**	35	661	39	1414
03:00		1	176			16	**217**				
03:15		2	192			20	**181**				
03:30		1	182			34	**168**				
03:45		0	181	4	731	47	154	117	720	121	1451
04:00		2	208			38	144				
04:15		4	230			51	147				
04:30		5	229			73	185				
04:45		24	206	35	873	60	161	222	637	257	1510
05:00		29	**281**			70	167				
05:15		22	**254**			93	161				
05:30		29	**249**			104	146				
05:45		43	**242**	123	1026	105	130	372	604	495	1630
06:00		26	219			142	131				
06:15		49	255			153	142				
06:30		62	218			179	141				
06:45		77	203	214	895	147	98	621	512	835	1407
07:00		102	173			134	112				
07:15		113	149			135	102				
07:30		107	147			140	90				
07:45		121	124	443	593	166	85	575	389	1018	982
08:00		103	137			153	121				
08:15		126	121			140	80				
08:30		126	103			128	66				
08:45		141	98	496	459	141	58	562	325	1058	784
09:00		106	87			149	94				
09:15		103	78			140	62				
09:30		110	81			144	42				
09:45		142	72	461	318	**161**	33	594	231	1055	549
10:00		121	49			**171**	43				
10:15		113	59			**167**	30				
10:30		143	40			**149**	23				
10:45		137	29	514	177	133	18	620	114	1134	291
11:00		**149**	20			161	26				
11:15		**135**	18			151	14				
11:30		**148**	13			181	20				
11:45		**155**	14	587	65	142	15	635	75	1222	140
Total		2948	7079	2948	7079	4421	5478	4421	5478	7369	12557
Combined Total		10027		10027		9899		9899		19926	
AM Peak	-	11:00	-	-	-	09:45	-	-	-	-	-
Vol.	-	587	-	-	-	648	-	-	-	-	-
P.H.F.		0.947				0.947					
PM Peak	-	-	05:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	1026	-	-	-	734	-	-	-	-
P.H.F.			0.913				0.846				
Percentage		29.4%	70.6%			44.7%	55.3%				
ADT/AADT		ADT 19,926		AADT 19,926							

Counts Unlimited, Inc.

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City of Yucaipa
Avenue E
B/ Yucaipa Boulevard - Dunlap Boulevard
24 Hour Directional Volume Count

YUC004
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		10	56			11	64				
12:15		8	66			15	63				
12:30		6	57			9	**69**				
12:45		4	45	28	224	8	**59**	43	255	71	479
01:00		1	48			7	**74**				
01:15		2	31			4	**75**				
01:30		0	47			9	48				
01:45		1	48	4	174	3	60	23	257	27	431
02:00		1	40			9	48				
02:15		1	36			3	68				
02:30		4	35			3	66				
02:45		0	51	6	162	1	47	16	229	22	391
03:00		0	56			4	65				
03:15		4	63			4	67				
03:30		6	47			3	95				
03:45		0	57	10	223	4	48	15	275	25	498
04:00		4	56			5	62				
04:15		1	59			7	53				
04:30		2	70			12	59				
04:45		14	**78**	21	263	8	71	32	245	53	508
05:00		9	**60**			10	73				
05:15		5	**65**			9	51				
05:30		7	**75**			21	65				
05:45		12	55	33	255	27	55	67	244	100	499
06:00		16	67			20	64				
06:15		22	74			30	49				
06:30		29	69			34	52				
06:45		31	45	98	255	43	55	127	220	225	475
07:00		19	50			56	47				
07:15		24	59			37	45				
07:30		29	59			48	42				
07:45		27	55	99	223	42	51	183	185	282	408
08:00		32	36			39	51				
08:15		19	37			51	31				
08:30		29	38			37	33				
08:45		38	35	118	146	42	41	169	156	287	302
09:00		30	44			46	32				
09:15		30	37			47	27				
09:30		29	26			35	31				
09:45		39	20	128	127	28	29	156	119	284	246
10:00		38	21			51	18				
10:15		37	23			24	23				
10:30		43	21			49	34				
10:45		39	11	157	76	42	15	166	90	323	166
11:00		**38**	12			**52**	19				
11:15		**41**	16			**48**	13				
11:30		**58**	12			**64**	15				
11:45		**50**	12	187	52	**56**	11	220	58	407	110
Total		889	2180	889	2180	1217	2333	1217	2333	2106	4513
Combined Total		3069		3069		3550		3550		6619	
AM Peak	-	11:00	-	-	-	11:00	-	-	-	-	-
Vol.	-	187	-	-	-	220	-	-	-	-	-
P.H.F.		0.806				0.859					
PM Peak	-	-	04:45	-	-	-	00:30	-	-	-	-
Vol.	-	-	278	-	-	-	277	-	-	-	-
P.H.F.			0.891				0.923				
Percentage		29.0%	71.0%			34.3%	65.7%				
ADT/AADT		ADT 6,619		AADT 6,619							

Counts Unlimited, Inc.

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City of Yucaipa
Dunlap Boulevard
S/ Avenue E
24 Hour Directional Volume Count

YUC005
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		3	12			4	7				
12:15		1	10			0	14				
12:30		2	10			0	7				
12:45		0	4	6	36	0	13	4	41	10	77
01:00		1	7			0	8				
01:15		1	10			0	8				
01:30		4	9			1	6				
01:45		2	9	8	35	0	9	1	31	9	66
02:00		2	13			0	7				
02:15		1	6			1	2				
02:30		0	11			0	7				
02:45		0	10	3	40	0	13	1	29	4	69
03:00		0	19			0	**11**				
03:15		2	12			1	**13**				
03:30		0	33			1	**11**				
03:45		1	14	3	78	0	**16**	2	51	5	129
04:00		1	23			0	5				
04:15		1	**16**			0	8				
04:30		2	**35**			0	8				
04:45		1	**20**	5	94	9	10	9	31	14	125
05:00		3	**24**			4	7				
05:15		2	15			2	10				
05:30		5	16			4	7				
05:45		7	3	17	58	6	9	16	33	33	91
06:00		5	3			10	5				
06:15		8	5			13	7				
06:30		6	7			8	8				
06:45		4	4	23	19	9	8	40	28	63	47
07:00		18	4			7	5				
07:15		3	7			**9**	6				
07:30		6	1			**12**	12				
07:45		7	3	34	15	**15**	1	43	24	77	39
08:00		10	4			**9**	3				
08:15		10	0			8	3				
08:30		11	4			5	4				
08:45		9	2	40	10	8	6	30	16	70	26
09:00		9	3			8	6				
09:15		12	0			9	1				
09:30		8	3			4	2				
09:45		11	5	40	11	6	5	27	14	67	25
10:00		8	1			3	3				
10:15		8	1			8	3				
10:30		10	2			10	4				
10:45		5	0	31	4	6	0	27	10	58	14
11:00		**18**	1			4	0				
11:15		**8**	1			7	1				
11:30		**10**	3			4	1				
11:45		**17**	2	53	7	8	2	23	4	76	11
Total		263	407	263	407	223	312	223	312	486	719
Combined Total		670		670		535		535		1205	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	53	-	-	-	45	-	-	-	-	-
P.H.F.		0.736				0.750					
PM Peak	-	-	04:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	95	-	-	-	51	-	-	-	-
P.H.F.			0.679				0.797				
Percentage		39.3%	60.7%			41.7%	58.3%				
ADT/AADT		ADT 1,205		AADT 1,205							

Counts Unlimited, Inc.

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City of Yucaipa
Avenue E
B/ Dunlap Boulevard - 18th Street
24 Hour Directional Volume Count

YUC006
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	14			1	16				
12:15		6	22			5	8				
12:30		2	18			1	15				
12:45		2	13	10	67	1	**22**	8	61	18	128
01:00		1	25			1	**19**				
01:15		1	8			0	**23**				
01:30		1	21			0	**19**				
01:45		1	18	4	72	0	15	1	76	5	148
02:00		1	17			0	12				
02:15		0	10			2	17				
02:30		0	24			0	16				
02:45		1	28	2	79	1	10	3	55	5	134
03:00		0	15			2	28				
03:15		2	24			1	23				
03:30		2	21			3	18				
03:45		1	26	5	86	2	13	8	82	13	168
04:00		0	29			5	23				
04:15		1	**34**			4	16				
04:30		1	**33**			8	12				
04:45		0	**24**	2	120	5	17	22	68	24	188
05:00		2	**33**			7	23				
05:15		2	27			4	5				
05:30		2	22			15	11				
05:45		3	23	9	105	14	14	40	53	49	158
06:00		4	24			15	21				
06:15		8	25			21	14				
06:30		12	24			22	16				
06:45		13	28	37	101	29	11	87	62	124	163
07:00		4	16			28	10				
07:15		8	24			26	13				
07:30		7	18			**34**	5				
07:45		8	11	27	69	**29**	12	117	40	144	109
08:00		9	9			**25**	12				
08:15		8	11			**35**	2				
08:30		6	11			15	5				
08:45		16	14	39	45	17	9	92	28	131	73
09:00		4	8			17	6				
09:15		9	16			15	9				
09:30		12	13			18	8				
09:45		18	10	43	47	5	5	55	28	98	75
10:00		9	7			19	3				
10:15		9	10			9	0				
10:30		10	8			15	6				
10:45		12	7	40	32	10	4	53	13	93	45
11:00		**11**	8			19	5				
11:15		**14**	4			17	1				
11:30		**9**	4			16	3				
11:45		**16**	3	50	19	12	4	64	13	114	32
Total		268	842	268	842	550	579	550	579	818	1421
Combined Total		1110		1110		1129		1129		2239	
AM Peak	-	11:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	50	-	-	-	123	-	-	-	-	-
P.H.F.		0.694				0.879					
PM Peak	-	-	04:15	-	-	-	00:45	-	-	-	-
Vol.	-	-	124	-	-	-	83	-	-	-	-
P.H.F.			0.912				0.902				
Percentage		24.1%	75.9%			48.7%	51.3%				
ADT/AADT		ADT 2,239		AADT 2,239							

Counts Unlimited, Inc.

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City of Yucaipa
Avenue E
B/ 18th Street - 17th Street
24 Hour Directional Volume Count

YUC007
Site Code: 202-18899

Start Time	04-Dec-18 Tue	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	14			1	18				
12:15		6	23			5	9				
12:30		2	16			1	14				
12:45		4	15	12	68	1	24	8	65	20	133
01:00		1	20			1	22				
01:15		1	17			0	24				
01:30		0	16			1	19				
01:45		1	16	3	69	1	17	3	82	6	151
02:00		1	18			0	9				
02:15		0	11			2	15				
02:30		0	25			0	17				
02:45		1	27	2	81	1	8	3	49	5	130
03:00		0	17			2	**31**				
03:15		1	28			1	**26**				
03:30		1	22			2	**21**				
03:45		0	26	2	93	2	**17**	7	95	9	188
04:00		0	23			4	23				
04:15		1	**31**			5	16				
04:30		1	**30**			7	13				
04:45		0	**26**	2	110	4	17	20	69	22	179
05:00		2	**32**			7	22				
05:15		1	24			5	24				
05:30		2	34			14	12				
05:45		3	21	8	111	13	15	39	73	47	184
06:00		3	25			15	19				
06:15		8	23			19	12				
06:30		10	22			25	11				
06:45		10	35	31	105	27	11	86	53	117	158
07:00		6	16			**28**	8				
07:15		11	23			**30**	12				
07:30		7	18			**37**	6				
07:45		10	11	34	68	**32**	9	127	35	161	103
08:00		11	7			26	10				
08:15		8	11			29	2				
08:30		6	10			23	5				
08:45		15	11	40	39	14	10	92	27	132	66
09:00		5	8			17	5				
09:15		5	10			15	9				
09:30		17	14			13	8				
09:45		14	12	41	44	5	5	50	27	91	71
10:00		8	7			16	4				
10:15		11	9			13	0				
10:30		11	8			16	6				
10:45		11	7	41	31	11	5	56	15	97	46
11:00		**14**	8			16	4				
11:15		**13**	4			18	1				
11:30		**12**	4			21	4				
11:45		**14**	5	53	21	9	4	64	13	117	34
Total		269	840	269	840	555	603	555	603	824	1443
Combined Total		1109		1109		1158		1158		2267	
AM Peak	-	11:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	53	-	-	-	127	-	-	-	-	-
P.H.F.		0.946				0.858					
PM Peak	-	-	04:15	-	-	-	03:00	-	-	-	-
Vol.	-	-	119	-	-	-	95	-	-	-	-
P.H.F.			0.930				0.766				
Percentage		24.3%	75.7%			47.9%	52.1%				
ADT/AADT		ADT 2,267		AADT 2,267							

City of Yucaipa
Yucaipa Boulevard
B/ 17th Street - Tennessee Street
24 Hour Directional Volume Count

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
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YUC002
Site Code: 202-19142

Start Time	28-Feb-19 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		26	132			14	**169**				
12:15		23	159			12	**184**				
12:30		19	150			13	**171**				
12:45		15	145	83	586	6	**158**	45	682	128	1268
01:00		14	146			2	150				
01:15		22	137			7	171				
01:30		18	154			3	156				
01:45		11	162	65	599	9	144	21	621	86	1220
02:00		7	150			3	150				
02:15		11	157			11	168				
02:30		9	156			5	155				
02:45		8	205	35	668	12	143	31	616	66	1284
03:00		6	193			21	161				
03:15		8	190			21	180				
03:30		13	213			25	132				
03:45		10	228	37	824	36	132	103	605	140	1429
04:00		8	283			34	133				
04:15		14	241			37	138				
04:30		7	282			72	145				
04:45		16	268	45	1074	72	145	215	561	260	1635
05:00		18	287			79	136				
05:15		29	254			98	161				
05:30		24	**262**			110	147				
05:45		24	**279**	95	1082	115	167	402	611	497	1693
06:00		43	**298**			130	155				
06:15		37	**290**			169	127				
06:30		55	228			**189**	153				
06:45		67	229	202	1045	**159**	123	647	558	849	1603
07:00		68	182			**138**	104				
07:15		101	163			**177**	82				
07:30		114	124			167	65				
07:45		133	126	416	595	151	82	633	333	1049	928
08:00		111	139			149	92				
08:15		102	126			146	71				
08:30		107	123			143	67				
08:45		146	91	466	479	121	86	559	316	1025	795
09:00		117	94			136	64				
09:15		110	95			126	74				
09:30		143	77			141	58				
09:45		144	70	514	336	149	35	552	231	1066	567
10:00		117	68			162	42				
10:15		136	94			135	30				
10:30		132	67			131	31				
10:45		**163**	45	548	274	145	25	573	128	1121	402
11:00		**126**	44			118	21				
11:15		**142**	45			149	24				
11:30		**135**	35			154	13				
11:45		157	48	560	172	145	10	566	68	1126	240
Total		3066	7734	3066	7734	4347	5330	4347	5330	7413	13064
Combined Total		10800		10800		9677		9677		20477	
AM Peak	-	10:45	-	-	-	06:30	-	-	-	-	-
Vol.	-	566	-	-	-	663	-	-	-	-	-
P.H.F.		0.868				0.877					
PM Peak	-	-	05:30	-	-	-	12:00	-	-	-	-
Vol.	-	-	1129	-	-	-	682	-	-	-	-
P.H.F.			0.947				0.927				
Percentage		28.4%	71.6%			44.9%	55.1%				
ADT/AADT		ADT 20,477		AADT 20,477							

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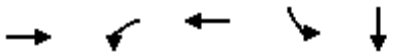
City of Yucaipa
18th Street
B/ Avenue E - Yucaipa Boulevard
24 Hour Directional Volume Count

YUC001
Site Code: 202-19142

Start Time	28-Feb-19 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	0			0	0				
12:15		0	0			0	1				
12:30		0	0			0	0				
12:45		0	0	1	0	0	0	0	1	1	1
01:00		0	0			0	0				
01:15		0	0			0	1				
01:30		0	0			0	0				
01:45		0	0	0	0	0	0	0	1	0	1
02:00		0	0			0	**1**				
02:15		0	0			0	**0**				
02:30		0	0			0	**0**				
02:45		0	0	0	0	0	**2**	0	3	0	3
03:00		0	0			0	1				
03:15		**0**	0			0	0				
03:30		**0**	0			0	0				
03:45		**1**	0	1	0	0	0	0	1	1	1
04:00		**1**	0			0	1				
04:15		0	0			0	1				
04:30		0	0			0	0				
04:45		0	0	1	0	0	0	0	2	1	2
05:00		0	0			0	0				
05:15		0	0			0	0				
05:30		0	0			0	0				
05:45		0	0	0	0	0	0	0	0	0	0
06:00		0	0			0	0				
06:15		0	0			0	0				
06:30		0	0			**1**	0				
06:45		0	0	0	0	**1**	0	2	0	2	0
07:00		0	0			**2**	0				
07:15		0	0			**1**	0				
07:30		2	0			1	0				
07:45		0	0	2	0	1	0	5	0	7	0
08:00		0	0			1	0				
08:15		0	0			0	0				
08:30		0	0			0	0				
08:45		0	0	0	0	1	0	2	0	2	0
09:00		1	0			3	0				
09:15		0	0			0	0				
09:30		0	0			0	0				
09:45		0	0	1	0	1	0	4	0	5	0
10:00		1	0			0	0				
10:15		0	0			1	0				
10:30		0	0			0	0				
10:45		0	0	1	0	0	0	1	0	2	0
11:00		0	0			0	1				
11:15		1	0			0	0				
11:30		0	0			2	0				
11:45		0	0	1	0	0	0	2	1	3	1
Total		8	0	8	0	16	9	16	9	24	9
Combined Total		8		8		25		25		33	
AM Peak	-	03:15	-	-	-	06:30	-	-	-	-	-
Vol.	-	2	-	-	-	5	-	-	-	-	-
P.H.F.		0.500				0.625					
PM Peak	-	-	-	-	-	-	02:00	-	-	-	-
Vol.	-	-	-	-	-	-	3	-	-	-	-
P.H.F.							0.375				
Percentage		100.0%	0.0%			64.0%	36.0%				
ADT/AADT		ADT 33		AADT 33							

Appendix B: LOS Worksheets



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	191	72	79	332	314
v/c Ratio	0.35	0.54	0.09	0.33	0.31
Control Delay	18.6	48.7	28.2	8.1	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.6	48.7	28.2	8.1	6.4
Queue Length 50th (ft)	24	27	14	54	37
Queue Length 95th (ft)	45	#59	23	116	90
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	1070	134	1609	1018	1004
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.54	0.05	0.33	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	162	14	66	73	0	0	0	0	477	3	115
Future Volume (veh/h)	0	162	14	66	73	0	0	0	0	477	3	115
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	176	15	72	79	0				323	276	125
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	330	28	88	797	0				1012	694	314
Arrive On Green	0.00	0.11	0.11	0.05	0.24	0.00				0.60	0.60	0.60
Sat Flow, veh/h	0	3218	264	1681	3441	0				1681	1151	521
Grp Volume(v), veh/h	0	94	97	72	79	0				323	0	401
Grp Sat Flow(s),veh/h/ln	0	1676	1718	1681	1676	0				1681	0	1673
Q Serve(g_s), s	0.0	2.6	2.7	2.1	0.9	0.0				4.7	0.0	6.3
Cycle Q Clear(g_c), s	0.0	2.6	2.7	2.1	0.9	0.0				4.7	0.0	6.3
Prop In Lane	0.00		0.15	1.00		0.00				1.00		0.31
Lane Grp Cap(c), veh/h	0	177	181	88	797	0				1012	0	1008
V/C Ratio(X)	0.00	0.53	0.54	0.82	0.10	0.00				0.32	0.00	0.40
Avail Cap(c_a), veh/h	0	536	550	134	1609	0				1012	0	1008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.2	21.2	23.5	14.9	0.0				4.9	0.0	5.2
Incr Delay (d2), s/veh	0.0	2.4	2.5	20.3	0.1	0.0				0.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	1.4	1.5	0.4	0.0				2.4	0.0	3.1
LnGrp Delay(d),s/veh	0.0	23.6	23.7	43.8	14.9	0.0				5.7	0.0	6.4
LnGrp LOS		C	C	D	B					A		A
Approach Vol, veh/h		191			151						724	
Approach Delay, s/veh		23.7			28.7						6.1	
Approach LOS		C			C						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			6.6	9.3		34.1		15.9
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			4.0	16.0		18.0		24.0
Max Q Clear Time (g_c+I1), s			4.1	4.7		8.3		2.9
Green Ext Time (p_c), s			0.0	0.7		2.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	97	592	139	708	52	51
v/c Ratio	0.49	0.56	0.21	0.47	0.06	0.06
Control Delay	26.5	20.1	16.2	4.4	0.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	20.1	16.2	4.4	0.7	0.7
Queue Length 50th (ft)	29	97	24	127	0	0
Queue Length 95th (ft)	#73	139	40	168	5	4
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1072	1500	818	796
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.34	0.13	0.47	0.06	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

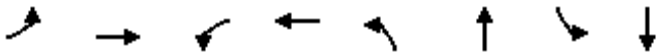
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	545	0	0	128	651	11	0	84	0	0	0
Future Volume (veh/h)	89	545	0	0	128	651	11	0	84	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	97	592	0	0	139	0	0	0	104			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	120	841	0	0	334	149	0	1040	1767			
Arrive On Green	0.14	0.50	0.00	0.00	0.07	0.00	0.00	0.00	0.59			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	97	592	0	0	139	0	0	0	104			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.8	6.8	0.0	0.0	2.0	0.0	0.0	0.0	0.7			
Cycle Q Clear(g_c), s	2.8	6.8	0.0	0.0	2.0	0.0	0.0	0.0	0.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	120	841	0	0	334	149	0	1040	1767			
V/C Ratio(X)	0.81	0.70	0.00	0.00	0.42	0.00	0.00	0.00	0.06			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	1040	1767			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.85	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	21.1	11.0	0.0	0.0	21.9	0.0	0.0	0.0	4.4			
Incr Delay (d2), s/veh	11.5	1.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	3.1	0.0	0.0	1.0	0.0	0.0	0.0	0.3			
LnGrp Delay(d),s/veh	32.6	12.1	0.0	0.0	22.6	0.0	0.0	0.0	4.4			
LnGrp LOS	C	B			C				A			
Approach Vol, veh/h		689			139			104				
Approach Delay, s/veh		15.0			22.6			4.4				
Approach LOS		B			C			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		33.5		16.5			7.6	9.0
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		2.7		8.8			4.8	4.0
Green Ext Time (p_c), s		0.2		3.7			0.0	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	154	520	14	588	139	56	160	186
v/c Ratio	0.42	0.46	0.04	0.52	0.44	0.10	0.39	0.31
Control Delay	30.4	17.5	31.2	27.6	32.2	18.3	30.0	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	17.5	31.2	27.6	32.2	18.3	30.0	7.1
Queue Length 50th (ft)	58	95	7	152	70	17	79	10
Queue Length 95th (ft)	126	144	24	205	129	45	139	59
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1128	368	1129	318	549	406	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.46	0.04	0.52	0.44	0.10	0.39	0.31

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	405	74	13	473	68	128	35	17	147	20	151
Future Volume (veh/h)	142	405	74	13	473	68	128	35	17	147	20	151
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	154	440	80	14	514	74	139	38	18	160	22	164
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	965	174	370	1001	144	341	363	172	470	58	431
Arrive On Green	0.44	0.68	0.68	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2838	513	1681	2944	422	1193	1133	537	1342	181	1346
Grp Volume(v), veh/h	154	259	261	14	292	296	139	0	56	160	0	186
Grp Sat Flow(s),veh/h/ln	1681	1676	1674	1681	1676	1690	1193	0	1670	1342	0	1527
Q Serve(g_s), s	6.3	7.1	7.3	0.7	13.9	14.0	10.2	0.0	2.4	9.5	0.0	9.4
Cycle Q Clear(g_c), s	6.3	7.1	7.3	0.7	13.9	14.0	19.6	0.0	2.4	11.9	0.0	9.4
Prop In Lane	1.00		0.31	1.00		0.25	1.00		0.32	1.00		0.88
Lane Grp Cap(c), veh/h	370	570	569	370	570	575	341	0	534	470	0	489
V/C Ratio(X)	0.42	0.45	0.46	0.04	0.51	0.52	0.41	0.00	0.10	0.34	0.00	0.38
Avail Cap(c_a), veh/h	370	570	569	370	570	575	341	0	534	470	0	489
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	11.7	11.7	30.7	26.4	26.4	33.9	0.0	23.9	28.1	0.0	26.3
Incr Delay (d2), s/veh	3.4	2.6	2.7	0.2	3.3	3.3	3.6	0.0	0.4	2.0	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.6	3.6	0.3	6.9	7.0	3.7	0.0	1.1	3.8	0.0	4.3
LnGrp Delay(d),s/veh	27.0	14.3	14.4	30.9	29.6	29.7	37.5	0.0	24.3	30.1	0.0	28.6
LnGrp LOS	C	B	B	C	C	C	D		C	C		C
Approach Vol, veh/h		674			602			195			346	
Approach Delay, s/veh		17.2			29.7			33.7			29.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		21.6	2.7	9.3		13.9	8.3	16.0
Green Ext Time (p_c), s		0.5	0.0	3.3		1.5	0.3	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	115	32	36	33	0
Future Vol, veh/h	8	115	32	36	33	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	125	35	39	36	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	74	0	-	0	198	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1526	-	-	-	791	1012
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	884	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1526	-	-	-	786	1012
Mov Cap-2 Maneuver	-	-	-	-	786	-
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	884	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1526	-	-	-	786
HCM Lane V/C Ratio	0.006	-	-	-	0.046
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	475	1	1	586	1	1
Future Vol, veh/h	475	1	1	586	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	516	1	1	637	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	517	0	838	259
Stage 1	-	-	-	-	517	-
Stage 2	-	-	-	-	321	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1045	-	305	740
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1045	-	305	740
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	708	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	537	-	-	1045	-
HCM Lane V/C Ratio	0.004	-	-	0.001	-
HCM Control Delay (s)	11.7	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

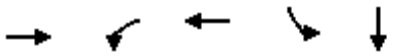
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	463	596	3	1	3
Future Vol, veh/h	6	463	596	3	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	503	648	3	1	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	651	0	-	0	916	326
Stage 1	-	-	-	-	650	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	931	-	-	-	272	670
Stage 1	-	-	-	-	481	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	931	-	-	-	270	670
Mov Cap-2 Maneuver	-	-	-	-	378	-
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	754	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	931	-	-	-	562
HCM Lane V/C Ratio	0.007	-	-	-	0.008
HCM Control Delay (s)	8.9	-	-	-	11.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	157	100	60	782	747
v/c Ratio	0.40	0.90	0.08	0.75	0.73
Control Delay	32.4	101.7	21.7	15.2	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	101.7	21.7	15.2	13.0
Queue Length 50th (ft)	35	47	11	223	180
Queue Length 95th (ft)	61	#135	24	426	365
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	714	111	1117	1045	1029
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.90	0.05	0.75	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	140	5	92	55	0	0	0	0	1090	10	306
Future Volume (veh/h)	0	140	5	92	55	0	0	0	0	1090	10	306
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	152	5	100	60	0				764	600	333
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	256	8	112	662	0				1170	743	412
Arrive On Green	0.00	0.08	0.08	0.07	0.20	0.00				0.70	0.70	0.70
Sat Flow, veh/h	0	3402	109	1681	3441	0				1681	1068	593
Grp Volume(v), veh/h	0	77	80	100	60	0				764	0	933
Grp Sat Flow(s),veh/h/ln	0	1676	1746	1681	1676	0				1681	0	1660
Q Serve(g_s), s	0.0	3.3	3.3	4.4	1.1	0.0				19.0	0.0	29.3
Cycle Q Clear(g_c), s	0.0	3.3	3.3	4.4	1.1	0.0				19.0	0.0	29.3
Prop In Lane	0.00		0.06	1.00		0.00				1.00		0.36
Lane Grp Cap(c), veh/h	0	130	135	112	662	0				1170	0	1155
V/C Ratio(X)	0.00	0.59	0.60	0.89	0.09	0.00				0.65	0.00	0.81
Avail Cap(c_a), veh/h	0	358	372	112	1118	0				1170	0	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	33.5	33.5	34.7	24.6	0.0				6.4	0.0	7.9
Incr Delay (d2), s/veh	0.0	4.2	4.1	52.8	0.1	0.0				2.8	0.0	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	1.8	3.7	0.5	0.0				9.6	0.0	15.2
LnGrp Delay(d),s/veh	0.0	37.7	37.6	87.5	24.7	0.0				9.2	0.0	14.0
LnGrp LOS		D	D	F	C					A		B
Approach Vol, veh/h		157			160						1697	
Approach Delay, s/veh		37.6			63.9						11.9	
Approach LOS		D			E						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			9.0	9.8		56.2		18.8
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			5.0	16.0		42.0		25.0
Max Q Clear Time (g_c+I1), s			6.4	5.3		31.3		3.1
Green Ext Time (p_c), s			0.0	0.5		7.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	108	1220	152	779	81	80
v/c Ratio	0.55	0.74	0.14	0.52	0.14	0.14
Control Delay	33.1	13.3	6.9	4.8	2.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	13.3	6.9	4.8	2.9	2.8
Queue Length 50th (ft)	31	126	14	148	0	0
Queue Length 95th (ft)	#82	187	m25	190	16	16
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1128	1500	579	569
Starvation Cap Reductn	0	8	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.70	0.13	0.52	0.14	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

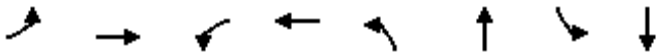
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1122	0	0	140	717	12	0	136	0	0	0
Future Volume (veh/h)	99	1122	0	0	140	717	12	0	136	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	108	1220	0	0	152	0	0	0	162			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	135	1526	0	0	988	442	0	679	1154			
Arrive On Green	0.08	0.46	0.00	0.00	0.39	0.00	0.00	0.00	0.38			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	108	1220	0	0	152	0	0	0	162			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.2	15.6	0.0	0.0	1.5	0.0	0.0	0.0	1.8			
Cycle Q Clear(g_c), s	3.2	15.6	0.0	0.0	1.5	0.0	0.0	0.0	1.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	135	1526	0	0	988	442	0	679	1154			
V/C Ratio(X)	0.80	0.80	0.00	0.00	0.15	0.00	0.00	0.00	0.14			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	679	1154			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	0.66	0.66	0.00	0.00	0.83	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.6	11.7	0.0	0.0	11.2	0.0	0.0	0.0	10.0			
Incr Delay (d2), s/veh	8.7	1.6	0.0	0.0	0.1	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	7.5	0.0	0.0	0.7	0.0	0.0	0.0	0.8			
LnGrp Delay(d),s/veh	31.3	13.3	0.0	0.0	11.2	0.0	0.0	0.0	10.3			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1328			152			162				
Approach Delay, s/veh		14.7			11.2			10.3				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		23.2		26.8			8.0	18.7
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		3.8		17.6			5.2	3.5
Green Ext Time (p_c), s		0.4		5.2			0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	173	1194	75	569	186	97	110	213
v/c Ratio	0.47	1.06	0.20	0.50	0.63	0.18	0.28	0.34
Control Delay	29.5	70.8	33.7	27.7	40.0	11.8	27.9	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	70.8	33.7	27.7	40.0	11.8	27.9	6.9
Queue Length 50th (ft)	69	~410	39	147	100	16	52	11
Queue Length 95th (ft)	m114	#553	79	200	181	53	99	62
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1127	368	1131	296	553	392	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	1.06	0.20	0.50	0.63	0.18	0.28	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	912	187	69	479	44	171	33	56	101	22	174
Future Volume (veh/h)	159	912	187	69	479	44	171	33	56	101	22	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	173	991	203	75	521	48	186	36	61	110	24	189
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	943	193	370	1056	97	316	189	320	429	55	433
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2774	567	1681	3105	285	1164	590	999	1293	172	1354
Grp Volume(v), veh/h	173	598	596	75	281	288	186	0	97	110	0	213
Grp Sat Flow(s),veh/h/ln	1681	1676	1665	1681	1676	1714	1164	0	1588	1293	0	1526
Q Serve(g_s), s	9.0	34.0	34.0	3.6	13.3	13.3	15.0	0.0	4.4	6.7	0.0	11.0
Cycle Q Clear(g_c), s	9.0	34.0	34.0	3.6	13.3	13.3	26.1	0.0	4.4	11.2	0.0	11.0
Prop In Lane	1.00		0.34	1.00		0.17	1.00		0.63	1.00		0.89
Lane Grp Cap(c), veh/h	370	570	566	370	570	583	316	0	508	429	0	488
V/C Ratio(X)	0.47	1.05	1.05	0.20	0.49	0.49	0.59	0.00	0.19	0.26	0.00	0.44
Avail Cap(c_a), veh/h	370	570	566	370	570	583	316	0	508	429	0	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	33.0	33.0	31.8	26.2	26.2	37.2	0.0	24.6	28.7	0.0	26.9
Incr Delay (d2), s/veh	4.2	51.3	52.4	1.2	3.0	3.0	7.8	0.0	0.8	1.4	0.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	23.8	23.8	1.8	6.6	6.8	5.5	0.0	2.1	2.6	0.0	5.0
LnGrp Delay(d),s/veh	38.1	84.3	85.4	33.1	29.2	29.2	45.0	0.0	25.5	30.1	0.0	29.7
LnGrp LOS	D	F	F	C	C	C	D		C	C		C
Approach Vol, veh/h		1367			644			283			323	
Approach Delay, s/veh		79.0			29.6			38.3			29.8	
Approach LOS		E			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		28.1	5.6	36.0		13.2	11.0	15.3
Green Ext Time (p_c), s		0.5	0.1	0.0		1.6	0.3	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	56.4
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	68	115	33	86	9
Future Vol, veh/h	0	68	115	33	86	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	74	125	36	93	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	161	0	-	0	217	143
Stage 1	-	-	-	-	143	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1418	-	-	-	771	905
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1418	-	-	-	771	905
Mov Cap-2 Maneuver	-	-	-	-	771	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	949	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1418	-	-	-	782
HCM Lane V/C Ratio	-	-	-	-	0.132
HCM Control Delay (s)	0	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	970	0	0	674	0	0
Future Vol, veh/h	970	0	0	674	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1054	0	0	733	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1054	0	1421	527
Stage 1	-	-	-	-	1054	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	656	-	127	496
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	656	-	127	496
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	671	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	656	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

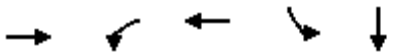
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1084	559	3	9	18
Future Vol, veh/h	11	1084	559	3	9	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	1178	608	3	10	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	611	0	-	0	1223	306
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	613	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	964	-	-	-	172	690
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	964	-	-	-	170	690
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	503	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	964	-	-	-	485
HCM Lane V/C Ratio	0.012	-	-	-	0.061
HCM Control Delay (s)	8.8	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	199	80	88	342	324
v/c Ratio	0.36	0.60	0.10	0.34	0.32
Control Delay	18.7	52.1	27.7	8.2	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	52.1	27.7	8.2	6.6
Queue Length 50th (ft)	25	32	18	57	40
Queue Length 95th (ft)	46	#71	25	121	94
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	1071	134	1609	1015	1003
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.60	0.05	0.34	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	169	14	74	81	0	0	0	0	492	3	118
Future Volume (veh/h)	0	169	14	74	81	0	0	0	0	492	3	118
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	184	15	80	88	0				333	286	128
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	342	28	98	829	0				996	685	307
Arrive On Green	0.00	0.11	0.11	0.06	0.25	0.00				0.59	0.59	0.59
Sat Flow, veh/h	0	3231	254	1681	3441	0				1681	1156	517
Grp Volume(v), veh/h	0	97	102	80	88	0				333	0	414
Grp Sat Flow(s),veh/h/ln	0	1676	1720	1681	1676	0				1681	0	1673
Q Serve(g_s), s	0.0	2.7	2.8	2.4	1.0	0.0				5.0	0.0	6.7
Cycle Q Clear(g_c), s	0.0	2.7	2.8	2.4	1.0	0.0				5.0	0.0	6.7
Prop In Lane	0.00		0.15	1.00		0.00				1.00		0.31
Lane Grp Cap(c), veh/h	0	182	187	98	829	0				996	0	992
V/C Ratio(X)	0.00	0.53	0.54	0.82	0.11	0.00				0.33	0.00	0.42
Avail Cap(c_a), veh/h	0	536	550	134	1609	0				996	0	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.1	21.1	23.3	14.6	0.0				5.2	0.0	5.5
Incr Delay (d2), s/veh	0.0	2.4	2.4	22.6	0.1	0.0				0.9	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.5	1.7	0.5	0.0				2.6	0.0	3.3
LnGrp Delay(d),s/veh	0.0	23.5	23.5	45.9	14.6	0.0				6.1	0.0	6.8
LnGrp LOS		C	C	D	B					A		A
Approach Vol, veh/h		199			168						747	
Approach Delay, s/veh		23.5			29.5						6.5	
Approach LOS		C			C						A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			6.9	9.4		33.6		16.4
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			4.0	16.0		18.0		24.0
Max Q Clear Time (g_c+I1), s			4.4	4.8		8.7		3.0
Green Ext Time (p_c), s			0.0	0.7		2.6		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	100	613	158	733	55	54
v/c Ratio	0.51	0.54	0.27	0.49	0.07	0.07
Control Delay	27.4	19.6	11.6	6.4	0.9	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	19.6	11.6	6.4	0.9	0.9
Queue Length 50th (ft)	30	102	20	212	0	0
Queue Length 95th (ft)	#76	142	29	284	5	5
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1072	1500	791	772
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.35	0.15	0.49	0.07	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	564	0	0	145	674	11	0	89	0	0	0
Future Volume (veh/h)	92	564	0	0	145	674	11	0	89	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	100	613	0	0	158	0	0	0	110			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	124	863	0	0	348	156	0	1028	1748			
Arrive On Green	0.15	0.51	0.00	0.00	0.07	0.00	0.00	0.00	0.58			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	100	613	0	0	158	0	0	0	110			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.9	7.0	0.0	0.0	2.3	0.0	0.0	0.0	0.8			
Cycle Q Clear(g_c), s	2.9	7.0	0.0	0.0	2.3	0.0	0.0	0.0	0.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	124	863	0	0	348	156	0	1028	1748			
V/C Ratio(X)	0.81	0.71	0.00	0.00	0.45	0.00	0.00	0.00	0.06			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	1028	1748			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	0.67	0.67	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	0.94	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	21.0	10.7	0.0	0.0	21.9	0.0	0.0	0.0	4.5			
Incr Delay (d2), s/veh	11.1	1.0	0.0	0.0	0.9	0.0	0.0	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	3.2	0.0	0.0	1.1	0.0	0.0	0.0	0.3			
LnGrp Delay(d),s/veh	32.1	11.7	0.0	0.0	22.8	0.0	0.0	0.0	4.6			
LnGrp LOS	C	B			C				A			
Approach Vol, veh/h		713			158			110				
Approach Delay, s/veh		14.6			22.8			4.6				
Approach LOS		B			C			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		33.1		16.9			7.7	9.2
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		2.8		9.0			4.9	4.3
Green Ext Time (p_c), s		0.3		3.9			0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	159	541	14	541	76	149	59	164	193
v/c Ratio	0.43	0.48	0.04	0.33	0.14	0.48	0.11	0.40	0.32
Control Delay	30.7	18.0	31.2	25.2	6.1	33.5	18.0	30.3	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	18.0	31.2	25.2	6.1	33.5	18.0	30.3	7.1
Queue Length 50th (ft)	59	99	7	93	0	76	17	81	10
Queue Length 95th (ft)	131	152	24	123	31	139	47	142	60
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1129	368	1638	560	312	549	406	605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.48	0.04	0.33	0.14	0.48	0.11	0.40	0.32

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	420	77	13	498	70	137	36	18	151	21	156
Future Volume (veh/h)	146	420	77	13	498	70	137	36	18	151	21	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	457	84	14	541	76	149	39	20	164	23	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	963	176	370	1638	510	335	352	181	467	58	430
Arrive On Green	0.44	0.68	0.68	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2832	517	1681	4818	1500	1185	1101	564	1338	182	1345
Grp Volume(v), veh/h	159	269	272	14	541	76	149	0	59	164	0	193
Grp Sat Flow(s),veh/h/ln	1681	1676	1673	1681	1606	1500	1185	0	1665	1338	0	1527
Q Serve(g_s), s	6.5	7.6	7.7	0.7	8.3	3.5	11.2	0.0	2.5	9.8	0.0	9.8
Cycle Q Clear(g_c), s	6.5	7.6	7.7	0.7	8.3	3.5	21.0	0.0	2.5	12.3	0.0	9.8
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.34	1.00		0.88
Lane Grp Cap(c), veh/h	370	570	569	370	1638	510	335	0	533	467	0	489
V/C Ratio(X)	0.43	0.47	0.48	0.04	0.33	0.15	0.45	0.00	0.11	0.35	0.00	0.39
Avail Cap(c_a), veh/h	370	570	569	370	1638	510	335	0	533	467	0	489
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	11.8	11.8	30.7	24.5	22.9	34.6	0.0	24.0	28.3	0.0	26.5
Incr Delay (d2), s/veh	3.6	2.8	2.9	0.2	0.5	0.6	4.2	0.0	0.4	2.1	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	3.9	3.9	0.3	3.8	1.5	4.0	0.0	1.2	3.9	0.0	4.5
LnGrp Delay(d),s/veh	27.3	14.6	14.6	30.9	25.1	23.6	38.9	0.0	24.4	30.4	0.0	28.8
LnGrp LOS	C	B	B	C	C	C	D		C	C		C
Approach Vol, veh/h		700			631			208			357	
Approach Delay, s/veh		17.5			25.0			34.8			29.6	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		23.0	2.7	9.7		14.3	8.5	10.3
Green Ext Time (p_c), s		0.5	0.0	3.4		1.6	0.3	4.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	4.2
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	137	83	38
Demand Flow Rate, veh/h	140	85	39
Vehicles Circulating, veh/h	39	9	38
Vehicles Exiting, veh/h	38	170	56
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.5	3.9	3.7
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	140	85	39
Cap Entry Lane, veh/h	1087	1120	1088
Entry HV Adj Factor	0.982	0.979	0.974
Flow Entry, veh/h	137	83	38
Cap Entry, veh/h	1067	1097	1060
V/C Ratio	0.129	0.076	0.036
Control Delay, s/veh	4.5	3.9	3.7
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	492	2	2	615	3	3
Future Vol, veh/h	492	2	2	615	3	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	535	2	2	668	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	537	0	807	269
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	271	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	651	-	387	621
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	651	-	386	621
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	688	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	476	-	-	651	-
HCM Lane V/C Ratio	0.014	-	-	0.003	-
HCM Control Delay (s)	12.7	-	-	10.5	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0	-	-	0	-

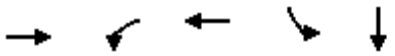
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	480	626	4	1	3
Future Vol, veh/h	6	480	626	4	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	522	680	4	1	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	684	0	-	0	905	342
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	223	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	554	-	-	-	346	558
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	728	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	554	-	-	-	342	558
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	728	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	482
HCM Lane V/C Ratio	0.012	-	-	-	0.009
HCM Control Delay (s)	11.6	-	-	-	12.5
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	168	108	66	808	769
v/c Ratio	0.43	0.86	0.08	0.77	0.75
Control Delay	35.3	90.8	23.0	16.7	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	90.8	23.0	16.7	14.3
Queue Length 50th (ft)	41	55	13	255	208
Queue Length 95th (ft)	68	#146	27	#500	413
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	670	125	1089	1049	1032
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.86	0.06	0.77	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	150	5	99	61	0	0	0	0	1126	10	315
Future Volume (veh/h)	0	150	5	99	61	0	0	0	0	1126	10	315
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	163	5	108	66	0				788	621	342
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	263	8	126	685	0				1169	745	410
Arrive On Green	0.00	0.08	0.08	0.08	0.20	0.00				0.70	0.70	0.70
Sat Flow, veh/h	0	3410	102	1681	3441	0				1681	1071	590
Grp Volume(v), veh/h	0	82	86	108	66	0				788	0	963
Grp Sat Flow(s),veh/h/ln	0	1676	1747	1681	1676	0				1681	0	1661
Q Serve(g_s), s	0.0	3.8	3.8	5.1	1.3	0.0				21.5	0.0	33.6
Cycle Q Clear(g_c), s	0.0	3.8	3.8	5.1	1.3	0.0				21.5	0.0	33.6
Prop In Lane	0.00		0.06	1.00		0.00				1.00		0.36
Lane Grp Cap(c), veh/h	0	133	138	126	685	0				1169	0	1155
V/C Ratio(X)	0.00	0.62	0.62	0.86	0.10	0.00				0.67	0.00	0.83
Avail Cap(c_a), veh/h	0	335	349	126	1090	0				1169	0	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	35.7	35.7	36.6	25.8	0.0				7.0	0.0	8.8
Incr Delay (d2), s/veh	0.0	4.6	4.5	40.5	0.1	0.0				3.1	0.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	2.0	3.8	0.6	0.0				10.9	0.0	17.3
LnGrp Delay(d),s/veh	0.0	40.3	40.2	77.1	25.9	0.0				10.1	0.0	15.9
LnGrp LOS		D	D	E	C					B		B
Approach Vol, veh/h		168			174						1751	
Approach Delay, s/veh		40.2			57.7						13.3	
Approach LOS		D			E						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			10.0	10.3		59.7		20.3
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			6.0	16.0		46.0		26.0
Max Q Clear Time (g_c+I1), s			7.1	5.8		35.6		3.3
Green Ext Time (p_c), s			0.0	0.6		7.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	111	1267	161	805	86	86
v/c Ratio	0.56	0.76	0.14	0.54	0.15	0.15
Control Delay	34.0	13.6	6.7	6.5	3.2	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	13.6	6.7	6.5	3.2	3.2
Queue Length 50th (ft)	31	134	15	225	0	0
Queue Length 95th (ft)	#84	198	m24	295	18	18
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1136	1500	570	561
Starvation Cap Reductn	0	7	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.73	0.14	0.54	0.15	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1166	0	0	148	741	12	0	146	0	0	0
Future Volume (veh/h)	102	1166	0	0	148	741	12	0	146	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	111	1267	0	0	161	0	0	0	173			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	139	1559	0	0	1014	454	0	662	1125			
Arrive On Green	0.08	0.47	0.00	0.00	0.40	0.00	0.00	0.00	0.37			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	111	1267	0	0	161	0	0	0	173			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.2	16.2	0.0	0.0	1.5	0.0	0.0	0.0	1.9			
Cycle Q Clear(g_c), s	3.2	16.2	0.0	0.0	1.5	0.0	0.0	0.0	1.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	139	1559	0	0	1014	454	0	662	1125			
V/C Ratio(X)	0.80	0.81	0.00	0.00	0.16	0.00	0.00	0.00	0.15			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	662	1125			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	0.63	0.63	0.00	0.00	0.91	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.5	11.5	0.0	0.0	10.9	0.0	0.0	0.0	10.4			
Incr Delay (d2), s/veh	8.8	1.8	0.0	0.0	0.1	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	7.8	0.0	0.0	0.7	0.0	0.0	0.0	0.8			
LnGrp Delay(d),s/veh	31.3	13.3	0.0	0.0	11.0	0.0	0.0	0.0	10.7			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1378			161			173				
Approach Delay, s/veh		14.7			11.0			10.7				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.7		27.3			8.1	19.1
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		3.9		18.2			5.2	3.5
Green Ext Time (p_c), s		0.5		5.0			0.0	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	178	1248	77	543	49	195	100	113	220
v/c Ratio	0.48	1.11	0.21	0.33	0.09	0.67	0.18	0.29	0.35
Control Delay	29.9	87.9	33.7	25.2	6.0	42.8	11.7	28.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	87.9	33.7	25.2	6.0	42.8	11.7	28.0	7.0
Queue Length 50th (ft)	72	~449	40	93	0	107	16	54	11
Queue Length 95th (ft)	m115	#594	81	124	22	#206	54	101	63
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1128	368	1638	546	290	553	390	622
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	1.11	0.21	0.33	0.09	0.67	0.18	0.29	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	950	198	71	500	45	179	34	58	104	23	179
Future Volume (veh/h)	164	950	198	71	500	45	179	34	58	104	23	179
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	178	1033	215	77	543	49	195	37	63	113	25	195
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	940	195	370	1638	510	310	188	320	426	55	433
Arrive On Green	0.15	0.23	0.23	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2766	574	1681	4818	1500	1156	588	1001	1290	173	1353
Grp Volume(v), veh/h	178	625	623	77	543	49	195	0	100	113	0	220
Grp Sat Flow(s),veh/h/ln	1681	1676	1663	1681	1606	1500	1156	0	1588	1290	0	1526
Q Serve(g_s), s	9.7	34.0	34.0	3.7	8.4	2.2	16.1	0.0	4.6	7.0	0.0	11.5
Cycle Q Clear(g_c), s	9.7	34.0	34.0	3.7	8.4	2.2	27.6	0.0	4.6	11.5	0.0	11.5
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.63	1.00		0.89
Lane Grp Cap(c), veh/h	370	570	566	370	1638	510	310	0	508	426	0	488
V/C Ratio(X)	0.48	1.10	1.10	0.21	0.33	0.10	0.63	0.00	0.20	0.27	0.00	0.45
Avail Cap(c_a), veh/h	370	570	566	370	1638	510	310	0	508	426	0	488
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	38.6	38.6	31.9	24.5	22.5	38.0	0.0	24.7	28.9	0.0	27.0
Incr Delay (d2), s/veh	4.4	66.8	68.7	1.3	0.5	0.4	9.4	0.0	0.9	1.5	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	26.3	26.4	1.9	3.8	1.0	6.0	0.0	2.1	2.7	0.0	5.2
LnGrp Delay(d),s/veh	41.8	105.4	107.3	33.2	25.1	22.9	47.3	0.0	25.5	30.4	0.0	30.0
LnGrp LOS	D	F	F	C	C	C	D		C	C		C
Approach Vol, veh/h		1426			669			295			333	
Approach Delay, s/veh		98.3			25.9			39.9			30.1	
Approach LOS		F			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		29.6	5.7	36.0		13.5	11.7	10.4
Green Ext Time (p_c), s		0.3	0.1	0.0		1.6	0.3	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	65.8
HCM 2010 LOS	E

Intersection	
Intersection Delay, s/veh	4.6
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	77	168	112
Demand Flow Rate, veh/h	79	172	114
Vehicles Circulating, veh/h	104	0	131
Vehicles Exiting, veh/h	141	183	41
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.6	4.8
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	79	172	114
Cap Entry Lane, veh/h	1018	1130	991
Entry HV Adj Factor	0.980	0.979	0.982
Flow Entry, veh/h	77	168	112
Cap Entry, veh/h	998	1106	974
V/C Ratio	0.078	0.152	0.115
Control Delay, s/veh	4.3	4.6	4.8
LOS	A	A	A
95th %tile Queue, veh	0	1	0

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1010	2	2	700	1	1
Future Vol, veh/h	1010	2	2	700	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1098	2	2	761	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1100	0	1407	550
Stage 1	-	-	-	-	1099	-
Stage 2	-	-	-	-	308	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	350	-	193	410
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	659	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	350	-	192	410
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	659	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	262	-	-	350	-
HCM Lane V/C Ratio	0.008	-	-	0.006	-
HCM Control Delay (s)	18.9	-	-	15.3	-
HCM Lane LOS	C	-	-	C	-
HCM 95th %tile Q(veh)	0	-	-	0	-

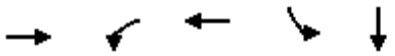
Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	1129	624	3	10	19
Future Vol, veh/h	11	1129	624	3	10	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	1227	678	3	11	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	681	0	-	0	1195	341
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	515	-
Critical Hdwy	5.34	-	-	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	3.12	-	-	-	3.82	3.92
Pot Cap-1 Maneuver	556	-	-	-	247	559
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	556	-	-	-	242	559
Mov Cap-2 Maneuver	-	-	-	-	242	-
Stage 1	-	-	-	-	369	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	556	-	-	-	385
HCM Lane V/C Ratio	0.022	-	-	-	0.082
HCM Control Delay (s)	11.6	-	-	-	15.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	367	237	245	376	359
v/c Ratio	0.55	0.75	0.16	0.57	0.54
Control Delay	24.1	39.7	9.2	19.5	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	39.7	9.2	19.5	16.3
Queue Length 50th (ft)	62	81	25	107	85
Queue Length 95th (ft)	91	#173	36	#238	183
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	893	335	1788	659	665
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.41	0.71	0.14	0.57	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	324	14	218	225	0	0	0	0	558	3	115
Future Volume (veh/h)	0	324	14	218	225	0	0	0	0	558	3	115
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	352	15	237	245	0				726	0	0
Adj No. of Lanes	0	2	0	1	2	0				2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	512	22	283	1313	0				1597	838	0
Arrive On Green	0.00	0.16	0.16	0.17	0.39	0.00				0.47	0.00	0.00
Sat Flow, veh/h	0	3366	139	1681	3441	0				3361	1765	0
Grp Volume(v), veh/h	0	180	187	237	245	0				726	0	0
Grp Sat Flow(s),veh/h/ln	0	1676	1740	1681	1676	0				1681	1765	0
Q Serve(g_s), s	0.0	6.1	6.1	8.2	2.9	0.0				8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.1	6.1	8.2	2.9	0.0				8.7	0.0	0.0
Prop In Lane	0.00		0.08	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	262	272	283	1313	0				1597	838	0
V/C Ratio(X)	0.00	0.69	0.69	0.84	0.19	0.00				0.45	0.00	0.00
Avail Cap(c_a), veh/h	0	447	464	336	1788	0				1597	838	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.88	0.88	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.9	23.9	24.1	12.0	0.0				10.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	3.1	13.1	0.1	0.0				0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	3.1	4.8	1.3	0.0				4.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	27.1	27.0	37.2	12.0	0.0				11.5	0.0	0.0
LnGrp LOS		C	C	D	B					B		
Approach Vol, veh/h		367			482						726	
Approach Delay, s/veh		27.0			24.4						11.5	
Approach LOS		C			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			14.1	13.4		32.5		27.5
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			12.0	16.0		20.0		32.0
Max Q Clear Time (g_c+I1), s			10.2	8.1		10.7		4.9
Green Ext Time (p_c), s			0.1	1.3		2.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	97	857	470	790	140	139
v/c Ratio	0.49	0.61	0.46	0.53	0.21	0.21
Control Delay	29.9	12.6	15.1	3.1	4.7	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	12.6	15.1	3.1	4.7	4.7
Queue Length 50th (ft)	27	88	88	12	3	3
Queue Length 95th (ft)	#67	113	m104	m154	34	34
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1098	1500	674	667
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.49	0.43	0.53	0.21	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

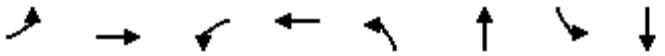
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	788	0	0	432	727	11	0	246	0	0	0
Future Volume (veh/h)	89	788	0	0	432	727	11	0	246	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	97	857	0	0	470	0	0	0	280			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	121	1203	0	0	693	310	0	849	1444			
Arrive On Green	0.07	0.36	0.00	0.00	0.35	0.00	0.00	0.00	0.48			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	97	857	0	0	470	0	0	0	280			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.8	11.0	0.0	0.0	6.0	0.0	0.0	0.0	2.7			
Cycle Q Clear(g_c), s	2.8	11.0	0.0	0.0	6.0	0.0	0.0	0.0	2.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	121	1203	0	0	693	310	0	849	1444			
V/C Ratio(X)	0.80	0.71	0.00	0.00	0.68	0.00	0.00	0.00	0.19			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	849	1444			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.81	0.81	0.00	0.00	0.50	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.8	13.8	0.0	0.0	14.9	0.0	0.0	0.0	7.4			
Incr Delay (d2), s/veh	9.5	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.6	5.1	0.0	0.0	2.8	0.0	0.0	0.0	1.1			
LnGrp Delay(d),s/veh	32.3	14.5	0.0	0.0	15.5	0.0	0.0	0.0	7.7			
LnGrp LOS	C	B			B				A			
Approach Vol, veh/h		954			470			280				
Approach Delay, s/veh		16.3			15.5			7.7				
Approach LOS		B			B			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		28.1		21.9			7.6	14.3
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		4.7		13.0			4.8	8.0
Green Ext Time (p_c), s		0.8		4.9			0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	154	961	53	876	272	101	171	192
v/c Ratio	0.42	0.85	0.14	0.77	0.87	0.18	0.44	0.32
Control Delay	31.4	31.6	47.3	23.6	60.4	13.4	31.3	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	31.6	47.3	23.6	60.4	13.4	31.3	7.5
Queue Length 50th (ft)	61	225	37	102	162	20	86	12
Queue Length 95th (ft)	129	#310	m53	146	#314	58	149	62
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1128	368	1131	313	555	390	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.85	0.14	0.77	0.87	0.18	0.44	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Future Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	154	748	213	53	793	83	272	46	55	171	28	164
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	876	250	370	1042	109	336	235	281	426	72	419
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2578	734	1681	3064	321	1186	733	877	1288	224	1310
Grp Volume(v), veh/h	154	486	475	53	434	442	272	0	101	171	0	192
Grp Sat Flow(s),veh/h/ln	1681	1676	1635	1681	1676	1708	1186	0	1610	1288	0	1534
Q Serve(g_s), s	7.9	27.0	27.0	2.5	23.0	23.1	22.3	0.0	4.6	11.1	0.0	9.7
Cycle Q Clear(g_c), s	7.9	27.0	27.0	2.5	23.0	23.1	32.0	0.0	4.6	15.7	0.0	9.7
Prop In Lane	1.00		0.45	1.00		0.19	1.00		0.54	1.00		0.85
Lane Grp Cap(c), veh/h	370	570	556	370	570	581	336	0	515	426	0	491
V/C Ratio(X)	0.42	0.85	0.85	0.14	0.76	0.76	0.81	0.00	0.20	0.40	0.00	0.39
Avail Cap(c_a), veh/h	370	570	556	370	570	581	336	0	515	426	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.5	30.7	30.7	31.4	29.4	29.4	39.2	0.0	24.7	30.3	0.0	26.4
Incr Delay (d2), s/veh	3.4	15.0	15.3	0.8	9.3	9.1	18.7	0.0	0.8	2.8	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	14.8	14.5	1.3	12.1	12.3	9.2	0.0	2.1	4.3	0.0	4.4
LnGrp Delay(d),s/veh	36.9	45.7	46.0	32.2	38.6	38.5	57.8	0.0	25.5	33.2	0.0	28.8
LnGrp LOS	D	D	D	C	D	D	E		C	C		C
Approach Vol, veh/h		1115			929			373			363	
Approach Delay, s/veh		44.6			38.2			49.1			30.8	
Approach LOS		D			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	4.5	29.0		17.7	9.9	25.1
Green Ext Time (p_c), s		0.0	0.1	2.7		1.5	0.3	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	41.3
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	4.6
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	151	147	117
Demand Flow Rate, veh/h	154	150	119
Vehicles Circulating, veh/h	104	24	38
Vehicles Exiting, veh/h	53	234	136
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	4.5	4.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	154	150	119
Cap Entry Lane, veh/h	1018	1103	1088
Entry HV Adj Factor	0.983	0.982	0.983
Flow Entry, veh/h	151	147	117
Cap Entry, veh/h	1001	1083	1070
V/C Ratio	0.151	0.136	0.109
Control Delay, s/veh	5.0	4.5	4.3
LOS	A	A	A
95th %tile Queue, veh	1	0	0

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	117	34	101	94	14
Future Vol, veh/h	22	117	34	101	94	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	127	37	110	102	15
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.4	7.7	8.5
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	0%	87%
Vol Thru, %	84%	25%	0%
Vol Right, %	0%	75%	13%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	139	135	108
LT Vol	22	0	94
Through Vol	117	34	0
RT Vol	0	101	14
Lane Flow Rate	151	147	117
Geometry Grp	1	1	1
Degree of Util (X)	0.185	0.16	0.152
Departure Headway (Hd)	4.397	3.936	4.666
Convergence, Y/N	Yes	Yes	Yes
Cap	819	914	770
Service Time	2.409	1.949	2.685
HCM Lane V/C Ratio	0.184	0.161	0.152
HCM Control Delay	8.4	7.7	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.6	0.5

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	117	34	101	94	14
Future Vol, veh/h	22	117	34	101	94	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	127	37	110	102	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	147	0	-	0	267	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1435	-	-	-	722	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	855	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1435	-	-	-	709	965
Mov Cap-2 Maneuver	-	-	-	-	709	-
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	855	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1435	-	-	-	734
HCM Lane V/C Ratio	0.017	-	-	-	0.16
HCM Control Delay (s)	7.6	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

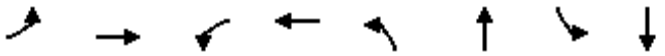
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	675	2	30	800	2	29
Future Vol, veh/h	675	2	30	800	2	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	734	2	33	870	2	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	736	0	1236	368
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	501	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	865	-	168	629
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	865	-	162	629
Mov Cap-2 Maneuver	-	-	-	-	287	-
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	574	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	584	-	-	865	-
HCM Lane V/C Ratio	0.058	-	-	0.038	-
HCM Control Delay (s)	11.5	-	-	9.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	779	197	687	288	195	1	26
v/c Ratio	0.04	0.85	0.78	0.76	0.59	0.24	0.00	0.06
Control Delay	27.6	56.9	63.7	39.9	45.2	4.0	27.0	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	56.9	63.7	39.9	45.2	4.0	27.0	21.5
Queue Length 50th (ft)	6	265	123	211	89	6	1	8
Queue Length 95th (ft)	m9	m#324	#235	279	132	44	5	29
Internal Link Dist (ft)		925		1050		192		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	913	251	904	487	796	302	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.85	0.78	0.76	0.59	0.24	0.00	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

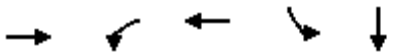
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Future Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	11	543	236	197	684	3	288	17	178	1	18	8
Adj No. of Lanes	1	2	0	1	2	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	605	262	243	1366	6	326	52	541	384	259	115
Arrive On Green	0.01	0.27	0.27	0.14	0.40	0.40	0.10	0.39	0.39	0.22	0.22	0.22
Sat Flow, veh/h	1681	2279	988	1681	3424	15	3261	133	1387	1183	1159	515
Grp Volume(v), veh/h	11	399	380	197	335	352	288	0	195	1	0	26
Grp Sat Flow(s),veh/h/ln	1681	1676	1590	1681	1676	1762	1630	0	1520	1183	0	1674
Q Serve(g_s), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Cycle Q Clear(g_c), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Prop In Lane	1.00		0.62	1.00		0.01	1.00		0.91	1.00		0.31
Lane Grp Cap(c), veh/h	19	445	422	243	669	703	326	0	593	384	0	374
V/C Ratio(X)	0.59	0.90	0.90	0.81	0.50	0.50	0.88	0.00	0.33	0.00	0.00	0.07
Avail Cap(c_a), veh/h	224	447	424	364	669	703	326	0	593	384	0	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	21.2	21.3	24.9	13.5	13.5	26.7	0.0	12.8	18.1	0.0	18.4
Incr Delay (d2), s/veh	19.0	15.6	16.8	8.1	0.6	0.6	23.6	0.0	1.5	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.2	8.0	3.7	4.2	4.4	3.4	0.0	2.5	0.0	0.0	0.4
LnGrp Delay(d),s/veh	48.5	36.9	38.0	33.0	14.1	14.1	50.2	0.0	14.3	18.1	0.0	18.7
LnGrp LOS	D	D	D	C	B	B	D		B	B		B
Approach Vol, veh/h		790			884			483			27	
Approach Delay, s/veh		37.6			18.3			35.7			18.7	
Approach LOS		D			B			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.4	12.7	19.9	10.0	17.4	4.7	27.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	13.0	16.0	6.0	9.0	8.0	21.0
Max Q Clear Time (g_c+I1), s		7.4	8.8	15.8	7.2	2.7	2.4	11.0
Green Ext Time (p_c), s		0.8	0.2	0.1	0.0	0.0	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	377	249	209	842	797
v/c Ratio	0.70	0.96	0.17	0.96	0.92
Control Delay	43.1	86.0	19.7	43.8	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	86.0	19.7	43.8	35.3
Queue Length 50th (ft)	106	142	41	461	391
Queue Length 95th (ft)	153	#289	65	#761	#689
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	595	260	1266	877	869
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.96	0.17	0.96	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	342	5	229	192	0	0	0	0	1191	10	306
Future Volume (veh/h)	0	342	5	229	192	0	0	0	0	1191	10	306
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	372	5	249	209	0				820	677	333
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	468	6	261	1134	0				963	640	315
Arrive On Green	0.00	0.14	0.14	0.16	0.34	0.00				0.57	0.57	0.57
Sat Flow, veh/h	0	3476	45	1681	3441	0				1681	1118	550
Grp Volume(v), veh/h	0	184	193	249	209	0				820	0	1010
Grp Sat Flow(s),veh/h/ln	0	1676	1757	1681	1676	0				1681	0	1668
Q Serve(g_s), s	0.0	9.6	9.6	13.2	4.0	0.0				36.6	0.0	51.6
Cycle Q Clear(g_c), s	0.0	9.6	9.6	13.2	4.0	0.0				36.6	0.0	51.6
Prop In Lane	0.00		0.03	1.00		0.00				1.00		0.33
Lane Grp Cap(c), veh/h	0	232	243	261	1134	0				963	0	956
V/C Ratio(X)	0.00	0.79	0.80	0.95	0.18	0.00				0.85	0.00	1.06
Avail Cap(c_a), veh/h	0	298	312	261	1267	0				963	0	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.5	37.6	37.7	21.0	0.0				16.0	0.0	19.2
Incr Delay (d2), s/veh	0.0	10.7	10.4	41.1	0.1	0.0				9.4	0.0	45.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.1	5.4	9.1	1.8	0.0				19.4	0.0	35.4
LnGrp Delay(d),s/veh	0.0	48.3	48.0	78.8	21.1	0.0				25.4	0.0	64.6
LnGrp LOS		D	D	E	C					C		F
Approach Vol, veh/h		377			458						1830	
Approach Delay, s/veh		48.1			52.5						47.1	
Approach LOS		D			D						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	16.4		55.6		34.4
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			14.0	16.0		48.0		34.0
Max Q Clear Time (g_c+I1), s			15.2	11.6		53.6		6.0
Green Ext Time (p_c), s			0.0	0.9		0.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	48.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	108	1549	449	853	189	191
v/c Ratio	0.45	0.83	0.36	0.57	0.38	0.38
Control Delay	27.3	15.4	14.6	1.6	10.6	10.8
Queue Delay	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	27.3	16.6	14.6	1.6	10.6	10.8
Queue Length 50th (ft)	32	190	58	0	23	24
Queue Length 95th (ft)	71	277	93	0	68	70
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	274	1889	1246	1500	501	497
Starvation Cap Reductn	0	158	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.89	0.36	0.57	0.38	0.38

Intersection Summary

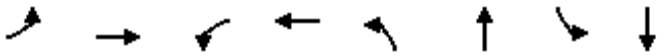
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1425	0	0	413	785	12	0	338	0	0	0
Future Volume (veh/h)	99	1425	0	0	413	785	12	0	338	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	0	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	108	1549	0	0	449	0	0	0	381			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	137	1789	0	0	1272	569	0	566	963			
Arrive On Green	0.08	0.53	0.00	0.00	0.38	0.00	0.00	0.00	0.32			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	108	1549	0	0	449	0	0	0	381			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.5	22.0	0.0	0.0	5.3	0.0	0.0	0.0	5.4			
Cycle Q Clear(g_c), s	3.5	22.0	0.0	0.0	5.3	0.0	0.0	0.0	5.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	137	1789	0	0	1272	569	0	566	963			
V/C Ratio(X)	0.79	0.87	0.00	0.00	0.35	0.00	0.00	0.00	0.40			
Avail Cap(c_a), veh/h	275	1890	0	0	1272	569	0	566	963			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.35	0.35	0.00	0.00	0.47	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	24.8	11.1	0.0	0.0	12.2	0.0	0.0	0.0	14.5			
Incr Delay (d2), s/veh	3.6	1.6	0.0	0.0	0.1	0.0	0.0	0.0	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	10.3	0.0	0.0	2.4	0.0	0.0	0.0	2.4			
LnGrp Delay(d),s/veh	28.4	12.7	0.0	0.0	12.3	0.0	0.0	0.0	15.7			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1657			449			381				
Approach Delay, s/veh		13.7			12.3			15.7				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		21.7		33.3			8.5	24.9
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		31.0			9.0	18.0
Max Q Clear Time (g_c+I1), s		7.4		24.0			5.5	7.3
Green Ext Time (p_c), s		1.0		5.3			0.1	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	173	1743	109	829	305	133	125	219
v/c Ratio	0.47	1.55	0.30	0.73	1.05	0.23	0.35	0.35
Control Delay	38.9	276.9	50.1	22.0	101.2	10.5	29.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	276.9	50.1	22.0	101.2	10.5	29.4	7.4
Queue Length 50th (ft)	96	~828	75	93	~212	19	61	13
Queue Length 95th (ft)	163	#970	m110	136	#378	62	112	67
Internal Link Dist (ft)		600		925		1078		400
Turn Bay Length (ft)	130		60		90		90	
Base Capacity (vph)	368	1128	368	1133	291	568	362	620
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	1.55	0.30	0.73	1.05	0.23	0.35	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Future Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	173	1404	339	109	772	57	305	42	91	125	30	189
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	916	216	370	1077	79	311	159	345	394	67	423
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2695	635	1681	3166	234	1157	497	1077	1252	210	1322
Grp Volume(v), veh/h	173	860	883	109	409	420	305	0	133	125	0	219
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1676	1723	1157	0	1575	1252	0	1531
Q Serve(g_s), s	9.0	34.0	34.0	5.4	21.3	21.3	20.7	0.0	6.3	8.2	0.0	11.3
Cycle Q Clear(g_c), s	9.0	34.0	34.0	5.4	21.3	21.3	32.0	0.0	6.3	14.5	0.0	11.3
Prop In Lane	1.00		0.38	1.00		0.14	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	370	570	562	370	570	586	311	0	504	394	0	490
V/C Ratio(X)	0.47	1.51	1.57	0.29	0.72	0.72	0.98	0.00	0.26	0.32	0.00	0.45
Avail Cap(c_a), veh/h	370	570	562	370	570	586	311	0	504	394	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	33.0	33.0	32.5	28.8	28.8	41.9	0.0	25.3	30.6	0.0	27.0
Incr Delay (d2), s/veh	4.2	238.0	265.6	2.0	7.6	7.4	46.4	0.0	1.3	2.1	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	53.4	56.9	2.7	11.0	11.2	12.4	0.0	2.9	3.1	0.0	5.2
LnGrp Delay(d),s/veh	38.1	271.0	298.6	34.6	36.4	36.2	88.3	0.0	26.5	32.8	0.0	29.9
LnGrp LOS	D	F	F	C	D	D	F		C	C		C
Approach Vol, veh/h		1916			938			438			344	
Approach Delay, s/veh		262.7			36.1			69.5			30.9	
Approach LOS		F			D			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	7.4	36.0		16.5	11.0	23.3
Green Ext Time (p_c), s		0.0	0.2	0.0		1.6	0.3	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	159.0
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	5.1
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	95	224	169
Demand Flow Rate, veh/h	97	229	172
Vehicles Circulating, veh/h	150	15	130
Vehicles Exiting, veh/h	152	232	114
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.7	5.2	5.3
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	97	229	172
Cap Entry Lane, veh/h	973	1113	992
Entry HV Adj Factor	0.983	0.980	0.983
Flow Entry, veh/h	95	224	169
Cap Entry, veh/h	956	1091	975
V/C Ratio	0.100	0.206	0.173
Control Delay, s/veh	4.7	5.2	5.3
LOS	A	A	A
95th %tile Queue, veh	0	1	1

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	74	117	89	135	20
Future Vol, veh/h	14	74	117	89	135	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	80	127	97	147	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	224	0	-	0	286	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	110	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1345	-	-	-	704	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1345	-	-	-	696	867
Mov Cap-2 Maneuver	-	-	-	-	696	-
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	915	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1345	-	-	-	714
HCM Lane V/C Ratio	0.011	-	-	-	0.236
HCM Control Delay (s)	7.7	0	-	-	11.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.9

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	74	117	89	135	20
Future Vol, veh/h	14	74	117	89	135	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	80	127	97	147	22
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.3	8.7	9.1
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	0%	87%
Vol Thru, %	84%	57%	0%
Vol Right, %	0%	43%	13%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	88	206	155
LT Vol	14	0	135
Through Vol	74	117	0
RT Vol	0	89	20
Lane Flow Rate	96	224	168
Geometry Grp	1	1	1
Degree of Util (X)	0.123	0.262	0.222
Departure Headway (Hd)	4.621	4.205	4.734
Convergence, Y/N	Yes	Yes	Yes
Cap	776	855	758
Service Time	2.647	2.225	2.761
HCM Lane V/C Ratio	0.124	0.262	0.222
HCM Control Delay	8.3	8.7	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	1.1	0.8

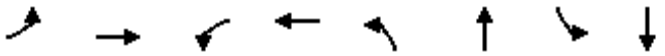
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1146	17	93	884	2	29
Future Vol, veh/h	1146	17	93	884	2	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1246	18	101	961	2	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1264	0	1938	632
Stage 1	-	-	-	-	1255	-
Stage 2	-	-	-	-	683	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	546	-	57	423
Stage 1	-	-	-	-	232	-
Stage 2	-	-	-	-	463	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	546	-	46	423
Mov Cap-2 Maneuver	-	-	-	-	132	-
Stage 1	-	-	-	-	189	-
Stage 2	-	-	-	-	463	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	370	-	-	546	-
HCM Lane V/C Ratio	0.091	-	-	0.185	-
HCM Control Delay (s)	15.7	-	-	13.1	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.7	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	1571	198	686	258	176	10	49
v/c Ratio	0.06	1.75	0.79	0.76	0.53	0.22	0.03	0.11
Control Delay	29.1	369.0	64.0	39.9	43.7	4.0	27.4	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	369.0	64.0	39.9	43.7	4.0	27.4	17.9
Queue Length 50th (ft)	10	~809	123	211	79	5	5	12
Queue Length 95th (ft)	m9	m#476	#237	279	119	42	18	41
Internal Link Dist (ft)		925		1050		192		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	900	251	904	487	787	307	459
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	1.75	0.79	0.76	0.53	0.22	0.03	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

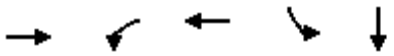
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Future Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1228	343	198	683	3	258	15	161	10	26	23
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1304	364	242	2365	10	353	43	464	306	145	128
Arrive On Green	0.01	0.35	0.35	0.14	0.48	0.48	0.11	0.33	0.33	0.17	0.17	0.17
Sat Flow, veh/h	1681	3746	1046	1681	4951	22	3261	129	1390	1204	865	765
Grp Volume(v), veh/h	15	1053	518	198	443	243	258	0	176	10	0	49
Grp Sat Flow(s),veh/h/ln	1681	1606	1580	1681	1606	1761	1630	0	1519	1204	0	1630
Q Serve(g_s), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Prop In Lane	1.00		0.66	1.00		0.01	1.00		0.91	1.00		0.47
Lane Grp Cap(c), veh/h	24	1118	550	242	1534	841	353	0	507	306	0	273
V/C Ratio(X)	0.62	0.94	0.94	0.82	0.29	0.29	0.73	0.00	0.35	0.03	0.00	0.18
Avail Cap(c_a), veh/h	244	1119	550	390	1534	841	473	0	507	306	0	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	21.8	21.8	28.6	10.9	10.9	29.8	0.0	17.3	24.1	0.0	24.6
Incr Delay (d2), s/veh	22.7	15.0	24.8	7.0	0.1	0.2	3.8	0.0	1.9	0.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	12.0	13.3	4.1	2.5	2.8	2.6	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	56.4	36.8	46.6	35.6	11.0	11.1	33.6	0.0	19.2	24.3	0.0	26.1
LnGrp LOS	E	D	D	D	B	B	C		B	C		C
Approach Vol, veh/h		1586			884			434			59	
Approach Delay, s/veh		40.2			16.6			27.7			25.8	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.0	13.9	28.0	11.5	15.5	5.0	36.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		23.0	16.0	24.0	10.0	9.0	10.0	30.0
Max Q Clear Time (g_c+I1), s		8.0	9.9	23.9	7.3	3.8	2.6	7.8
Green Ext Time (p_c), s		0.9	0.3	0.1	0.2	0.1	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	375	246	253	386	368
v/c Ratio	0.56	0.77	0.17	0.59	0.56
Control Delay	24.1	41.5	9.1	20.4	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	41.5	9.1	20.4	17.0
Queue Length 50th (ft)	63	84	26	111	89
Queue Length 95th (ft)	92	#182	37	#250	#193
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	893	335	1788	653	659
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.73	0.14	0.59	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	331	14	226	233	0	0	0	0	573	3	118
Future Volume (veh/h)	0	331	14	226	233	0	0	0	0	573	3	118
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	360	15	246	253	0				745	0	0
Adj No. of Lanes	0	2	0	1	2	0				2	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	521	22	292	1339	0				1570	824	0
Arrive On Green	0.00	0.16	0.16	0.17	0.40	0.00				0.47	0.00	0.00
Sat Flow, veh/h	0	3369	136	1681	3441	0				3361	1765	0
Grp Volume(v), veh/h	0	183	192	246	253	0				745	0	0
Grp Sat Flow(s),veh/h/ln	0	1676	1741	1681	1676	0				1681	1765	0
Q Serve(g_s), s	0.0	6.2	6.2	8.5	2.9	0.0				9.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	6.2	6.2	8.5	2.9	0.0				9.1	0.0	0.0
Prop In Lane	0.00		0.08	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	0	266	276	292	1339	0				1570	824	0
V/C Ratio(X)	0.00	0.69	0.69	0.84	0.19	0.00				0.47	0.00	0.00
Avail Cap(c_a), veh/h	0	447	464	336	1788	0				1570	824	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.84	0.84	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.8	23.9	24.0	11.7	0.0				10.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.2	3.1	13.4	0.1	0.0				1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	3.2	5.0	1.3	0.0				4.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	27.0	27.0	37.3	11.8	0.0				12.0	0.0	0.0
LnGrp LOS		C	C	D	B					B		
Approach Vol, veh/h		375			499						745	
Approach Delay, s/veh		27.0			24.4						12.0	
Approach LOS		C			C						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			14.4	13.5		32.0		28.0
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			12.0	16.0		20.0		32.0
Max Q Clear Time (g_c+I1), s			10.5	8.2		11.1		4.9
Green Ext Time (p_c), s			0.1	1.3		2.1		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	100	877	488	815	143	142
v/c Ratio	0.51	0.60	0.53	0.54	0.22	0.22
Control Delay	30.8	12.1	16.1	5.1	5.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	12.1	16.1	5.1	5.2	5.2
Queue Length 50th (ft)	28	90	82	311	5	4
Queue Length 95th (ft)	#74	116	m100	m376	37	36
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	201	1743	1072	1500	650	643
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.50	0.46	0.54	0.22	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	807	0	0	449	750	11	0	251	0	0	0
Future Volume (veh/h)	92	807	0	0	449	750	11	0	251	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	100	877	0	0	488	0	0	0	286			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	125	1223	0	0	706	316	0	838	1425			
Arrive On Green	0.07	0.36	0.00	0.00	0.35	0.00	0.00	0.00	0.48			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	100	877	0	0	488	0	0	0	286			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	2.9	11.2	0.0	0.0	6.2	0.0	0.0	0.0	2.8			
Cycle Q Clear(g_c), s	2.9	11.2	0.0	0.0	6.2	0.0	0.0	0.0	2.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	125	1223	0	0	706	316	0	838	1425			
V/C Ratio(X)	0.80	0.72	0.00	0.00	0.69	0.00	0.00	0.00	0.20			
Avail Cap(c_a), veh/h	202	1744	0	0	1073	480	0	838	1425			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	0.76	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	22.8	13.7	0.0	0.0	14.8	0.0	0.0	0.0	7.6			
Incr Delay (d2), s/veh	9.0	0.6	0.0	0.0	0.9	0.0	0.0	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	5.2	0.0	0.0	2.9	0.0	0.0	0.0	1.2			
LnGrp Delay(d),s/veh	31.8	14.3	0.0	0.0	15.7	0.0	0.0	0.0	7.9			
LnGrp LOS	C	B			B				A			
Approach Vol, veh/h		977			488			286				
Approach Delay, s/veh		16.1			15.7			7.9				
Approach LOS		B			B			A				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		27.8		22.2			7.7	14.5
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		26.0			6.0	16.0
Max Q Clear Time (g_c+I1), s		4.8		13.2			4.9	8.2
Green Ext Time (p_c), s		0.8		5.0			0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	159	980	53	821	85	282	104	175	199
v/c Ratio	0.43	0.87	0.14	0.50	0.15	0.92	0.19	0.45	0.33
Control Delay	31.8	33.2	49.5	18.9	5.0	69.0	13.3	31.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	33.2	49.5	18.9	5.0	69.0	13.3	31.6	7.5
Queue Length 50th (ft)	64	232	37	66	4	172	21	88	13
Queue Length 95th (ft)	133	#326	m66	80	m14	#332	60	153	63
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1128	368	1638	560	307	557	387	608
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.87	0.14	0.50	0.15	0.92	0.19	0.45	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Future Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	764	216	53	821	85	282	47	57	175	29	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	878	248	370	1638	510	330	233	282	423	72	419
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2582	730	1681	4818	1500	1179	727	882	1285	223	1310
Grp Volume(v), veh/h	159	496	484	53	821	85	282	0	104	175	0	199
Grp Sat Flow(s),veh/h/ln	1681	1676	1636	1681	1606	1500	1179	0	1609	1285	0	1534
Q Serve(g_s), s	8.2	27.7	27.7	2.5	13.6	4.0	21.9	0.0	4.7	11.5	0.0	10.1
Cycle Q Clear(g_c), s	8.2	27.7	27.7	2.5	13.6	4.0	32.0	0.0	4.7	16.2	0.0	10.1
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.55	1.00		0.85
Lane Grp Cap(c), veh/h	370	570	556	370	1638	510	330	0	515	423	0	491
V/C Ratio(X)	0.43	0.87	0.87	0.14	0.50	0.17	0.86	0.00	0.20	0.41	0.00	0.41
Avail Cap(c_a), veh/h	370	570	556	370	1638	510	330	0	515	423	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	30.9	30.9	31.4	26.3	23.1	40.0	0.0	24.7	30.6	0.0	26.6
Incr Delay (d2), s/veh	3.6	16.5	16.8	0.8	1.1	0.7	23.7	0.0	0.9	3.0	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	15.4	15.1	1.3	6.2	1.7	9.9	0.0	2.2	4.4	0.0	4.6
LnGrp Delay(d),s/veh	37.2	47.4	47.8	32.2	27.4	23.8	63.7	0.0	25.6	33.6	0.0	29.0
LnGrp LOS	D	D	D	C	C	C	E		C	C		C
Approach Vol, veh/h		1139			959			386			374	
Approach Delay, s/veh		46.2			27.3			53.4			31.2	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	4.5	29.7		18.2	10.2	15.6
Green Ext Time (p_c), s		0.0	0.1	2.4		1.5	0.3	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	38.9
HCM 2010 LOS	D

Intersection	
Intersection Delay, s/veh	4.7
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	154	155	119
Demand Flow Rate, veh/h	157	158	121
Vehicles Circulating, veh/h	106	24	40
Vehicles Exiting, veh/h	55	239	142
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	4.6	4.4
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	157	158	121
Cap Entry Lane, veh/h	1016	1103	1086
Entry HV Adj Factor	0.983	0.982	0.983
Flow Entry, veh/h	154	155	119
Cap Entry, veh/h	999	1084	1068
V/C Ratio	0.154	0.143	0.111
Control Delay, s/veh	5.0	4.6	4.4
LOS	A	A	A
95th %tile Queue, veh	1	0	0

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	120	36	107	96	14
Future Vol, veh/h	22	120	36	107	96	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	130	39	116	104	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	155	0	-	0	275	97
Stage 1	-	-	-	-	97	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1425	-	-	-	715	959
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	853	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1425	-	-	-	702	959
Mov Cap-2 Maneuver	-	-	-	-	702	-
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	853	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1425	-	-	-	727
HCM Lane V/C Ratio	0.017	-	-	-	0.164
HCM Control Delay (s)	7.6	0	-	-	10.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	120	36	107	96	14
Future Vol, veh/h	22	120	36	107	96	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	130	39	116	104	15
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.5	7.8	8.6
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	87%
Vol Thru, %	85%	25%	0%
Vol Right, %	0%	75%	13%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	142	143	110
LT Vol	22	0	96
Through Vol	120	36	0
RT Vol	0	107	14
Lane Flow Rate	154	155	120
Geometry Grp	1	1	1
Degree of Util (X)	0.189	0.17	0.156
Departure Headway (Hd)	4.411	3.946	4.694
Convergence, Y/N	Yes	Yes	Yes
Cap	815	911	765
Service Time	2.426	1.961	2.712
HCM Lane V/C Ratio	0.189	0.17	0.157
HCM Control Delay	8.5	7.8	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.6	0.6

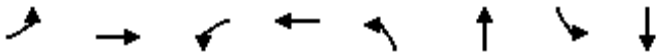
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	692	3	31	829	4	31
Future Vol, veh/h	692	3	31	829	4	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	752	3	34	901	4	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	755	0	1182	378
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	428	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	513	-	251	529
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	513	-	234	529
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	572	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	462	-	-	513	-
HCM Lane V/C Ratio	0.082	-	-	0.066	-
HCM Control Delay (s)	13.5	-	-	12.5	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	798	197	720	288	195	1	26
v/c Ratio	0.04	0.61	0.78	0.55	0.59	0.24	0.00	0.06
Control Delay	27.6	47.0	63.7	33.2	45.2	4.0	27.0	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	47.0	63.7	33.2	45.2	4.0	27.0	21.5
Queue Length 50th (ft)	6	182	123	144	89	6	1	8
Queue Length 95th (ft)	m9	m217	#235	185	132	44	5	29
Internal Link Dist (ft)		925		1050		211		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	1319	251	1300	487	796	302	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.61	0.78	0.55	0.59	0.24	0.00	0.06

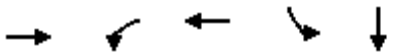
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Future Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	764	216	53	821	85	282	47	57	175	29	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	885	250	68	1277	398	495	290	352	590	89	523
Arrive On Green	0.12	0.34	0.34	0.04	0.27	0.27	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1681	2582	730	1681	4818	1500	1179	727	882	1285	223	1310
Grp Volume(v), veh/h	159	496	484	53	821	85	282	0	104	175	0	199
Grp Sat Flow(s),veh/h/ln	1681	1676	1636	1681	1606	1500	1179	0	1609	1285	0	1534
Q Serve(g_s), s	5.1	15.2	15.2	1.7	8.3	2.4	11.9	0.0	2.3	5.6	0.0	4.9
Cycle Q Clear(g_c), s	5.1	15.2	15.2	1.7	8.3	2.4	16.9	0.0	2.3	7.9	0.0	4.9
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.55	1.00		0.85
Lane Grp Cap(c), veh/h	198	574	560	68	1277	398	495	0	642	590	0	612
V/C Ratio(X)	0.80	0.86	0.86	0.78	0.64	0.21	0.57	0.00	0.16	0.30	0.00	0.33
Avail Cap(c_a), veh/h	244	610	595	122	1401	436	495	0	642	590	0	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	16.9	16.9	26.1	17.9	15.7	17.2	0.0	10.6	13.1	0.0	11.4
Incr Delay (d2), s/veh	12.1	9.9	10.1	14.4	0.7	0.2	4.7	0.0	0.5	1.3	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	8.5	8.3	1.1	3.7	1.0	4.5	0.0	1.1	2.2	0.0	2.3
LnGrp Delay(d),s/veh	35.7	26.8	27.0	40.5	18.6	16.0	21.9	0.0	11.2	14.4	0.0	12.8
LnGrp LOS	D	C	C	D	B	B	C		B	B		B
Approach Vol, veh/h		1139			959			386			374	
Approach Delay, s/veh		28.1			19.6			19.0			13.6	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.9	6.2	22.8		25.9	10.5	18.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	4.0	20.0		19.0	8.0	16.0
Max Q Clear Time (g_c+I1), s		18.9	3.7	17.2		9.9	7.1	10.3
Green Ext Time (p_c), s		0.0	0.0	1.6		1.2	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C



Lane Group	EBT	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	388	257	215	867	820
v/c Ratio	0.72	0.99	0.18	0.99	0.95
Control Delay	43.5	93.4	19.7	50.9	40.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	93.4	19.7	50.9	40.1
Queue Length 50th (ft)	109	148	42	~505	420
Queue Length 95th (ft)	157	#301	66	#793	#721
Internal Link Dist (ft)	117		320		250
Turn Bay Length (ft)		115			
Base Capacity (vph)	595	260	1266	875	866
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.99	0.17	0.99	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	352	5	236	198	0	0	0	0	1227	10	315
Future Volume (veh/h)	0	352	5	236	198	0	0	0	0	1227	10	315
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1765	1800	1765	1765	0				1765	1765	1800
Adj Flow Rate, veh/h	0	383	5	257	215	0				844	698	342
Adj No. of Lanes	0	2	0	1	2	0				1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	478	6	261	1144	0				958	638	313
Arrive On Green	0.00	0.14	0.14	0.16	0.34	0.00				0.57	0.57	0.57
Sat Flow, veh/h	0	3477	44	1681	3441	0				1681	1119	548
Grp Volume(v), veh/h	0	189	199	257	215	0				844	0	1040
Grp Sat Flow(s),veh/h/ln	0	1676	1757	1681	1676	0				1681	0	1668
Q Serve(g_s), s	0.0	9.8	9.9	13.7	4.1	0.0				39.0	0.0	51.3
Cycle Q Clear(g_c), s	0.0	9.8	9.9	13.7	4.1	0.0				39.0	0.0	51.3
Prop In Lane	0.00		0.03	1.00		0.00				1.00		0.33
Lane Grp Cap(c), veh/h	0	237	248	261	1144	0				958	0	951
V/C Ratio(X)	0.00	0.80	0.80	0.98	0.19	0.00				0.88	0.00	1.09
Avail Cap(c_a), veh/h	0	298	312	261	1267	0				958	0	951
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.95	0.95	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.4	37.4	37.9	20.9	0.0				16.7	0.0	19.3
Incr Delay (d2), s/veh	0.0	11.6	11.2	49.5	0.1	0.0				11.5	0.0	58.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	5.6	9.9	1.9	0.0				20.9	0.0	38.6
LnGrp Delay(d),s/veh	0.0	49.0	48.6	87.4	21.0	0.0				28.2	0.0	77.6
LnGrp LOS		D	D	F	C					C		F
Approach Vol, veh/h		388			472						1884	
Approach Delay, s/veh		48.8			57.1						55.5	
Approach LOS		D			E						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			18.0	16.7		55.3		34.7
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			14.0	16.0		48.0		34.0
Max Q Clear Time (g_c+I1), s			15.7	11.9		53.3		6.1
Green Ext Time (p_c), s			0.0	0.8		0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	54.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	111	1597	458	879	194	197
v/c Ratio	0.49	0.81	0.33	0.59	0.42	0.43
Control Delay	31.6	13.8	13.4	1.7	13.3	13.5
Queue Delay	0.0	2.3	0.0	0.0	0.0	0.0
Total Delay	31.6	16.1	13.4	1.7	13.3	13.5
Queue Length 50th (ft)	37	201	60	0	30	31
Queue Length 95th (ft)	80	287	93	0	83	85
Internal Link Dist (ft)		320	600		228	
Turn Bay Length (ft)	160					
Base Capacity (vph)	251	2011	1400	1500	467	463
Starvation Cap Reductn	0	276	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.92	0.33	0.59	0.42	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1469	0	0	421	809	12	0	348	0	0	0
Future Volume (veh/h)	102	1469	0	0	421	809	12	0	348	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1765	1765	1800	0	1765	1765	1800	1765	1765			
Adj Flow Rate, veh/h	111	1597	0	0	458	0	0	0	392			
Adj No. of Lanes	1	2	0	0	2	1	0	1	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2			
Cap, veh/h	141	1869	0	0	1365	611	0	546	928			
Arrive On Green	0.08	0.56	0.00	0.00	0.41	0.00	0.00	0.00	0.31			
Sat Flow, veh/h	1681	3441	0	0	3441	1500	0	1765	3000			
Grp Volume(v), veh/h	111	1597	0	0	458	0	0	0	392			
Grp Sat Flow(s),veh/h/ln	1681	1676	0	0	1676	1500	0	1765	1500			
Q Serve(g_s), s	3.9	24.2	0.0	0.0	5.6	0.0	0.0	0.0	6.2			
Cycle Q Clear(g_c), s	3.9	24.2	0.0	0.0	5.6	0.0	0.0	0.0	6.2			
Prop In Lane	1.00		0.00	0.00		1.00	0.00		1.00			
Lane Grp Cap(c), veh/h	141	1869	0	0	1365	611	0	546	928			
V/C Ratio(X)	0.79	0.85	0.00	0.00	0.34	0.00	0.00	0.00	0.42			
Avail Cap(c_a), veh/h	252	2012	0	0	1365	611	0	546	928			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.30	0.30	0.00	0.00	0.70	0.00	0.00	0.00	1.00			
Uniform Delay (d), s/veh	27.0	11.2	0.0	0.0	12.2	0.0	0.0	0.0	16.5			
Incr Delay (d2), s/veh	3.0	1.1	0.0	0.0	0.1	0.0	0.0	0.0	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.9	11.2	0.0	0.0	2.6	0.0	0.0	0.0	2.7			
LnGrp Delay(d),s/veh	30.0	12.4	0.0	0.0	12.3	0.0	0.0	0.0	17.9			
LnGrp LOS	C	B			B				B			
Approach Vol, veh/h		1708			458			392				
Approach Delay, s/veh		13.5			12.3			17.9				
Approach LOS		B			B			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		22.6		37.4			9.0	28.4
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0		36.0			9.0	23.0
Max Q Clear Time (g_c+I1), s		8.2		26.2			5.9	7.6
Green Ext Time (p_c), s		1.0		7.3			0.1	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	178	1797	111	795	58	314	136	128	227
v/c Ratio	0.48	1.59	0.30	0.49	0.11	1.10	0.24	0.36	0.36
Control Delay	39.2	297.8	52.6	18.1	4.8	117.6	10.5	29.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	297.8	52.6	18.1	4.8	117.6	10.5	29.7	7.4
Queue Length 50th (ft)	100	~867	77	62	1	~229	19	62	14
Queue Length 95th (ft)	167	#1008	134	76	m8	#397	63	115	69
Internal Link Dist (ft)		600		925			1078		400
Turn Bay Length (ft)	130		300		100	90		90	
Base Capacity (vph)	368	1128	368	1638	546	285	569	359	624
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	1.59	0.30	0.49	0.11	1.10	0.24	0.36	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Future Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	178	1446	351	111	795	58	314	43	93	128	32	195
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	916	216	370	1638	510	304	159	345	391	69	421
Arrive On Green	0.22	0.34	0.34	0.22	0.34	0.34	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2694	635	1681	4818	1500	1149	498	1077	1248	216	1316
Grp Volume(v), veh/h	178	884	913	111	795	58	314	0	136	128	0	227
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1606	1500	1149	0	1575	1248	0	1532
Q Serve(g_s), s	9.2	34.0	34.0	5.5	13.0	2.7	20.2	0.0	6.4	8.5	0.0	11.8
Cycle Q Clear(g_c), s	9.2	34.0	34.0	5.5	13.0	2.7	32.0	0.0	6.4	14.9	0.0	11.8
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	370	570	562	370	1638	510	304	0	504	391	0	490
V/C Ratio(X)	0.48	1.55	1.62	0.30	0.49	0.11	1.03	0.00	0.27	0.33	0.00	0.46
Avail Cap(c_a), veh/h	370	570	562	370	1638	510	304	0	504	391	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	33.0	33.0	32.6	26.1	22.7	42.3	0.0	25.3	30.9	0.0	27.1
Incr Delay (d2), s/veh	4.4	256.5	289.3	2.1	1.0	0.5	60.6	0.0	1.3	2.2	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	56.3	60.6	2.8	5.9	1.2	13.5	0.0	3.0	3.2	0.0	5.4
LnGrp Delay(d),s/veh	38.5	289.5	322.3	34.6	27.1	23.1	102.9	0.0	26.6	33.1	0.0	30.3
LnGrp LOS	D	F	F	C	C	C	F		C	C		C
Approach Vol, veh/h		1975			964			450			355	
Approach Delay, s/veh		282.0			27.7			79.8			31.3	
Approach LOS		F			C			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	26.0	38.0		36.0	26.0	38.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	22.0	34.0		32.0	22.0	34.0
Max Q Clear Time (g_c+I1), s		34.0	7.5	36.0		16.9	11.2	15.0
Green Ext Time (p_c), s		0.0	0.2	0.0		1.6	0.3	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	168.5
HCM 2010 LOS	F

Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	99	231	177
Demand Flow Rate, veh/h	101	236	180
Vehicles Circulating, veh/h	158	15	133
Vehicles Exiting, veh/h	155	244	118
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	5.2	5.4
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	TR	LR
Assumed Moves	LT	TR	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	101	236	180
Cap Entry Lane, veh/h	965	1113	989
Entry HV Adj Factor	0.983	0.980	0.983
Flow Entry, veh/h	99	231	177
Cap Entry, veh/h	949	1091	973
V/C Ratio	0.105	0.212	0.182
Control Delay, s/veh	4.8	5.2	5.4
LOS	A	A	A
95th %tile Queue, veh	0	1	1

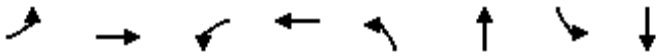
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1186	19	95	910	3	30
Future Vol, veh/h	1186	19	95	910	3	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	90	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1289	21	103	989	3	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1310	0	1902	655
Stage 1	-	-	-	-	1300	-
Stage 2	-	-	-	-	602	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	277	-	106	350
Stage 1	-	-	-	-	158	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	277	-	67	350
Mov Cap-2 Maneuver	-	-	-	-	67	-
Stage 1	-	-	-	-	99	-
Stage 2	-	-	-	-	464	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	21.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	253	-	-	277	-
HCM Lane V/C Ratio	0.142	-	-	0.373	-
HCM Control Delay (s)	21.6	-	-	25.5	-
HCM Lane LOS	C	-	-	D	-
HCM 95th %tile Q(veh)	0.5	-	-	1.7	-



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	15	1620	198	713	258	176	11	50
v/c Ratio	0.06	1.24	0.79	0.55	0.53	0.22	0.04	0.11
Control Delay	29.4	153.9	64.0	33.1	43.7	4.0	27.5	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	153.9	64.0	33.1	43.7	4.0	27.5	17.7
Queue Length 50th (ft)	10	~478	123	142	79	5	5	12
Queue Length 95th (ft)	m9	m272	#237	183	119	42	19	41
Internal Link Dist (ft)		925		1050		211		222
Turn Bay Length (ft)	90		100					
Base Capacity (vph)	251	1307	251	1300	487	787	307	459
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	1.24	0.79	0.55	0.53	0.22	0.04	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Future Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1277	343	198	710	3	258	15	161	11	26	24
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1261	338	224	2240	9	304	48	519	369	192	177
Arrive On Green	0.01	0.33	0.33	0.13	0.45	0.45	0.09	0.37	0.37	0.23	0.23	0.23
Sat Flow, veh/h	1681	3782	1015	1681	4952	21	3261	129	1390	1204	846	781
Grp Volume(v), veh/h	15	1084	536	198	460	253	258	0	176	11	0	50
Grp Sat Flow(s),veh/h/ln	1681	1606	1586	1681	1606	1761	1630	0	1519	1204	0	1627
Q Serve(g_s), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Prop In Lane	1.00		0.64	1.00		0.01	1.00		0.91	1.00		0.48
Lane Grp Cap(c), veh/h	24	1071	529	224	1453	797	304	0	567	369	0	369
V/C Ratio(X)	0.62	1.01	1.01	0.88	0.32	0.32	0.85	0.00	0.31	0.03	0.00	0.14
Avail Cap(c_a), veh/h	90	1071	529	224	1453	797	304	0	567	369	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	25.0	25.0	31.9	13.1	13.1	33.5	0.0	16.7	22.6	0.0	23.1
Incr Delay (d2), s/veh	2.4	11.6	15.4	31.2	0.1	0.2	19.5	0.0	1.4	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.7	13.1	6.0	3.0	3.3	3.4	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	39.1	36.6	40.4	63.2	13.3	13.4	53.0	0.0	18.1	22.8	0.0	23.9
LnGrp LOS	D	F	F	E	B	B	D		B	C		C
Approach Vol, veh/h		1635			911			434			61	
Approach Delay, s/veh		37.9			24.1			38.8			23.7	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		32.0	14.0	29.0	11.0	21.0	5.1	37.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0	10.0	25.0	7.0	17.0	4.0	31.0
Max Q Clear Time (g_c+I1), s		8.2	10.7	27.0	7.8	3.8	2.7	8.9
Green Ext Time (p_c), s		1.0	0.0	0.0	0.0	0.2	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Appendix C: Freeway Mainline Analysis

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing Conditions*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5596*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*123000*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5596*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1274*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing Conditions*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*6870*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*151000*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*6870*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1564*	pc/h/ln
S	*68.5*	mph
D = v_p / S	*22.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future No Project*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5764*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*126690*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5764*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1312*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.8*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future No Project*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7077*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*155530*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*7077*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1611*	pc/h/ln
S	*68.0*	mph
D = v_p / S	*23.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing With Project*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5707*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*125424*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5707*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1299*	pc/h/ln
S	*69.9*	mph
D = v_p / S	*18.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Existing With Project*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7091*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*155848*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*7091*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1614*	pc/h/ln
S	*68.0*	mph
D = v_p / S	*23.7*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future With Project*

Site Information

Highway/Direction of Travel	*I10 EB*
From/To	*Wabash/Yucaipa*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*5875*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*129114*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*5875*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1338*	pc/h/ln
S	*69.8*	mph
D = v_p / S	*19.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Oliver Gaskell*
Agency or Company	*IBI Group*
Date Performed	*12/17/2018*
Analysis Time Period	*Future With Project*

Site Information

Highway/Direction of Travel	*I10 WB*
From/To	*Yucaipa/Live Oak*
Jurisdiction	*Caltrans*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis*

☑ Oper.(LOS) ☐ Des.(N) ☑ Planning Data

Flow Inputs

Volume, V	*7297*	veh/h	Peak-Hour Factor, PHF	*0.94*
AADT	*160378*	veh/day	%Trucks and Buses, P_T	*14*
Peak-Hr Prop. of AADT, K	*0.07*		%RVs, P_R	*0*
Peak-Hr Direction Prop, D	*65*		General Terrain:	*Level*
DDHV = AADT x K x D	*7297*	veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.935*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*70.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*70.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1661*	pc/h/ln
S	*67.5*	mph
D = v_p / S	*24.6*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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Appendix D: LOS Worksheets for Driveways

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Oliver Gaskell*	Intersection	*A1*
Agency/Co.	*IBI Group*	Jurisdiction	*City of Yucaipa*
Date Performed	*12/18/2018*	Analysis Year	*2018*
Analysis Time Period	*Ex + Proj AM*		

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa* | North/South Street: *Driveway A1*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*822*	*75*		*900*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*822*	*75*	*0*	*900*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*5*			
C (m) (veh/h)					*645*			
v/c					*0.01*			
95% queue length					*0.02*			
Control Delay (s/veh)					*10.6*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*10.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Oliver Gaskell*	Intersection	*A1*
Agency/Co.	*IBI Group*	Jurisdiction	*City of Yucaipa*
Date Performed	*12/18/2018*	Analysis Year	*2018*
Analysis Time Period	*Ex + Proj PM*		

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa*	North/South Street: *Driveway A1*
Intersection Orientation: *East-West*	Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*1430*	*61*		*887*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*1430*	*61*	*0*	*887*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*5*			
C (m) (veh/h)					*434*			
v/c					*0.01*			
95% queue length					*0.03*			
Control Delay (s/veh)					*13.4*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*13.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*37*	*6*			*7*	*26*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*37*	*6*	*0*	*0*	*7*	*26*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*24*	*0*	*34*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*24*	*0*	*34*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*37*						*58*	
C (m) (veh/h)	*1592*						*981*	
v/c	*0.02*						*0.06*	
95% queue length	*0.07*						*0.19*	
Control Delay (s/veh)	*7.3*						*8.9*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.9*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex+Proj PM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*64*	*4*			*16*	*98*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*64*	*4*	*0*	*0*	*16*	*98*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*26*	*0*	*35*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*26*	*0*	*35*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*64*						*61*	
C (m) (veh/h)	*1488*						*885*	
v/c	*0.04*						*0.07*	
95% queue length	*0.13*						*0.22*	
Control Delay (s/veh)	*7.5*						*9.4*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*9.4*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*9*	*42*			*39*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*9*	*42*	*0*	*0*	*39*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*8*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*8*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*9*						*9*	
C (m) (veh/h)	*1584*						*1021*	
v/c	*0.01*						*0.01*	
95% queue length	*0.02*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.6*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* North/South Street: *18th Street*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*68*			*42*	*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*68*	*0*	*0*	*42*	*9*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*9*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*9*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*10*	
C (m) (veh/h)	*1568*						*1005*	
v/c	*0.01*						*0.01*	
95% queue length	*0.04*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.6*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Oliver Gaskell*	Intersection	*A4*
Agency/Co.	*IBI Group*	Jurisdiction	*City of Yucaipa*
Date Performed	*12/18/2018*	Analysis Year	*2018*
Analysis Time Period	*Ex + Proj AM*		

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*112*	*11*	*5*	*171*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*112*	*11*	*5*	*171*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*11*	*0*	*6*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*11*	*0*	*6*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*5*		*17*				
C (m) (veh/h)		*1477*		*765*				
v/c		*0.00*		*0.02*				
95% queue length		*0.01*		*0.07*				
Control Delay (s/veh)		*7.4*		*9.8*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--	*9.8*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A4*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* North/South Street: *Avenue E*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*90*	*12*	*14*	*329*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*90*	*12*	*14*	*329*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*	*0*	*11*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*11*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*14*		*21*				
C (m) (veh/h)		*1503*		*720*				
v/c		*0.01*		*0.03*				
95% queue length		*0.03*		*0.09*				
Control Delay (s/veh)		*7.4*		*10.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* North/South Street: *Avenue E*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*142*	*47*	*62*	*208*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*142*	*47*	*62*	*208*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*44*	*0*	*66*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*44*	*0*	*66*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*62*		*110*				
C (m) (veh/h)		*1397*		*706*				
v/c		*0.04*		*0.16*				
95% queue length		*0.14*		*0.55*				
Control Delay (s/veh)		*7.7*		*11.0*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.0*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* North/South Street: *Avenue E*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*116*	*40*	*70*	*370*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*116*	*40*	*70*	*370*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*35*	*0*	*62*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*35*	*0*	*62*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*70*		*97*				
C (m) (veh/h)		*1436*		*658*				
v/c		*0.05*		*0.15*				
95% queue length		*0.15*		*0.51*				
Control Delay (s/veh)		*7.6*		*11.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj AM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*97*			*157*	*96*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*97*	*0*	*0*	*157*	*96*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*92*	*0*	*20*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*92*	*0*	*20*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*112*	
C (m) (veh/h)	*1324*						*718*	
v/c	*0.02*						*0.16*	
95% queue length	*0.05*						*0.55*	
Control Delay (s/veh)	*7.8*						*10.9*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*10.9*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Ex + Proj PM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2018*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*17*	*84*			*327*	*78*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*17*	*84*	*0*	*0*	*327*	*78*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*71*	*0*	*16*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*71*	*0*	*16*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*17*						*87*	
C (m) (veh/h)	*1165*						*589*	
v/c	*0.01*						*0.15*	
95% queue length	*0.04*						*0.52*	
Control Delay (s/veh)	*8.1*						*12.2*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*12.2*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A1*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa* | North/South Street: *Driveway A1*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*842*	*75*		*1195*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*842*	*75*	*0*	*1195*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*5*			
C (m) (veh/h)					*637*			
v/c					*0.01*			
95% queue length					*0.02*			
Control Delay (s/veh)					*10.7*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*10.7*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A1*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Yucaipa* | North/South Street: *Driveway A1*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*1474*	*61*		*1150*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*1474*	*61*	*0*	*1150*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*1*	*0*	*2*	*0*
Configuration		*T*	*R*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*4*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*4*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
v (veh/h)					*4*			
C (m) (veh/h)					*422*			
v/c					*0.01*			
95% queue length					*0.03*			
Control Delay (s/veh)					*13.6*			
LOS					*B*			
Approach Delay (s/veh)	--	--	*13.6*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*37*	*10*			*2*	*26*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*37*	*10*	*0*	*0*	*2*	*26*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*24*	*0*	*34*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*24*	*0*	*34*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*37*						*58*	
C (m) (veh/h)	*1599*						*984*	
v/c	*0.02*						*0.06*	
95% queue length	*0.07*						*0.19*	
Control Delay (s/veh)	*7.3*						*8.9*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.9*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A2*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A2* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*64*	*6*			*0*	*98*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*64*	*6*	*0*	*0*	*0*	*98*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*26*	*0*	*35*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*26*	*0*	*35*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*64*						*61*	
C (m) (veh/h)	*1508*						*902*	
v/c	*0.04*						*0.07*	
95% queue length	*0.13*						*0.22*	
Control Delay (s/veh)	*7.5*						*9.3*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*9.3*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*9*	*46*			*40*	*0*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*9*	*46*	*0*	*0*	*40*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*8*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*8*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*9*						*9*	
C (m) (veh/h)	*1583*						*1019*	
v/c	*0.01*						*0.01*	
95% queue length	*0.02*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.6*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A3*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A3* | North/South Street: *18th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*68*			*42*	*9*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*68*	*0*	*0*	*42*	*9*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*1*	*0*	*9*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*1*	*0*	*9*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*10*	
C (m) (veh/h)	*1568*						*1005*	
v/c	*0.01*						*0.01*	
95% queue length	*0.04*						*0.03*	
Control Delay (s/veh)	*7.3*						*8.6*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*8.6*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Oliver Gaskell*	Intersection	*A4*
Agency/Co.	*IBI Group*	Jurisdiction	*City of Yucaipa*
Date Performed	*12/18/2018*	Analysis Year	*2020*
Analysis Time Period	*Cu + Proj AM*		

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*118*	*11*	*5*	*175*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*118*	*11*	*5*	*175*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*11*	*0*	*6*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*11*	*0*	*6*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*5*		*17*				
C (m) (veh/h)		*1469*		*756*				
v/c		*0.00*		*0.02*				
95% queue length		*0.01*		*0.07*				
Control Delay (s/veh)		*7.5*		*9.9*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--	*9.9*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A4*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A4* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*94*	*12*	*14*	*343*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*94*	*12*	*14*	*343*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*	*0*	*11*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*11*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*14*		*21*				
C (m) (veh/h)		*1498*		*709*				
v/c		*0.01*		*0.03*				
95% queue length		*0.03*		*0.09*				
Control Delay (s/veh)		*7.4*		*10.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*148*	*47*	*62*	*212*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*148*	*47*	*62*	*212*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*44*	*0*	*66*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*44*	*0*	*66*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*62*		*110*				
C (m) (veh/h)		*1390*		*699*				
v/c		*0.04*		*0.16*				
95% queue length		*0.14*		*0.56*				
Control Delay (s/veh)		*7.7*		*11.1*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.1*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A5*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A5* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*120*	*40*	*70*	*384*	
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*120*	*40*	*70*	*384*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*1*	*0*	*1*	*0*
Configuration		*T*	*R*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*35*	*0*	*62*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*35*	*0*	*62*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				
v (veh/h)		*70*		*97*				
C (m) (veh/h)		*1432*		*647*				
v/c		*0.05*		*0.15*				
95% queue length		*0.15*		*0.53*				
Control Delay (s/veh)		*7.6*		*11.5*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*11.5*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj AM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*103*			*161*	*96*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*103*	*0*	*0*	*161*	*96*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*92*	*0*	*20*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*92*	*0*	*20*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*21*						*112*	
C (m) (veh/h)	*1320*						*709*	
v/c	*0.02*						*0.16*	
95% queue length	*0.05*						*0.56*	
Control Delay (s/veh)	*7.8*						*11.0*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*11.0*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Oliver Gaskell*
Agency/Co.	*IBI Group*
Date Performed	*12/18/2018*
Analysis Time Period	*Cu + Proj PM*

Site Information

Intersection	*A6*
Jurisdiction	*City of Yucaipa*
Analysis Year	*2020*

Project Description *Yucaipa Pointe Traffic Impact Analysis Study*

East/West Street: *Driveway A6* | North/South Street: *Avenue E*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*17*	*88*			*341*	*78*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*17*	*88*	*0*	*0*	*341*	*78*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LT*				*T*	*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*71*	*0*	*16*			
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*71*	*0*	*16*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*0*	*0*
Configuration		*LTR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LTR*	
v (veh/h)	*17*						*87*	
C (m) (veh/h)	*1151*						*576*	
v/c	*0.01*						*0.15*	
95% queue length	*0.04*						*0.53*	
Control Delay (s/veh)	*8.2*						*12.4*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*12.4*	
Approach LOS	--	--					*B*	

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Appendix E: Mitigated LOS Worksheets

HCM 2010 Signalized Intersection Summary
150: Yucaipa Blvd & Knollhaven Lane

12/20/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Future Volume (veh/h)	10	500	217	181	629	3	265	16	164	1	17	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	11	543	236	197	684	3	288	17	178	1	18	8
Adj No. of Lanes	1	2	0	1	2	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	605	262	243	1366	6	326	52	541	384	259	115
Arrive On Green	0.01	0.27	0.27	0.14	0.40	0.40	0.10	0.39	0.39	0.22	0.22	0.22
Sat Flow, veh/h	1681	2279	988	1681	3424	15	3261	133	1387	1183	1159	515
Grp Volume(v), veh/h	11	399	380	197	335	352	288	0	195	1	0	26
Grp Sat Flow(s),veh/h/ln	1681	1676	1590	1681	1676	1762	1630	0	1520	1183	0	1674
Q Serve(g_s), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Cycle Q Clear(g_c), s	0.4	13.8	13.8	6.8	9.0	9.0	5.2	0.0	5.4	0.0	0.0	0.7
Prop In Lane	1.00		0.62	1.00		0.01	1.00		0.91	1.00		0.31
Lane Grp Cap(c), veh/h	19	445	422	243	669	703	326	0	593	384	0	374
V/C Ratio(X)	0.59	0.90	0.90	0.81	0.50	0.50	0.88	0.00	0.33	0.00	0.00	0.07
Avail Cap(c_a), veh/h	224	447	424	364	669	703	326	0	593	384	0	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	21.2	21.3	24.9	13.5	13.5	26.7	0.0	12.8	18.1	0.0	18.4
Incr Delay (d2), s/veh	19.0	15.6	16.8	8.1	0.6	0.6	23.6	0.0	1.5	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	8.2	8.0	3.7	4.2	4.4	3.4	0.0	2.5	0.0	0.0	0.4
LnGrp Delay(d),s/veh	48.5	36.9	38.0	33.0	14.1	14.1	50.2	0.0	14.3	18.1	0.0	18.7
LnGrp LOS	D	D	D	C	B	B	D		B	B		B
Approach Vol, veh/h		790			884			483			27	
Approach Delay, s/veh		37.6			18.3			35.7			18.7	
Approach LOS		D			B			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.4	12.7	19.9	10.0	17.4	4.7	27.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	13.0	16.0	6.0	9.0	8.0	21.0
Max Q Clear Time (g_c+I1), s		7.4	8.8	15.8	7.2	2.7	2.4	11.0
Green Ext Time (p_c), s		0.8	0.2	0.1	0.0	0.0	0.0	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.1
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Future Volume (veh/h)	14	1130	316	182	628	3	237	14	148	9	24	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1228	343	198	683	3	258	15	161	10	26	23
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1304	364	242	2365	10	353	43	464	306	145	128
Arrive On Green	0.01	0.35	0.35	0.14	0.48	0.48	0.11	0.33	0.33	0.17	0.17	0.17
Sat Flow, veh/h	1681	3746	1046	1681	4951	22	3261	129	1390	1204	865	765
Grp Volume(v), veh/h	15	1053	518	198	443	243	258	0	176	10	0	49
Grp Sat Flow(s),veh/h/ln	1681	1606	1580	1681	1606	1761	1630	0	1519	1204	0	1630
Q Serve(g_s), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.6	21.9	21.9	7.9	5.8	5.8	5.3	0.0	6.0	0.5	0.0	1.8
Prop In Lane	1.00		0.66	1.00		0.01	1.00		0.91	1.00		0.47
Lane Grp Cap(c), veh/h	24	1118	550	242	1534	841	353	0	507	306	0	273
V/C Ratio(X)	0.62	0.94	0.94	0.82	0.29	0.29	0.73	0.00	0.35	0.03	0.00	0.18
Avail Cap(c_a), veh/h	244	1119	550	390	1534	841	473	0	507	306	0	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	21.8	21.8	28.6	10.9	10.9	29.8	0.0	17.3	24.1	0.0	24.6
Incr Delay (d2), s/veh	22.7	15.0	24.8	7.0	0.1	0.2	3.8	0.0	1.9	0.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	12.0	13.3	4.1	2.5	2.8	2.6	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	56.4	36.8	46.6	35.6	11.0	11.1	33.6	0.0	19.2	24.3	0.0	26.1
LnGrp LOS	E	D	D	D	B	B	C		B	C		C
Approach Vol, veh/h		1586			884			434			59	
Approach Delay, s/veh		40.2			16.6			27.7			25.8	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		27.0	13.9	28.0	11.5	15.5	5.0	36.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		23.0	16.0	24.0	10.0	9.0	10.0	30.0
Max Q Clear Time (g_c+I1), s		8.0	9.9	23.9	7.3	3.8	2.6	7.8
Green Ext Time (p_c), s		0.9	0.3	0.1	0.2	0.1	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Future Volume (veh/h)	142	688	196	49	730	76	250	42	51	157	26	151
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	154	748	213	53	793	83	272	46	55	171	28	164
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	967	275	70	930	97	440	252	301	530	77	450
Arrive On Green	0.15	0.50	0.50	0.04	0.30	0.30	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1681	2578	734	1681	3064	321	1186	733	877	1288	224	1310
Grp Volume(v), veh/h	154	486	475	53	434	442	272	0	101	171	0	192
Grp Sat Flow(s),veh/h/ln	1681	1676	1635	1681	1676	1708	1186	0	1610	1288	0	1534
Q Serve(g_s), s	4.4	11.8	11.8	1.6	12.2	12.2	11.2	0.0	2.2	5.4	0.0	4.7
Cycle Q Clear(g_c), s	4.4	11.8	11.8	1.6	12.2	12.2	15.9	0.0	2.2	7.6	0.0	4.7
Prop In Lane	1.00		0.45	1.00		0.19	1.00		0.54	1.00		0.85
Lane Grp Cap(c), veh/h	191	629	613	70	509	518	440	0	552	530	0	526
V/C Ratio(X)	0.81	0.77	0.77	0.76	0.85	0.85	0.62	0.00	0.18	0.32	0.00	0.36
Avail Cap(c_a), veh/h	202	629	613	134	536	547	440	0	552	530	0	526
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.64	0.64	0.64	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	10.8	10.8	23.7	16.4	16.4	18.3	0.0	11.5	14.2	0.0	12.3
Incr Delay (d2), s/veh	17.0	4.9	5.0	10.1	8.1	8.0	6.4	0.0	0.7	1.6	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.2	6.0	0.9	6.7	6.8	4.4	0.0	1.1	2.1	0.0	2.3
LnGrp Delay(d),s/veh	37.7	15.7	15.8	33.8	24.5	24.4	24.7	0.0	12.2	15.8	0.0	14.3
LnGrp LOS	D	B	B	C	C	C	C		B	B		B
Approach Vol, veh/h		1115			929			373			363	
Approach Delay, s/veh		18.8			25.0			21.3			15.0	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		21.2	6.1	22.8		21.2	9.7	19.2
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		16.0	4.0	18.0		16.0	6.0	16.0
Max Q Clear Time (g_c+I1), s		17.9	3.6	13.8		9.6	6.4	14.2
Green Ext Time (p_c), s		0.0	0.0	2.3		0.9	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Future Volume (veh/h)	159	1292	312	100	710	52	281	39	84	115	28	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	173	1404	339	109	772	57	305	42	91	125	30	189
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	1415	333	134	1534	113	293	142	309	374	60	379
Arrive On Green	0.24	1.00	1.00	0.08	0.48	0.48	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1681	2695	635	1681	3166	234	1157	497	1077	1252	210	1322
Grp Volume(v), veh/h	173	860	883	109	409	420	305	0	133	125	0	219
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1676	1723	1157	0	1575	1252	0	1531
Q Serve(g_s), s	10.8	0.0	57.4	7.0	18.3	18.3	21.6	0.0	7.2	9.2	0.0	13.1
Cycle Q Clear(g_c), s	10.8	0.0	57.4	7.0	18.3	18.3	31.5	0.0	7.2	13.6	0.0	13.1
Prop In Lane	1.00		0.38	1.00		0.14	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	201	880	868	134	812	835	293	0	451	374	0	439
V/C Ratio(X)	0.86	0.98	1.02	0.82	0.50	0.50	1.04	0.00	0.29	0.33	0.00	0.50
Avail Cap(c_a), veh/h	458	930	917	168	812	835	293	0	451	374	0	439
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	0.0	49.8	19.3	19.3	46.6	0.0	30.6	34.7	0.0	32.7
Incr Delay (d2), s/veh	5.7	15.9	26.0	19.1	0.4	0.4	63.8	0.0	1.7	2.4	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.9	6.3	4.0	8.5	8.7	14.1	0.0	3.3	3.4	0.0	6.0
LnGrp Delay(d),s/veh	46.6	15.9	26.0	68.9	19.8	19.7	110.4	0.0	32.2	37.1	0.0	36.7
LnGrp LOS	D	B	F	E	B	B	F		C	D		D
Approach Vol, veh/h		1916			938			438			344	
Approach Delay, s/veh		23.3			25.5			86.7			36.8	
Approach LOS		C			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		34.0	12.7	63.3		34.0	17.2	58.8
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		26.0	11.0	61.0		26.0	30.0	42.0
Max Q Clear Time (g_c+I1), s		33.5	9.0	59.4		15.6	12.8	20.3
Green Ext Time (p_c), s		0.0	0.0	1.4		1.3	0.4	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	517	217	181	659	4	265	16	164	1	17	7
Future Volume (veh/h)	10	517	217	181	659	4	265	16	164	1	17	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	11	562	236	197	716	4	288	17	178	1	18	8
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	783	320	205	1700	9	284	58	605	455	323	144
Arrive On Green	0.01	0.23	0.23	0.12	0.34	0.34	0.09	0.44	0.44	0.28	0.28	0.28
Sat Flow, veh/h	1681	3361	1373	1681	4944	28	3261	133	1387	1183	1159	515
Grp Volume(v), veh/h	11	536	262	197	465	255	288	0	195	1	0	26
Grp Sat Flow(s),veh/h/ln	1681	1606	1522	1681	1606	1760	1630	0	1520	1183	0	1674
Q Serve(g_s), s	0.4	8.8	9.1	6.7	6.4	6.4	5.0	0.0	4.8	0.0	0.0	0.7
Cycle Q Clear(g_c), s	0.4	8.8	9.1	6.7	6.4	6.4	5.0	0.0	4.8	0.0	0.0	0.7
Prop In Lane	1.00		0.90	1.00		0.02	1.00		0.91	1.00		0.31
Lane Grp Cap(c), veh/h	19	748	355	205	1104	605	284	0	662	455	0	467
V/C Ratio(X)	0.58	0.72	0.74	0.96	0.42	0.42	1.01	0.00	0.29	0.00	0.00	0.06
Avail Cap(c_a), veh/h	117	896	425	205	1104	605	284	0	662	455	0	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	20.3	20.4	25.0	14.4	14.4	26.2	0.0	10.5	14.9	0.0	15.2
Incr Delay (d2), s/veh	25.5	2.2	5.4	51.5	0.3	0.5	56.9	0.0	1.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.1	4.3	6.0	2.8	3.1	4.5	0.0	2.2	0.0	0.0	0.3
LnGrp Delay(d),s/veh	53.7	22.5	25.8	76.5	14.7	14.9	83.1	0.0	11.6	14.9	0.0	15.4
LnGrp LOS	D	C	C	E	B	B	F		B	B		B
Approach Vol, veh/h		809			917			483			27	
Approach Delay, s/veh		24.0			28.0			54.3			15.4	
Approach LOS		C			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		29.0	11.0	17.4	9.0	20.0	4.6	23.7
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		25.0	7.0	16.0	5.0	16.0	4.0	19.0
Max Q Clear Time (g_c+I1), s		6.8	8.7	11.1	7.0	2.7	2.4	8.4
Green Ext Time (p_c), s		1.1	0.0	2.2	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Future Volume (veh/h)	14	1175	316	182	653	3	237	14	148	10	24	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	15	1277	343	198	710	3	258	15	161	11	26	24
Adj No. of Lanes	1	3	0	1	3	0	2	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	24	1261	338	224	2240	9	304	48	519	369	192	177
Arrive On Green	0.01	0.33	0.33	0.13	0.45	0.45	0.09	0.37	0.37	0.23	0.23	0.23
Sat Flow, veh/h	1681	3782	1015	1681	4952	21	3261	129	1390	1204	846	781
Grp Volume(v), veh/h	15	1084	536	198	460	253	258	0	176	11	0	50
Grp Sat Flow(s),veh/h/ln	1681	1606	1586	1681	1606	1761	1630	0	1519	1204	0	1627
Q Serve(g_s), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Cycle Q Clear(g_c), s	0.7	25.0	25.0	8.7	6.9	6.9	5.8	0.0	6.2	0.5	0.0	1.8
Prop In Lane	1.00		0.64	1.00		0.01	1.00		0.91	1.00		0.48
Lane Grp Cap(c), veh/h	24	1071	529	224	1453	797	304	0	567	369	0	369
V/C Ratio(X)	0.62	1.01	1.01	0.88	0.32	0.32	0.85	0.00	0.31	0.03	0.00	0.14
Avail Cap(c_a), veh/h	90	1071	529	224	1453	797	304	0	567	369	0	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	25.0	25.0	31.9	13.1	13.1	33.5	0.0	16.7	22.6	0.0	23.1
Incr Delay (d2), s/veh	2.4	11.6	15.4	31.2	0.1	0.2	19.5	0.0	1.4	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.7	13.1	6.0	3.0	3.3	3.4	0.0	2.8	0.2	0.0	0.9
LnGrp Delay(d),s/veh	39.1	36.6	40.4	63.2	13.3	13.4	53.0	0.0	18.1	22.8	0.0	23.9
LnGrp LOS	D	F	F	E	B	B	D		B	C		C
Approach Vol, veh/h		1635			911			434			61	
Approach Delay, s/veh		37.9			24.1			38.8			23.7	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s		32.0	14.0	29.0	11.0	21.0	5.1	37.9
Change Period (Y+Rc), s		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		28.0	10.0	25.0	7.0	17.0	4.0	31.0
Max Q Clear Time (g_c+I1), s		8.2	10.7	27.0	7.8	3.8	2.7	8.9
Green Ext Time (p_c), s		1.0	0.0	0.0	0.0	0.2	0.0	4.7

Intersection Summary	
HCM 2010 Ctrl Delay	33.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Future Volume (veh/h)	146	703	199	49	755	78	259	43	52	161	27	156
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	159	764	216	53	821	85	282	47	57	175	29	170
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	885	250	68	1277	398	495	290	352	590	89	523
Arrive On Green	0.12	0.34	0.34	0.04	0.27	0.27	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1681	2582	730	1681	4818	1500	1179	727	882	1285	223	1310
Grp Volume(v), veh/h	159	496	484	53	821	85	282	0	104	175	0	199
Grp Sat Flow(s),veh/h/ln	1681	1676	1636	1681	1606	1500	1179	0	1609	1285	0	1534
Q Serve(g_s), s	5.1	15.2	15.2	1.7	8.3	2.4	11.9	0.0	2.3	5.6	0.0	4.9
Cycle Q Clear(g_c), s	5.1	15.2	15.2	1.7	8.3	2.4	16.9	0.0	2.3	7.9	0.0	4.9
Prop In Lane	1.00		0.45	1.00		1.00	1.00		0.55	1.00		0.85
Lane Grp Cap(c), veh/h	198	574	560	68	1277	398	495	0	642	590	0	612
V/C Ratio(X)	0.80	0.86	0.86	0.78	0.64	0.21	0.57	0.00	0.16	0.30	0.00	0.33
Avail Cap(c_a), veh/h	244	610	595	122	1401	436	495	0	642	590	0	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.80	0.80	0.80	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	16.9	16.9	26.1	17.9	15.7	17.2	0.0	10.6	13.1	0.0	11.4
Incr Delay (d2), s/veh	12.1	9.9	10.1	14.4	0.7	0.2	4.7	0.0	0.5	1.3	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	8.5	8.3	1.1	3.7	1.0	4.5	0.0	1.1	2.2	0.0	2.3
LnGrp Delay(d),s/veh	35.7	26.8	27.0	40.5	18.6	16.0	21.9	0.0	11.2	14.4	0.0	12.8
LnGrp LOS	D	C	C	D	B	B	C		B	B		B
Approach Vol, veh/h		1139			959			386			374	
Approach Delay, s/veh		28.1			19.6			19.0			13.6	
Approach LOS		C			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		25.9	6.2	22.8		25.9	10.5	18.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	4.0	20.0		19.0	8.0	16.0
Max Q Clear Time (g_c+I1), s		18.9	3.7	17.2		9.9	7.1	10.3
Green Ext Time (p_c), s		0.0	0.0	1.6		1.2	0.0	2.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Future Volume (veh/h)	164	1330	323	102	731	53	289	40	86	118	29	179
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1765	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	178	1446	351	111	795	58	314	43	93	128	32	195
Adj No. of Lanes	1	2	0	1	3	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	1320	311	118	2095	652	304	159	345	391	69	421
Arrive On Green	0.13	0.49	0.49	0.07	0.43	0.43	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1681	2694	635	1681	4818	1500	1149	498	1077	1248	216	1316
Grp Volume(v), veh/h	178	884	913	111	795	58	314	0	136	128	0	227
Grp Sat Flow(s),veh/h/ln	1681	1676	1653	1681	1606	1500	1149	0	1575	1248	0	1532
Q Serve(g_s), s	10.4	49.0	49.0	6.6	11.2	2.3	20.2	0.0	6.4	8.5	0.0	11.8
Cycle Q Clear(g_c), s	10.4	49.0	49.0	6.6	11.2	2.3	32.0	0.0	6.4	14.9	0.0	11.8
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.68	1.00		0.86
Lane Grp Cap(c), veh/h	210	821	810	118	2095	652	304	0	504	391	0	490
V/C Ratio(X)	0.85	1.08	1.13	0.94	0.38	0.09	1.03	0.00	0.27	0.33	0.00	0.46
Avail Cap(c_a), veh/h	319	821	810	118	2095	652	304	0	504	391	0	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.8	25.5	25.5	46.3	19.1	16.6	42.3	0.0	25.3	30.9	0.0	27.1
Incr Delay (d2), s/veh	7.2	46.7	66.7	58.2	0.1	0.0	60.6	0.0	1.3	2.2	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	33.3	37.3	5.0	5.0	0.9	13.5	0.0	3.0	3.2	0.0	5.4
LnGrp Delay(d),s/veh	49.9	72.2	92.2	104.5	19.2	16.7	102.9	0.0	26.6	33.1	0.0	30.3
LnGrp LOS	D	F	F	F	B	B	F		C	C		C
Approach Vol, veh/h		1975			964			450			355	
Approach Delay, s/veh		79.4			28.9			79.8			31.3	
Approach LOS		E			C			E			C	

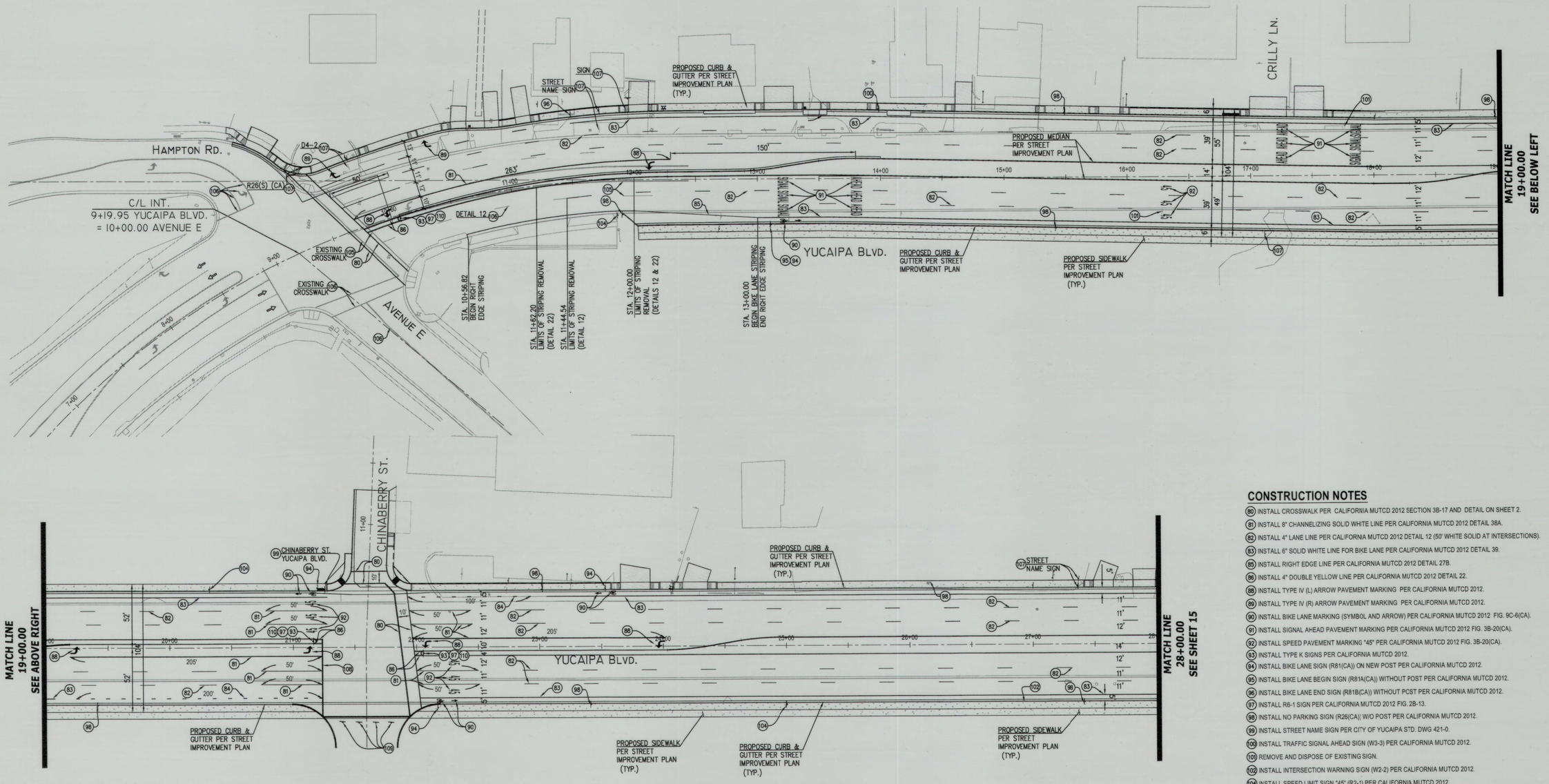
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		36.0	11.0	53.0		36.0	16.5	47.5
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0	7.0	49.0		32.0	19.0	37.0
Max Q Clear Time (g_c+I1), s		34.0	8.6	51.0		16.9	12.4	13.2
Green Ext Time (p_c), s		0.0	0.0	0.0		1.6	0.2	6.1

Intersection Summary	
HCM 2010 Ctrl Delay	61.9
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Appendix F: Yucaipa Boulevard Widening Project Plan



CONSTRUCTION NOTES

(80) INSTALL CROSSWALK PER CALIFORNIA MUTCD 2012 SECTION 3B-17 AND DETAIL ON SHEET 2.
(81) INSTALL 8" CHANNELIZING SOLID WHITE LINE PER CALIFORNIA MUTCD 2012 DETAIL 38A.
(82) INSTALL 4" LANE LINE PER CALIFORNIA MUTCD 2012 DETAIL 12 (50' WHITE SOLID AT INTERSECTIONS).
(83) INSTALL 6" SOLID WHITE LINE FOR BIKE LANE PER CALIFORNIA MUTCD 2012 DETAIL 39.
(85) INSTALL RIGHT EDGE LINE PER CALIFORNIA MUTCD 2012 DETAIL 27B.
(86) INSTALL 4" DOUBLE YELLOW LINE PER CALIFORNIA MUTCD 2012 DETAIL 22.
(88) INSTALL TYPE IV (L) ARROW PAVEMENT MARKING PER CALIFORNIA MUTCD 2012.
(89) INSTALL TYPE IV (R) ARROW PAVEMENT MARKING PER CALIFORNIA MUTCD 2012.
(90) INSTALL BIKE LANE MARKING (SYMBOL AND ARROW) PER CALIFORNIA MUTCD 2012 FIG. 9C-6(CA).
(91) INSTALL SIGNAL AHEAD PAVEMENT MARKING PER CALIFORNIA MUTCD 2012 FIG. 3B-20(CA).
(92) INSTALL SPEED PAVEMENT MARKING "45" PER CALIFORNIA MUTCD 2012 FIG. 3B-20(CA).
(93) INSTALL TYPE K SIGNS PER CALIFORNIA MUTCD 2012.
(94) INSTALL BIKE LANE SIGN (R81(CA)) ON NEW POST PER CALIFORNIA MUTCD 2012.
(95) INSTALL BIKE LANE BEGIN SIGN (R81A(CA)) WITHOUT POST PER CALIFORNIA MUTCD 2012.
(96) INSTALL BIKE LANE END SIGN (R81B(CA)) WITHOUT POST PER CALIFORNIA MUTCD 2012.
(97) INSTALL R6-1 SIGN PER CALIFORNIA MUTCD 2012 FIG. 2B-13.
(98) INSTALL NO PARKING SIGN (R26(CA)) W/O POST PER CALIFORNIA MUTCD 2012.
(99) INSTALL STREET NAME SIGN PER CITY OF YUCAIPA STD. DWG 421-0.
(103) INSTALL TRAFFIC SIGNAL AHEAD SIGN (W3-3) PER CALIFORNIA MUTCD 2012.
(101) REMOVE AND DISPOSE OF EXISTING SIGN.
(102) INSTALL INTERSECTION WARNING SIGN (W2-2) PER CALIFORNIA MUTCD 2012.
(104) INSTALL SPEED LIMIT SIGN "45" (R2-1) PER CALIFORNIA MUTCD 2012.
(105) REMOVE EXISTING STRIPING/ MARKING.
(106) PROTECT IN PLACE EXISTING MARKING AND STRIPING.
(107) RELOCATE EXISTING SIGN.
(108) INSTALL 12" WIDE SOLID WHITE LINE PER CALIFORNIA MUTCD 2012 SECTION 3B.16.
(109) INSTALL TYPE 4 OBJECT MARKER, OM4-1, PER CALIFORNIA MUTCD 2012 FIG. 2C-13
(110) INSTALL R4-7 SIGN PER CALIFORNIA MUTCD 2012 FIG. 2B-10.

TRAFFIC SIGNING AND STRIPING GENERAL NOTES:

1. TRAFFIC STRIPING, PAVEMENT LEGENDS AND RAISED PAVEMENT MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST VERSION OF THE CALIFORNIA (MUTCD) MANUAL AND CALTRANS STANDARDS PLANS AND STANDARD SPECIFICATIONS SECTION 84 AND 85, MAY 2006.
2. REFLECTORIZE ALL TRAFFIC STRIPES, PAVEMENT LEGENDS AND PAVEMENT MARKINGS. PAVEMENT LEGENDS AND MARKINGS SHALL MATCH CITY STENCILS. ALL DETAILS REFER TO CALTRANS STANDARD PLANS A20-A THROUGH A-20D AND A-24A THROUGH A-24E.
3. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC PER CITY STANDARD SPECIFICATIONS. SKIP LINES SHALL BE APPLIED BY EXTRUSION METHOD ONLY.
4. ALL CONFLICTING LINES, MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE REMOVED BY WET SANDBLASTING OR METHOD APPROVED BY THE CITY ENGINEER.
5. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY ENGINEER FOR "CAT TRACKING" PRIOR TO FINAL INSTALLATION.
6. ALL REMOVED SIGNS AND POST IN GOOD CONDITION SHALL BE SALVAGED AND DELIVERED TO THE CITY YARD.
7. ALL SIGNS SHALL BE NEW (OTHER THAN THOSE SHOWN TO BE RELOCATED). ALL NEW AND RELOCATED SIGNS SHALL BE MOUNTED ON NEW POSTS WITH NEW HARDWARE UNLESS NOTED OTHERWISE. SIGNS DESIGNED FOR INSTALLATION OF EXISTING STREET LIGHT POLES SHALL BE MOUNTED WITH NEW HARDWARE.
8. TRAFFIC SIGNS DIMENSIONS, COLORS AND LETTERING SHALL CONFORM TO THE LATEST CALIFORNIA MUTCD SPECIFICATIONS. SIGN CODES SHOWN HEREON ARE TO CONFORM TO CALIFORNIA MUTCD SPECIFICATIONS. TRAFFIC SIGN SIZE SHALL BE STANDARD UNLESS OTHERWISE SHOWN ON THE PLANS. ALL SIGNS ARE TO BE REFLECTIVE.
9. NEW SIGN POST SHALL BE 12 GAGE GALVANIZED STEEL, PERFORATED 4 SIDES, EASY ERECT BREAKAWAY BASE, "UNI-STRUT" OR APPROVED EQUAL. SIGNS SHALL BE MOUNTED ON STREET LIGHT POLES WHENEVER FEASIBLE.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIARIZED WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS.

NOTE:

- ALL COMMERCIAL AND BUSINESS SIGNS TO BE REMOVED OR RELOCATED PER STREET IMPROVEMENT PLANS.
- EXISTING STRIPING TO BE REMOVED UNLESS NOTED OTHERWISE ON PLANS.
- EXISTING SIGNS TO BE REMOVED AND DISPOSED UNLESS NOTED ON THE PLANS TO BE RELOCATED OR PROTECTED IN PLACE.

40' 0 40' 80' 120'
SCALE: 1" = 40'

⚠ PHASE I

PROJECT # : 10771

RECOMMENDED FOR APPROVAL BY:
Margaret Monson 4/2/15 DATE: 4/2/15
APPROVED BY:
DATE: 4/2/15
FERMIN PRECIADO, CITY ENGINEER
CITY OF YUCAIPA PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION

CITY OF YUCAIPA
YUCAIPA BOULEVARD
SIGNING & STRIPING
19+00.00 - 28+00.00
JOB No. 09001
Drawing No.
Sheet 14 of 20

DIGALERT — DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU BEGIN — 1-800-227-2600 — A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

APD CONSULTANTS, INC.
PLANNING . ENGINEERING . CONSTRUCTION MANAGEMENT
188 Technology Dr., Suite B, IRVINE, CA 92618
TEL: (949) 336-6336 FAX: (949) 336-6338 www.apdcon.com
Rabih Mahmoud, P.E. R.C.E. 60421 03/25/15 DATE

REGISTERED PROFESSIONAL ENGINEER RABIH F. MAHMOUD 60421 EXPIRES 6/30/16 CIVIL STATE OF CALIFORNIA

PLANS PREPARED FOR :
THE CITY OF YUCAIPA
34272 YUCAIPA BOULEVARD
YUCAIPA, CA 92399-9950
CONTACT PERSON: FERMIN PRECIADO
CITY ENGINEER
(909) 797-2489

DESIGNED BY: V.B.
DRAWN BY: C.R.
CHECKED BY: R.M.

Date	By	REVISIONS	App'd
4/2015	MM	2 REVISED PER PRIVATE CONSTRUCTION PLANS INCL. IN CONTRACT.	
4/2015	MM	1 REVISED PHASE I LIMITS.	

BENCH MARK
BEING A 2" BRASS DISK STAMPED "SAN BERNARDINO COUNTY SURVEYOR BENCH MARK NO. 1-24, 1969".
ELEVATION: 2112.379 FEET
LOCATED ON THE EAST SIDE OF AN INLET BOX, 1.5 FT. NORTH OF THE SOUTH EDGE, 28 FT. NORTH OF CENTERLINE OF SAND CANYON ROAD (YUCAIPA BLVD. EXTENDED), 300 FT. EAST OF 16TH STREET, ON SAND CANYON TURNOFF.

Scale: 0 1 2 3

Drawing Name: P:\2009\09001 Yucaipa Blvd\Eng\Mai\09001pa1-14x09x38.53-28+00.00.dwg
Last Opened: Mar 25, 2015 - 9:17am by Robbem